

De- Stress to Nursing Success

Jessica Jenkins & Emily Whittle

Northern Illinois University

Senior Honors Capstone Project

December 6, 2013

# Table Of Contents

- ❖ Research and Data Collection Paper.....p. 2-
  - Background of Topic.....p. 2-5
  - Benefits of relaxation exercises & Deep breathing...p. 5-9
  - Literature Review.....p. 10-12
  - Our data collection information & Analysis.....p. 12-16
  - Generalized Conclusion and Future Suggestions.....p. 16-17
  - References.....p. 18
- ❖ Appendices
  - Appendix A
    - Probable Agenda.....p. 19
  - Appendix B
    - Flyers for Event.....p. 20
  - Appendix C
    - De-Stress Class Script.....p.21-24
  - Appendix D
    - Examples of Pre and Post Survey.....p. 25-26
  - Appendix E
    - Data Collection & Collaboration Sheet For De-Stress Class One.....p. 27-28
  - Appendix F
    - Data Collection & Collaboration Sheet For De-Stress Class Two.....p. 29-30
  - Appendix G
    - Data Collection & Collaboration for Class Two: Heart Rate.....p. 31-32

## **Background of Topic**

Nursing as a whole is a very stressful occupation to go into. From the pre-requisite classes one needs to take to even have a chance of getting into a nursing program; to the many clinical and classes that are required within nursing school, it is just a stressful school atmosphere as a whole. Then one needs to begin preparing for a national board exam that will basically dictate the rest of their life. Plus adding on family commitments, work life, and attempts for a bit of fun, it can all be very trying and consuming to an individual. It is a lot to handle and can be very stressful to the individual.

Stress is a very powerful and overwhelming thing. In some instances, stress is a very good thing for one to be exposed to as it aids them in completing new challenges and makes the body and mind endure new thoughts and feelings. But in most cases, stress is a mentally and physically draining aspect. It can lead to illness, mental break-downs, burn out, and much more if not handled in a prompt and correct way. According to Gibbons, Dempster, and Moutray (2010), nursing students experience more stress than other students due to: less free time because of long study hours, the stress of developing clinical skills, a perceived lack of practical skill, knowing that their clinical skills are being evaluated and graded, nursing staff attitudes towards students in the clinical setting, and placement on unit and with preceptor are all stressors for nursing students that are unique to them that can also provoke high levels of anxiety.

There are many things that an individual can do to handle their stress. Each person is different, and stress forms in different ways in those individuals, so one needs to find what is the best outlet for themselves to find that inner peace and relaxation. Many people enjoy cooking, dancing, running, listening to music, shopping, etc. Many also enjoy and use deep breathing and relaxing exercises to handle those trying times. Deep breathing, relaxing stretching and

exercising are the avenue the authors of this paper decided to explore. The authors are both nursing students, who are very involved and also have jobs outside of school, so they know about the negative effects stress can have on the body. The authors have both found that incorporating deep breathing and relaxing exercises into one's daily lifestyle can really aid in reducing one's stress level. Nursing school has been one of the most stressful times in the authors' lives, and from their de-stressing classes they have found that they are not the only ones who feel this way. There is also much literature out there that support the ideals of incorporating relaxation techniques (whether in the form of deep breathing, yoga, Tai Chi, or stretches) into one's routine to aid in a healthier, less stressful lifestyle that ultimately leads to a more productive, safe, happy, and healthier environment as a whole. This is especially important for nurses who often face high levels of stress in their line of work and have very important duties with having people's lives in their hands. They need to be healthy, engaged, and ready to take on the pressures that this job entails. It can be highly rewarding if one learns to battle the harmful stressors and indulge in the wonders of healing another person back to health.

In an article found in the journal *American Nurse* (2012), this is a major concern that national nursing associations have seen in nurses across the country. They are becoming overstressed, overworked, and overtired; all which can lead to very harmful effects on the individual, the client(s) they are assigned to care for, and the facilities in which they work. They are taking a stand by addressing some of these concerns at the annual ANA Conference and really focusing on topics such as relaxation, healthy eating, getting enough sleep, and holistically taking care of one's self before taking on the care of another. The article goes on to further state, "Registered nurses have all the normal stressors of life. Add on critical decisions in a fast-paced environment, and they are prime candidates for scoring high on the Life Stress Inventory, which

looks at factors like finances, illness, and divorce” (p. 7). Being in such a professional and critical profession it is easy for a nurse to feel overwhelmed and not be at their best. Thus, the ANA created the “Healthy Nurse Program” that was included in their national “Nurses as Models of Wellness in Action” conference. This conference and program included education and resources on healthy practices and concerns. There were specific topic areas such as, “safe patient handling, avoiding toxic materials, proper nutrition and diet, tobacco cessation, compassion fatigue, immunization, and stress” (p.7). What causes stress, how to avoid stress, and how to healthily handle stress were the main topics of discussion. Different techniques and exercises were taught and addressed by specialists in order to educate those who need to be well to care for those who are unwell. This is a great push and a start of something very important. If nurses do not take good care of themselves, they will ultimately become unfit to take good care of their patients.

In an article by Registered Nurse, Susan Trossman, she expresses further details about the ANA’s healthy nurse conference. As a member of the registered nurse community, as well as a member of the ANA, she attended the conference and found it to be extremely helpful in her professional and personal life. She states that, “stress relief, sleep, staffing, yoga, snacks, and change all were a part of the American Nurses Association Conference aimed at getting participants to think and maybe re-think what they can do to be healthier and be better able to communicate healthy habits to their patients” (p. 12). All of these aspects are essential to the proper care of patients and nurses themselves. This issue is so pertinent that the First Lady, Michelle Obama, herself sent a message to be shown at the conference reminding those that attended the conference that healthcare professionals are essential to the survival of the nation and that proper care is important in improving the health and wellness of the nation. Attending

the conference were well known authors, professionals, and specialists in the areas of: changing behaviors, healthy eating, physical exercise, and the importance of sleep to evoke a safe and healthy environment. Each professional shared their findings and explained the importance of incorporating these healthy habits into one's daily lifestyles. They shared techniques that not only could the professional nurses use to improve their wellbeing, but also to share with their patients as well. Things as simple as taking the stairs instead of the elevator, choosing water over a can of pop, and getting to sleep a hour earlier could all allude to a safer, healthier, and ultimately happier lifestyle.

All of these examples prove that nurses and nursing students need to take the time to care for themselves in order to best be able to care for others. The authors of this paper wanted to delve into the realm of yoga and yoga-like exercises and deep breathing exercises as a means for nursing students to better handle the overwhelming amounts of stress that they encounter when working towards their nursing degree.

### **Benefits of Relaxation Exercises and Deep Breathing**

The stress response, also known as the "fight or flight" response, helps to prepare the body to either confront or avoid danger. This response is integral to survival and when elicited increases the heart rate, blood pressure, and respirations, sharpens the senses, and tightens the muscles. So, stress is a good thing when used in appropriate situations such as a disaster but problems begin to arise when the stress response is being elicited daily by money woes, slow moving traffic when running late, worrying about one's job, dealing with relationship and/or family troubles, and other day-to-day activities and worries. When the stress response is evoked on a daily basis, developing health problems becomes a concern, such as hypertension which can

then lead to heart disease. “Moreover, the buildup of stress can contribute to anxiety and depression. Often people try to relieve the pressure by self-medicating with alcohol or drugs, or develop bad habits like smoking or overeating.” (p. 6).

Meditation is a great way to reduce stress in one’s life. Meditation methods can reduce blood pressure, heart rate, and respirations and can reduce blood lactate levels which are believed to be linked to panic attacks. Focusing on one’s breathing patterns is typically a component of these different meditation exercises such as yoga, tai chi, and Qi Gong. Therefore, learning deep breathing exercises is a simple and easy way to incorporate stress relief practices into one’s daily life. “Deep abdominal breathing encourages full oxygen exchange— that is, the beneficial trade of incoming oxygen for outgoing carbon dioxide. Not surprisingly, it can slow the heartbeat and lower or stabilize blood pressure.” (“Breath control helps quell errant stress response”, p. 7). So, incorporating deep breathing exercises into one’s daily routine can help improve one’s health and many of these relaxing deep breathing exercises are taught in yoga classes to help participants to relax and become in-tune with their bodies.

An example of a relaxing and challenging exercise program is yoga. Yoga has been found to be one of the best ways to reduce stress levels and challenge the body and mind. There are numerous studies that present the benefits of yoga. At the conferences mentioned above, they incorporated elements of yoga practice into some of their teaching areas. Yoga not only challenges the body to hold certain poses and feel every aspect of one’s body, but it also relaxes the body and mind so that one can feel refreshed and accomplished once a session of yoga is completed. The effects of yoga have been studied tremendously on a wide range of subjects, from young children to older adults and the results generally come to conclusive results; those results showing numerous health and wellness benefits.

In an article written by Lisa Diamond titled “The Benefits of Yoga in Improving Health”, Diamond believes that there is evidence to support prescribing yoga to patients as a primary care method of stress management. Diamond found a study review by Hayes and Chase which found evidence that practicing yoga regularly helps to reduce stress and anxiety. Swami Rami, a master yoga instructor, amazed investigators in the 1970’s when he was able to control autonomic nervous system functions such as respiratory rate and heart rate, which were previously thought to be involuntary bodily functions. This showed just how powerful yoga is as far as being used as a relaxation technique and proving the established link between the mind and body as practiced in yoga.

In persons that practice yoga regularly, it has been shown to have anti-inflammatory effects on the endocrine system, increase cortisol levels, and decrease catecholamine levels. Although the body views exercise as self-induced stress which leads to temporary modifications in the immune system, this kind of stress does not have a negative effect on the body but rather leads to a reduction in morbidity and advanced longevity. Stress, depression, and anxiety adversely affect the white blood cell count by increasing the number of neutrophils, monocytes, and eosinophils, placing the body at risk for disease.

Natural killer (NK) cells are used in the body to produce antigens and prevent disease which makes them an important component to attaining an overall state of wellness. NK cells increase after a person engages in exercise and this gives the body an immune function boost by increasing the “search and destroy” mission of white blood cells. NK cells are decreased in persons that experience chronic stress and persons that experience chronic stress also have an alteration in their cytotoxicity. This is not to say that everyone that experiences stress will have a negative effect on their NK cells, for Diamond found a study by Daruna which stated that people



who experience stress but do not perceive it as high did not have a reduction in their NK cells, but rather, they were enhanced. In a study conducted by Ross and Thomas, it was found that a person's perception of their state of mind affects their immune system function for they found that people who reported being depressed or lonely had reduced NK cells but those that reported being social introverts had an increase in NK cells.

Through Diamond's research, it was found that yoga can reverse the negative impacts on the immune system by increasing levels of immunoglobulin A (IgA) and NK cells. Although it is not known how yoga acts in the body, it is thought to have an immediate effect on the sympathetic nervous system, as well as the hypothalamic-pituitary-adrenal axis. Yoga also has been shown to have an immediate effect on the emotional, social, and spiritual wellbeing of the participant and decreases anxiety.

The use of yoga as a complimentary alternative medicine (CAM) could have vast implications in healthcare by helping people to be able to increase their own self-care. The use of yoga as a CAM is important because 75 to 90 percent of primary care visits are related to stress. Stress has also been linked to many major causes of death such as: heart disease, cancer, lung ailments, accidents, cirrhosis, and suicide. In the study conduction by Hayes and Chase, they made recommendations to primary care providers and gave the following reasons as to why yoga should be prescribed. Yoga has been found to: decrease stress and anxiety, improve function, improve symptoms of lower back pain, improve outcomes in asthma, improve physical measures and quality of life measures in older adults, shorten the duration of labor and improve birth outcomes, and assist with the management of eating disorders.

In response to these numerous benefits of yoga, a new form of yoga that differs from regular yoga practice emerged called yoga therapy. “Georg Feuerstein, the former head of the International Association of Yoga, states: ‘Yoga therapy aims at the holistic treatment of various kinds of psychological or somatic dysfunctions ranging from back problems to emotional distress.’” (p. 18). It is known that people who practice yoga on a regular basis report having increased feelings of happiness, enhanced meaning in their lives, and are able to establish a stronger connection with others. The study of yoga and its effects on the body have only just begun in the Western world and it is thought to have much more than just effects on flexibility, stretching, balance, breathing, the mind, and immune function.

The prescribing of yoga needs to be carefully considered and researched by the provider. Yoga, like any other exercise regimen, can be dangerous to a person’s health if not executed properly. There are also many different forms of yoga and the provider should look into which form of yoga they think would be most beneficial for their patients. Although careful consideration needs to be taken before prescribing yoga, some of the effects that have been shown over time in studies include a significant reduction in heart rate and blood pressure. A few more positive effects of yoga on persons that practice yoga as a means of self-care include: improved quality of sleep, improved mental health, and significant reduction of stress and anxiety (Diamond, 2012, pgs. 16-19). Since yoga has few side-effects (when taught by a certified instructor), is low in cost, and can be practiced virtually anywhere by everyone regardless of age or physical ability, it is highly encouraged as a means for one to take their health into their own hands and improve their quality of life.

## Literature Review

In an article found in the journal *Alternative Therapies*, a study was presented on the effects of yoga on inner-city children's well-being and perceptions of themselves. In this pilot study the researchers looked at inner-city fourth and fifth grade students. They conducted the study at two afterschool programs at which they offered one hour per week for 12 weeks of yoga and at the other program one hour per week for 12- weeks of non-yoga activities. The tools used in the measurements of this study included the "Harter's Global Self-Worth and Physical Appearances subscales" as well as secondary scales "Perceptions of Physical Health and Yoga Teachings" (p. 36). Measures were taken pre-interventions and post. They measured the child's strength and flexibility, balance, and overall well-being. The results showed that the children whom were in the yoga interventions group had higher post intervention measurement and a higher level of well-being in comparison to the non-yoga group. The study states, "The majority of the children participating in yoga reported enhanced well-being, as reflected by perceived improvements in behaviors directly targeted by yoga (eg. Strength, balance, flexibility)" (p. 36). Although the study could not come to conclusive evidence that incorporation of yoga had life changing effects on the overall well-being of the child, the children did report a lessened stress and negative behaviors in their lives post interventions. This was just a pilot study but most definitely opens new doors to further trials and studies to aid in drawing conclusive results. Yoga has proven to be a body and wellness strengthener and with further evidence could maybe be a predominant intervention to improving the overall health and well-being of individuals.

Moving on to a study that was done with young adult age groups demonstrated similar results; however, this study was more directed to the illness of depression and if yoga could aid in reducing symptoms of depression. This study wished to further analyze the feeling of uplifting

moods in hopes to aid in reducing the depression symptoms of young adult individuals. The objective was to, “examine the effects of short-term lyengar yoga course on mood in mildly depressed young adults” (p. 60). At a college recreational center, 28 young adults who were pre-screened for signs of depression were assigned to either a yoga intervention group or wait-list control group. The participants in the yoga group attended two one-hour classes of lyengar yoga each week for five consecutive weeks. There was an emphasis on yoga poses and breathing that were found to alleviate depression. The tools used to measure the effects of the group included the “Beck Depression Inventory, State-Trait Anxiety Inventory, Profile Mood States, and morning cortisol levels” (p. 61). The results were conclusive with other yoga studies in that those whom participated in the yoga intervention saw an improvement in their well-being. In this particular study, those whom participated in the yoga reported a decrease in their depression related symptoms and trait anxiety. Participants also reported a decrease in negative mood and thoughts and decrease in fatigue following the classes. There was also a trend found that those who participated in the yoga had higher levels of morning cortisol compared to the control. This gives a scientific and pathological baseline evidence that this type of intervention could be alluding to the need for a larger scale study to verify results. This could ultimately lead to alternative therapies for those who are displaying signs of depression and could fully study the effects of yoga on mood disturbances, hopefully eliminating the harmful and increasing the beneficial.

Referring back to the subject of nurses and the effects of stress reduction in their practice, one could see how studies of how yoga could be beneficial to this aggregate as well could be completed. In a study found in the journal *Issues in Mental Health Nursing*, the authors explored a hospital facility that incorporated yoga and Tai Chi exercises into their employees’ daily

activities and looked at the outcomes that came forth. The article states, “Given the current necessity of retaining qualified nurses, a self-care program consisting of Yoga, Tai Chi, Meditation classes, and Reiki healing sessions was designed for university-based hospitals”(p. 1141). The effectiveness was measured using self-care journals and analyzed using Heideggerian phenomenological approach. The study looked at elements of the nurses, the classes themselves, the stress the participants face daily, and how adding these elements into the healthcare field could be holistically beneficial. The outcomes were similar to those found in other studies. The participants reported, “Sensations of warmth, tingling, and pulsation which were relaxing, becoming aware of an enhanced problem solving ability, and noticing an increased ability to focus on patient needs” (p. 1150-1152). Overall, if hospitals took on a program such as this one, they too could often see the essential benefits in their nurses and care of their patients as well. In conclusion, the study states, “Hospitals willing to invest in self-care options for nurses can anticipate patient and work related benefits”(p.1152). Not only will they retain their nurses, but the nurses themselves will be healthier and more alert and that makes for better patient outcomes and less risks within the hospital facility.

The abundance of studies that continually prove the multiple mental and physical health benefits of yoga, deep breathing, and relaxation exercises should be evidence enough to start programs in hospitals and universities for nurses and nursing students to help them alleviate their stress and anxiety levels and create a safer environment for all involved.

### **Data Collection Information and Analysis**

Overall, stress reduction, in whatever form, has been proven to be highly effective. Whether in aiding to reduce illness symptoms, to improving self-worth and well-being, to aiding

in keeping employees and professionals safe and healthy, it is essential to teach and learn these elements and incorporate them into one's everyday life. Stress is a good thing when it is handled in a safe and healthy manner. It can be trying, but can be handled. There are many practices out there that have more than proven to be effective, it is just a matter of finding what is most helpful and beneficial to the individual.

Through use of this knowledge, the authors created a "De-stress" class to incorporate into the very hectic and stressful lives of nursing students. The authors' hopes are that by teaching nursing students these elements they will take them forward with them and use them to stay healthy, successful, safe, and well in their future practices.

In developing this de-stress class, the authors first reviewed literature on the subject of yoga and deep breathing exercises which helped them to choose what kind of activities they wanted to incorporate into their de-stress class (See Appendix A for probable agenda made after research and Appendix B for the flyer made for the De-Stress classes). They began the class by helping the participants to get into a relaxing state of mind by simply practicing a deep breathing exercise that lasted about five minutes. The participants were then asked to stand and take part in some simple, yoga-like stretches to help relax their tense muscles. The participants were told before participating in the yoga-like exercises that the authors of this paper who conducted the de-stress classes were not certified yoga instructors, to not over-stretch to the point of pain or discomfort, and to only participate in exercises they felt comfortable doing and were given the option to not take part in this portion of the class if they felt uncomfortable. The final part of the class was a 20 minute guided, whole-body relaxation exercise that had the participants practice more deep breathing exercises, relax all muscle groups from toe-to-head, and learn to use "anchoring" as a future technique of relaxation, all while listening to calming music to give the

participants something to focus on other than their own thoughts to promote the greatest possible relaxation (See Appendix C for de-stress class script).

The participants were asked to complete a pre- and post- survey with their participation in the De-stress class. The pre-survey asked what track the participants were in (track relates to the semester number the nursing students are in and the nursing program at NIU is 5 semesters), what classes they were currently taking, to rate their current stress level, they were asked if they had ever participated in a yoga or deep breathing class previously, and they were asked to choose their coping mechanisms for stress (i.e. watching TV, hanging out with friends, exercising, etc..) (See Appendix D for pre-survey questions). The participants were also asked to complete a post-de-stress class survey which had them rank their stress level after completion of the de-stress class, were asked if they thought the de-stress class helped relieve their stress, were asked if they would consider participating in a yoga or deep breathing class after participating in the de-stress class, asked if they felt as though they were more open to learning and/or absorbing information after their participation, and to list reasons as to why the de-stress class did or did not help them (See Appendix D for post-survey questions).

The first De-Stress class was held on Wednesday, November 6, 2013 from 3pm-4pm. All of the participants were 5th track students. The stress level (rated on a 0-10 scale, 10 being the worst) ranged between 2 and 7 on the scale. More than half of the class had participated in yoga or a deep breathing class previous to the authors' de-stress class. The top five ranked activities used to decrease stress levels were: watching TV, spending time with significant other/family, listening to music, going/hanging out with friends, and eating junk food.

The post-survey data showed that on the stress scale after participating in the de-stress class the participants rated their stress level between a 0 and 3 on the scale. The majority of the participants felt as though the class: helped them relieve stress, would consider using yoga and deep breathing as a stress relief activity, and felt as though they were more open to learning/absorbing information. The top two responses as to how the de-stress class did or did not help the participants of the de-stress class were that it helped them because they now felt relaxed and helped because it helped them to relieve some tension in their muscles (Appendix E contains the results of the pre- and post-surveys of De-Stress class number one).

The second De-Stress class was held on Tuesday, November 19, 2013 from 3pm-4pm. This class was slightly different than the first because the authors asked the participants to count their heart rate for 30 seconds and multiply by 2 before and after the De-Stress class (giving the heart rate for a full minute, this is the most accurate notation of the person's heart rate level). The authors also offered some testing strategies and advice to this group of nursing students before the De-Stress class and made themselves available after the De-Stress class for questions because this class consisted of 4th track students and the authors were 5th track students that were willing to give advice about the semester to come. The participants were still asked to complete the same pre- and post-survey that the first De-Stress class participants were asked to complete.

As mentioned before, this De-Stress class consisted of 4th track students. The stress level rated on the 0-10 scale for this De-Stress class ranged between 2 and 5. The majority of the participants had participated in a yoga or deep breathing class previous to the De-Stress class. The top five outlets for stress in this group were: watching TV, listening to music, sleeping/napping, going/hanging out with friends, and exercising (See Appendix F for full results of the pre-survey for De-Stress class number two).



After participating in the De-Stress class the participants rated their stress level between 0 and 3 on the stress scale. The majority of the participants: felt as though the De-Stress class helped them to relieve stress, would consider using yoga and deep breathing as stress relief activities, and felt as though they were more open to learning/absorbing information. The top three responses as to why the De-Stress class did or did not help them relieve stress were: the class helped because they felt relaxed after participating, that the class was helpful because they forget to take the time to relax, and that they did not find the class helpful because of condition in the environment of the classroom the De-Stress class was held in (See Appendix F for full results of the post-survey De-Stress class number two).

After reading the article titled “Arterial Blood Pressure and Cardiovascular Responses to Yoga Practice,” the authors thought it would be interesting to have the participants count their heart rate before and after participation in the De-Stress class. Although the authors found that some of the heart rates increased after participation in De-Stress class, the majority of the class’ participants’ heart rates decreased after participation. What was even more shocking to the authors is that 16 of the 52 participants heart rates decreased by 6-10+ beats per minute. This helps the authors to prove some of the immediate physical effects that yoga-like exercise and deep breathing can have on the body (See Appendix G for the full results of the heart rate data).

### **Generalized Conclusion and Future Suggestions**

The authors of this paper believe that incorporating a similar de-stress class into the nursing curriculum at NIU at least once every two weeks in specified classes could really be beneficial for the nursing students and improve academic success by the students not experiencing as much distress. Learning de-stress techniques and including them in the students’

every-day lives could help to improve the health of NIU's nursing students, as well as improve the health of future nursing practice since those that attend NIU will have these relaxation techniques for life and can teach them to future co-workers and even patients. The implications of the results from the surveys conducted in both de-stress classes suggest that 40 minutes of focusing on relaxing decreased the students' perceived amount of stress and many students reported that the de-stress class helped them to relax and reminded them of how important it is to take the time for oneself to just relax, which the authors know is quite easy to forget when one is attending nursing school. Also, taking note of the decrease in heart rate of many of the participants in the second de-stress class shows the instant impact that these relaxation exercises can have on the physical aspects of the body that allow a person to become more relaxed.

Although further research needs to be delved into how exactly yoga and yoga-like exercises affect the body, many of the studies reviewed by the authors had only positive things to say about the effects of yoga and yoga-like exercise. The authors were not able to find many articles on deep breathing and its effects on stress but since breathing exercises are components of many relaxation exercises, the authors believe that is evidence enough to prove the great implications this simple exercise can have on stress and anxiety.

### References

- Berger, D., Silver, E., & Stein, R. (2009). Effects of yoga on inner-city children's well-being: a pilot study. *Alternative Therapies In Health & Medicine*, 15(5), 36-42.
- Breath control helps quell errant stress response. Harvard Women's Health Watch. 6-7.
- Diamond, L. (2012). *The benefits of yoga in improving health*. *Primary Health Care*, 22(2), 16-19.
- Gibbons C. , Dempster M. & Moutray M. (2011) *Stress, coping and satisfaction in nursing students*. *Journal of Advanced Nursing* 67(3), 621–632. doi: 10.1111/j.1365-2648.2010.05495.
- Miles, S., Chou, C., Lin, H., Hunter, S., Dhindsa, M., Nualnim, N., et al. (2013). Arterial Blood Pressure and Cardiovascular Responses to Yoga Practice. *Alternative Therapies*, 19(1), 38-45.
- Raingruber, B., & Robinson, C. (2007). The effectiveness of Tai Chi, Yoga, Meditation, and Reiki healing sessions in promoting health and enhancing problem solving abilities of registered nurses. *Issues In Mental Health Nursing*, 28(10), 1141-1155.
- Say 'no' to fatigue, 'yes' to yoga*. (2012). *American Nurse*, 44(1), 7.
- Trossman, S. (2012). *Participants at ANA conference learn strategies to help themselves and their patients*. *American Nurse*, 44(4), 12.
- Woolery, A., Myers, H., Sternlieb, B., & Zeltzer, L. (2004). A yoga intervention for young adults with elevated symptoms of depression. *Alternative Therapies In Health & Medicine*, 10(2), 60-63.

**Appendix A**  
Probable agenda made for class post initial research

**De- Stress to Success**  
**Calendar and Event Details**

**Dates to which the Class will be held:**

1. Friday October 4<sup>th</sup>
2. Friday October 25<sup>th</sup>
3. Friday November 8<sup>th</sup>

Classes will be held for an hour and a half

**What is included in this class? :**

1. Pre-Interview on current stressors
2. Some Deep Breathing pre-relaxation exercises
  - a. Tuning on relaxing sounds/music
3. Beginning of Meditation
  - a. Learning and using a mantra or positive distractions
  - b. Take yourself to a calming place
  - c. Let every part of yourself become calmed
  - d. Feel safe and at peace
4. Deep Breathing exercises
  - a. Square Breathing
  - b. Down step breathing
5. Positional Breathing
  - a. Sitting up with legs crossed
  - b. Sitting with extended legs and arms
  - c. Get into a laying position with everything relaxed
6. Come back to with the group
  - a. Gently and slowly come back to reality
  - b. Stretch each relaxed limb
  - c. Slowly rise up to standing position
  - d. Stretch to the sky
  - e. State: "I am now a stronger, smarter, and focused person. I can now take on the tasks at hand for me today"
7. Evaluation Survey
  - a. Give suggestions for next class
  - b. Things one would like to incorporate

Appendix B  
Poster for announcing De- Stress Class



# De-Stress to aid in Nursing Success!

Emily Whittle and Jessica Jenkins need your help in completing their Honors Capstone project! We want to see if stress reducing activities such as yoga-like stretching and breathing exercises as well as stress/anxiety

reducing exercises can not only reduce face but to also see if these activities academic success(es) as well.

## Just

the stress and anxiety nursing students have an effect on nursing students'

## Breathe...

and smile.



## When we want to see you there!!!

Wednesday, November 6<sup>th</sup> (3:00-4:00pm, Rm 100)

Tuesday, November 19<sup>th</sup> (3:00-4:00pm, Rm 111) ~ Test taking strategies presented.

Feel free to bring your yoga mat with you. As part of your participation we ask that you complete our pre- and post- de-stress class surveys. We hope to see you there, and remember... Just breathe and Smile because you will be successful!



# BEAT STRESS HAVE SUCCESS

## Appendix C

### Script for De-Stress Class

#### **Relax Under Pressure: Guided Relaxation Script**

Learn to relax under pressure with this guided relaxation that will help you to remain calm and focused in a high pressure environment, such as a job interview, presentation, or test. Listen to this relaxation exercise in preparation for the high pressure situation, and then when you are faced with the task you can use the relaxation skills you have learned to keep yourself focused and calm, and not be nervous.

Get into a comfortable position, and set aside a few minutes so you can practice relaxing. The more you practice, the more easily you will relax under pressure. This exercise will review three ways to relax under pressure, including calm breathing, relaxing tense muscles, and calming your thoughts.

Start by concentrating on your breathing. Breathe in...and out.  
Deeply in...and slowly out.  
In...out.

Keep breathing slowly like this. You can slow your breathing even further by counting. Breathe in to the count of four...hold to the count of three...and breathe out to the count of five...

Breathe in...2...3...4...hold...2...3...exhale...2...3...4...5...  
Breathe in...hold...breathe out...  
Breathe in...and out...

Keep breathing...letting your breath slow comfortably.

You are learning the relaxation skill of slowing your breathing. You can actually feel yourself calming down as you breathe slowly and calmly. This calm breathing helps you focus, and be alert and relaxed. You are learning how to relax under pressure.

#### **Relaxation stretching:**

##### **Sun Salutation**

###### Sun Salutation Step 1

1. Stand with both feet touching. Bring your hands together, palm to palm, at the heart. Make sure your weight is evenly distributed. Exhale.

###### Sun Salutation Step 2

2. Raise your arms upward. Slowly bend backward, stretching arms above the head. Relax your neck. Inhale.

###### Bend Forward Step 3

3. Exhale while you slowly bend forward until your hands are in line with your feet, touching your head to your knees, if possible. Press your palms down, fingertips in line with toes (bend your knees if you have to), and touch the floor.

4. Raise your arms upward. Slowly bend backward, stretching arms above the head. Relax your neck. Inhale.

## Plank Step 5

5. Bring your left foot together with your right foot.

## Push Up Step 6

6. Exhale as you lower your body, resting on your forearms.

## Upward Facing Dog Step 7

7. As you inhale, lower your pelvis to the ground and raise your head and bend backward as far as possible, while straightening your arms.

## Push Up Step 6

1. Exhale as you lower your body, resting on your forearms.

## Plank Step 5

2. Bring your left foot together with your right foot.

## Bend Forward Step 10

3. Keeping your hands in place, bring both feet together. Straighten your legs but keep your waist bent and upper body lowered. Touch your head to your knees, if possible. Exhale.

## Sun Salutation Step 11

4. Slowly rise, straightening your back into a standing pose. Bend backward, stretching your arms above your head as you inhale.

## Mountain Pose Step 12

5. Return to position number 1. Exhale.

**Muscle Relaxation****Induction:**

Begin by finding a comfortable position, seated or lying down.

Take a deep breath in, and as you exhale, allow your body to begin to relax.

Breathe slowly and naturally.

Raise your shoulders toward your ears. Then, let your shoulders relax.... dropping into a comfortable, loose position, and feel yourself sinking into the surface you are on.

Allow your jaw to drop slightly, letting the muscles of your face and jaw become loose and relaxed.

Wiggle your toes once or twice and feel your feet and legs relaxing.

Gently open and close your hands once... and again... and then relax your hands and arms. Take a deep breath in, feeling the tension in your chest and stomach as you hold that breath...

And allow your chest and stomach to relax as the breath escapes slowly.

Allow the muscles of your back to relax.... from your neck..... to your upper back..... middle back..... lower back..... feeling your whole body relaxing.

Notice any areas of tension in your body, and relax those areas now.

Your body will continue to relax... deeper and deeper.... loose.... heavy.... relaxed.

Relaxation:

Stretch the muscles of your face as you open your mouth wide and breathe in .... yawn if you wish.... stretch the muscles of your face.... and let your face slacken gently as you breathe out.... relax completely.... let your lower jaw hang loosely below your upper jaw, your teeth not touching.

Scan your body for areas of tension as you take another deep breath in. Feel the tension in your body as you hold that breath. Now let the tension go as you let the breath go.

Point your toes, stretching your legs. Release the muscles of your legs and relax. Now bring your feet upward, toward your shins, stretching the back of your legs. Release the stretch, relaxing your legs completely.

Let your legs become limp.... loose and relaxed....

Let your arms become relaxed and loose....

Notice how your body feels.

Feel the relaxation flowing through your body. Notice that you can become even more relaxed.... wiggle your toes once or twice, and then allow your toes to be still and relaxed.

Feel the relaxation flowing.... spreading.... until your feet are relaxed as well.

Let the relaxation continue to your ankles. Feel how loose and relaxed your ankles feel.

Now allow the muscles of your lower legs to give up their hold. Feel the relaxation in your lower legs... calm..... relaxed.... heavy..... relaxed.....

Enjoy the feeling of relaxation as it continues to your knees..... then your upper legs.... feel your thighs legs relaxing and letting go.... your legs feel very heavy..... very heavy, and very relaxed.....

Feel the relaxation flowing.... allow your buttocks to relax.... your pelvic area.... and now your abdomen..... feel the muscles becoming loose and relaxed.... letting go of all the tension.... relaxed and heavy.....

Allow your lower back to relax..... feel the relaxation there as the muscles of your lower back give up their hold.... leaving nothing but relaxation... calm.... peaceful....

Let the relaxation continue to flow throughout your body, spreading now to the muscles of your sides..... feel your sides, abdomen, and chest gently moving in and out with each breath.... each breath making you even more relaxed.....

Allow the muscles of your sides to let go.... feel the relaxation filling your core.... relaxing your chest and stomach..... your middle back..... your upper back.....

The relaxation continues to increase.... pleasantly more and more relaxed.... deeper and deeper..... feel your shoulders relaxing.... your upper arms.... your elbows....

Feel your arms relaxing more and more.... becoming heavier and heavier... let the relaxation continue... spreading to your lower arms.... your wrists.... and your hands....

Your arms become completely limp and relaxed.... pleasant.... relaxed....

Let the relaxation continue from your lower back.... middle back.... and upper back.... to your neck.... the back of your neck and the front of your neck.... the back of your head... the top of your head.... your chin.... your face..... your jaws....

Feel your cheeks relaxing.... becoming completely loose and relaxed..... feel your lips relaxing.... becoming soft and relaxed..... let your tongue relax..... feel your nose relaxing... let your eyes relax..... your eyelids are very heavy and relaxed..... feel your eyebrows relaxing.... and your forehead becoming smooth, cool, and relaxed....



Your whole body is now fully relaxed...

Enjoy the relaxation you are experiencing... use your left thumb and two fingers to gently squeeze your right thumb, while at the same time saying silently "relax," anchoring the feeling of relaxation to this spot.

Experience the feeling of deep relaxation. Notice your breathing. Notice how calm and regular your breathing is.... watch your breathing, without trying to change it in any way.

As you breathe in, say in your mind "I am relaxed."

As you breathe out, mentally say "I am calm."

I am relaxed

I am calm

I am relaxed

I am calm

Now squeeze your right thumb while mentally saying, "relax." Let the anchoring occur as this spot becomes associated with the peaceful, relaxed state you are in.

Feel the relaxation deepen each time you squeeze your right thumb while saying "relax." Continue to allow the relaxation to flow throughout your body.... calm.... peaceful... relaxed.....  
(pause)

Memorize this feeling of relaxation. Notice how your body feels. Notice how calm you are. Create a picture in your mind of this state of relaxation. With this image in mind, gently squeeze your right thumb one more time while saying to yourself, "relax." Feel the relaxation deepen. This spot is an anchor to remind you of the relaxation you are feeling right now. In the future, when you squeeze your right thumb, the feelings and memories of how relaxed you are right now will fill your mind, and your body will automatically relax.

You are as relaxed as you want to be. Calm... Relaxed.....

Warm...safe....comfortable...relaxed...

(pause)

You can use anchoring any time to cue your body to relax. Remember the pleasant, peaceful state of relaxation, and know that your anchor can remind you of the relaxation you experienced.

Conclusion:

Now it is time to reawaken your body and mind. When you are ready, start to move your muscles a little, feeling each muscle reawaken.

Wiggle your fingers and toes. Open your hands... then close them... and open them once again.

Roll your shoulders forward..... and back.... feeling your muscles reawakening.

Lean your left ear toward your left shoulder.... return to center.... and move your right ear toward your right shoulder.... then return to neutral.

Stretch a bit, feeling the energy flowing through your body.

Take a deep breath, reaching your arms up above your head as you inhale, and lowering your arms out to the sides and down as you exhale.

Take one more deep breath in, feeling fully alert and awake as you exhale. Return to your usual activities feeling calm and refreshed.

### *Reference*

Raudebaugh, C. (n.d.). Custom Relaxation Scripts. Create Your Own. Retrieved October 4, 2013, from <http://www.innerhealthstudio.com/custom-relaxation-scripts.html>

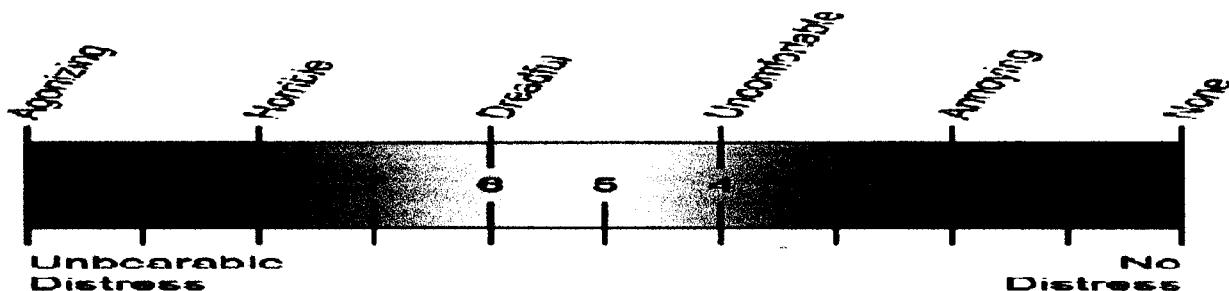
**Appendix D**  
Pre-Survey Example

De-Stress Class Pre-Survey

What track are you in?

1<sup>st</sup>                  2<sup>nd</sup>                  3<sup>rd</sup>                  4<sup>th</sup>                  5<sup>th</sup>

What classes are you currently taking, including clinical?



As of right now, what is your stress level? (Circle number)

Have you participated in yoga or a deep breathing class before, either independently or in a class?

Yes

No

What do you normally do to relieve stress? Select all that apply.

Listen to music

Drink alcohol

Watch TV

Go for a walk

Go out/hang out with friends

Exercise

Smoke cigarettes

Go shopping (online or stores)

Eat junk food

Spend time with significant other/ family

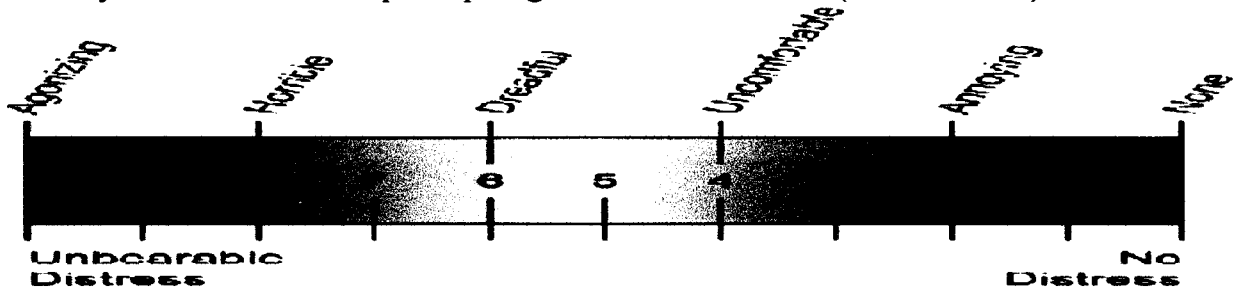
Sleep/nap

Other(s) \_\_\_\_\_

**Appendix D Continued**  
**Post Survey Example**

De-Stress Class Post-Survey

1. What is your stress level after participating in the de-stress class? (Circle number)



2. Do you feel as though the de-stress class helped you to relax and relieve stress?

Yes

No

3. Would you now consider using yoga-like exercise and deep breathing as a stress relief activity?

Yes

No

4. Do you feel as though you are more open to learning/absorbing information after participating in this yoga class?

Yes

No

5. Please list the reasons why you believe this class did or did not help with your stress and relaxation level and why.

### Appendix E

#### Pre-Survey Results from Class One

1. Track	5 <sup>th</sup> → 54 participants
----------	-----------------------------------

2. Classes those participants are enrolled:

- Gerontology: NURS 431
- Leadership Nursing: NURS 432
- Transition to professional Nursing: NURS 435
- Leadership Clinical
  - Swimming: KNPE 120
  - Basketball: KNPE 178
  - ROTC PROGRAM

3. Stress scale

10	9	8	7	6	5	4	3	2	1	NO RESPONSE
0	1	4	10	8	6	10	6	6	1	4

4. Participated in Yoga or deep breathing before?

Yes:	43
No:	11

5. Activities participants complete to relieve stress:

Activity:	Number who complete activity:
Listen to Music	35
Watch TV	37
Go out/hang out with friends	32
Smoke Cigarettes	8
Eat Junk food	27
Sleep/Nap	20
Drink Alcohol	12
Go for a walk	16
Exercise	30
Go shopping online or at stores	24
Spend time with significant other/family	36
Other:	PRAY, ARCHERY, BOXING, COLOR RUN, SING, PLAY SOCCER PLAY VIDEO GAMES, GO OUTSIDE, PLAY WITH ANIMALS, IMAGERY, PROGRESSIVE MUSCLE RELAXATION, ABDOMINAL BREATHING

**Appendix E Continued**  
Post Survey results from Class One

## Post Survey

1) What is your stress level after participating in the de-stress class?

0	1	2	3	4	5	6	7	8	9	10
14	8	12	9	3	1	3				

No response - 4

2) Do you feel as though the de-stress class helped you relax or relieve stress?

Yes	no
52	2

3) Would you now consider using yoga-like exercise and deep breathing as a stress relief activity?

Yes	no
53	1

4) Do you feel as though you are more open to learning/absorbing information after participating in this de-stress class?

Yes	no
47	7

5) Please list the reasons why you believe this class did or did not help with your stress and relaxation level and why?

Thinking about other things, can't relax - 2

Good to take time to relax the mind and body to function better as a person - 3

Relaxed tension in muscles - 8

No response - 9

Feel like sleeping now - 5

These exercises will help before exams and interviews - 1

Reminded me to take time to breathe/ focus on breathing - 3

Needed more time to feel relaxed - 3

Feel relaxed now - 15

Let me forget about my problems - 4

Soothing environment - 1

### Appendix F

#### Pre- Survey Results for Class Two

1. Track	4 <sup>th</sup> → 52 PARTICIPANTS
----------	-----------------------------------

#### 2. Classes those participants are enrolled:

- Pediatrics Lecture- NURS 422
- Pediatrics Clinical-NURS 433
- Community Health-NURS 419
- Informatics – NURS 425
- Genetics-NURS 408
- Community Clinical- NURS 443
  - EPZE-201

#### 3. Stress scale

10	9	8	7	6	5	4	3	2	1	NO RESPONSE
		1	1	4	12	11	6	11	5	1

#### 4. Participated in Yoga or deep breathing before?

Yes:	40
No:	12

#### 5. Activities participants complete to relieve stress:

Activity:	Number who complete activity:
Listen to Music	36
Watch TV	40
Go out/hang out with friends	34
Smoke Cigarettes	3
Eat Junk food	18
Sleep/Nap	36
Drink Alcohol	12
Go for a walk	20
Exercise	34
Go shopping online or at stores	26
Spend time with significant other/family	32
Other:	READ FACEBOOK COOK PLAY WITH ANIMALS X 2 PAINT/DRAW MEDITATE

**Appendix F Continued**  
Post- Survey Data Class Two

## Post-Survey Results

1) What is your stress level after participating in the de-stress class?

0	1	2	3	4	5	6	7	8	9	10
13	12	8	8	2	4			1		

No response: 3

2) Do you feel as though the de-stress class helped you relax or relieve stress?

Yes	no
44	8

3) Would you now consider using yoga-like exercise and deep breathing as a stress relief activity?

Yes	no
48	4

4) Do you feel as though you are more open to learning/absorbing information after participating in this de-stress class?

Yes	no
43	9

5) Please list the reasons why you believe this class did or did not help with your stress and relaxation level and why?

Thinking about other things – 2

Feel relaxed - 23

Forget about the need to take time and relax – 6

No response – 6

Like to work out to relieve stress, not deep breathing – 1

Back hurt, so laying down wasn't relaxing – 2

Helped release tension in muscles – 2

Feel tired now – 4

Uncomfortable environment -6

**Appendix G**  
Heart Rate Results from Class Two  
**Data Collaboration of Heart Rates Before and After Class:**

Participant's Heart Rate:	Number of Participants:
Increased by 6-10	2
Increased by 2-5	4
Stayed the same or increased/decreased by 1	12
Decreased by 2-5	18
Decreased by 6-10+	16



**Appendix G Continued**  
Complete Set of Heart Rates

PRE-RELAXATION HEART RATE	POST RELAXATION HEART RATE
72	72
70	74
69	68
74	64
72	68
96	88
82	80
48	49
92	86
52	52
80	70
80	64
64	60
68	68
68	68
72	74
48	48
62	54
66	70
62	60
96	90
84	64
92	84
70	86
68	58
70	68
76	76
70	66
68	64
100	100
86	86
94	100
90	86
94	82
86	82
80	88
62	60
66	64
72	64
76	72
84	80
80	76
75	70
90	90
64	60
72	56
92	88
94	84
86	80
82	84
70	70