Relationship of Stress and Physical Activity in Nursing Students

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Abstract

Research has shown that increased physical activity is related to decreased perceived stress in children and adults, but few studies have examined the relationship between the amount of physical activity and perceived stress in college students. Thus the purpose of this study was to investigate the relationship between the amount of physical activity and perceived stress in undergraduate nursing students. Physical activity has been shown to be an adequate coping mechanism for decreasing perceived stress and will be used as the primary coping mechanism in this study. The theoretical framework for this study was Lazarus and Folkman’s Theory of Stress and Coping, which states that how people cope with their stress will affect how they perceive their actual mental and physical health. The study was a descriptive, correlational design with a sample of 98 adult nursing students, 36 sophomores and 62 juniors, with a mean age of 22.26 years, who were enrolled in a Midwest state university. Data was collected using the Student Nurse Stress Index and a survey to record the amount of physical activity in minutes. Pearson correlation coefficients showed that there was no correlation between perceived stress and the amount of physical activity (r= -.08, p= .45). As a result, physical activity was not an adequate coping mechanism in decreasing perceived stress in this sample which suggests that there may be other coping mechanisms that are specific to the individual when trying to decrease their perceived stress.
Stress is a negative response by the body that responds when a person is overwhelmed beyond his or her capacity (Gibbons, Dempster, & Moutray, 2007). Stress has been found to have negative emotional, mental, and physical effects in people, especially when they lack healthy coping mechanisms (Moscaritolo, 2009). College students in particular are exposed to increased stress related to hectic schedules, lack of time, and various responsibilities (Gibbons, Dempster, & Moutray, 2007). According to Moscaritolo, “stress contributes to anxiety, which can in turn interfere with college students’ academic performance by leading to the development of poor coping skills” (pg.18). One method of coping with stress may be incorporating physical activity into one's daily routine. Consistently practiced physical activity has been shown to effectively lower stress by improving mood and decreasing the risk of stress related diseases (Coulter, Dickman & Maradiegue, 2009). Research has shown that increased physical activity has led to decreased perceived stress in adults (Coulter et al., 2009), but few studies have examined the relationship between stress and the amount of physical activity in college students. The results from this study will determine whether the amount of physical activity affects perceived stress in undergraduate nursing students. The purpose of this study is to investigate the relationship between the amount of physical activity and perceived stress in undergraduate nursing students.

**Review of Literature**

**Stress in Nursing Students**

Many researchers have investigated stress in college students. For example, Nicholl and Timmons (2005) studied program related stressors, including the type and amount of course load, in nursing students. They found that the highest ranking stressor was the student’s inability
to balance a work schedule and course studying. They concluded that the student’s balance between work and studying affected the way they managed their time in general which caused more stress rather than the effects of specific aspects of the program.

Moscaritolo (2009) examined the relationship among anxiety, stress, academic performance, and coping skills in nursing students. The researchers focused on the clinical instructors’ use of humor and mindfulness training on student stress in clinical settings and found that both reduced stressed in nursing students. The study outcome revealed that stress is a contributing factor to anxiety, which then results in interference with students’ academic performance and poor coping skills. The findings were consistent with Gibbons, Dempster, and Moutray (2007) who reported that students who cope well are more likely to have a positive outlook on the nursing program and coursework.

Physical Activity in College Students

Many researchers have investigated barriers to physical activity in college students. For example, Brown (2005) found a lack of physical activity performed by college students in spite of access to recreational centers provided by colleges. One barrier to physical activity may be that college students do not have a clear understanding of the benefits of physical activity. Grubbs and Carter (2002) found that college students may not participate in physical activity due to lack of time. The results found that college students are motivated to work out to prevent weight gain, relieve stress, and improve their sense of well-being and self esteem. Finally, Pinto and Marcus (1995) found that there was not a significance difference in the amount of physical activity and the grade level in school. The results also found that female students tended to engage in aerobic exercises, whereas male students concentrated on weight training.
Physical Activity and Stress

Researchers have examined the relationship between physical activity and stress. Coulter, Dickman, and Maradiegue (2009) investigated the effect of physical activity on stress in working women. The results showed that working women are not integrating physical activity into their daily routine which results in higher prevalence in stress-related diseases. Taking into recommendations from healthcare professionals and integrating exercise into a daily routine may prevent health problems, strengthen coping skills, and lead to a healthy lifestyle. The implications were that participation in exercise by working women resulted in favorable effects on multiple body systems, including an increased sense of well-being, a reduced risk for obesity and stress-related diseases, and decreased stress. These findings were consistent with Michael, Unger, Hamilton, and Metz (2006), who studied associations between physical activity and perceived stress. The results indicated that increased levels of exercise were associated with significant decrease in perceived stress. Studies researching physical activity and stress in college students were not found, which presents as a gap in knowledge and will be examined in this study (See Appendix A).

Theoretical Framework

The theoretical framework for this study was Lazarus and Folkman’s Theory of Stress and Coping. According to Lazarus and DeLongis (1983), “sources of stress and patterns of coping arises not only from the environmental conditions of living but also from the personal agendas and characteristics that shape stressful encounters and are shaped by them” (pg. 246). The struggle to make sense of a problem and how to cope with it is centered on an individual’s own beliefs. This struggle “shapes cognitive appraisals of stressful transactions and coping, and
therefore has profound consequences on morale, social and work functioning, and somatic health” (pg. 246). The theory proposes that how people cope with their stress will affect how they perceive their actual mental and physical health.

This research study focused on student’s perceived stress and the amount of physical activity as their coping mechanism. The anticipated outcome of this study is that if students are able to manage and cope with their stress in a healthy way by means of physical activity, then they will have a decreased perception of stress. This is significant because if nursing students can manage their stress, they may be able to focus more on their coursework and perform better in their college programs. Physical activity is a healthy coping mechanism because it not only relieves stress, but it also improves the mental, physical, and spiritual aspects of the whole person (Pinto & Marcus, 1995). Based on the theoretical framework, the hypothesis is nursing students who are physically active will report less stress.

**Methods**

**Design**

The study used a descriptive, correlational design. Cross-sectional data was collected since it is defined as a collection of data including “phenomena under study collected at one time” (Polit & Beck, 2006). This type of design measures the relationship between phenomena (physical activity and stress) at a fixed point (Polit & Beck, 2006).
Sample and Site

The sample of this study consisted of adults who were at least 18 years old and who were sophomore and junior nursing students enrolled in a four-year Bachelor of Science Nursing program at a college of nursing at a Midwest state university. This particular college was founded in 1967, has 1000 students, and is part of a 20,000 plus student state university. Surveys were collected from 36 sophomores and 62 juniors giving a total of 98 undergraduate nursing students.

Procedures

Data were collected through the use of a survey, which according to Polit “collects information on people’s actions, knowledge, intentions, opinions, and attitudes” (pg. 241). No identifying data was collected, and therefore, the surveys were anonymous. After getting permission from faculty to recruit participants during course time, the researchers described the study and distributed consent forms and surveys to participants. The survey was a combination of questions about the frequency and intensity of physical activity and the Student Nurse Stress Index (Appendix B). The study was approved by the Institutional Review Board at the university and written consent was obtained prior to data collection.

Measures

Demographic data were collected about age, race, year in school, gender, residence, marital status, academic workload, employment status, and health habits, including smoking and alcohol consumption.
Physical activity was measured with questions about physical activity frequency and intensity. For example, participants were asked to disclose how many days per week they participate in physical activity and the number of minutes engaged in each day of physical activity. In addition, they were asked to write the type(s) of physical activity they perform (i.e., jogging, weight lifting, etc.). They were also asked to rate the intensity of their physical activity involvements.

Perceived stress was measured with the Student Nurse Stress Index (Jones & Johnston, 1999). Participants were asked to rate stress on a 5 point Likert scale with 1= not stressful up to 5= extremely stressful. They were asked to rate stress in four areas: academic load, clinical concerns, personal problems, and interface worries. The ratings were then added up with the totals ranging from 22-110. The higher the score, the higher the student perceives stress. According to Jones and Johnston (1999),

“This more complex four-factor model was confirmed using independent data from the validation sample, and the total invariance of factor loadings and factor co-variances of this more complex four-factor model was established in both data sets simultaneously using multi-sample techniques. The SNSI shows cross-sample factor congruence, good internal reliabilities, and concurrent and discriminant validity across a range of reporting conditions (pg. 162)”

**Data Analysis**

The data collected was organized using a codebook, entered in an excel worksheet, and imported into Statistical Package for Social Science. Descriptive statistics (percentages, means, and standard deviations) were used to describe demographics, stress, and physical activity. Pearson correlation coefficients were used to determine relationship between stress and physical activity. The level of significance was set at p-values <0.05.
The results of the descriptive statistics show that the mean age of the students was 22.26 years (SD= 4.857). The mean for the amount of minutes per week a student participated in physical activity was 50.30 minutes (SD= 37.542) and the mean Stress Score was 61.94 (SD= 11.035) indicating a result less than the average of the extreme parameters. The results can be found in Appendix C under Table 1. The results also showed there was not a significant relationship between physical activity and perceived stress (r=-0.08, p= 0.45). The results can be found in Appendix C under Table 2.

**Discussion**

There are several reasons why there was not a significant relationship between physical activity and perceived stress in this study’s sample. The results of this study are not supported by other studies. For example, Michael et al. (2006) found that with increased physical activity there was a significant decrease in perceived hassles in a sample of college students. Coulter et al. (2009) found that women who participated in exercise had a reduction in stress. The sample population for the reviewed studies including working middle-age women and private and community college students had decreased stress related to increased physical activity. These findings from these studies differ from the sample population of this study due to the characteristics of this sample including a specified major, mean age, and attendance to a state public university. Differences in results may be attributed to differences in sample size and different measurement tools.

According to *Lazarus and Folkman’s Theory of Stress and Coping*, the struggle to make sense of a problem and how to manage it is centered on an individual’s own beliefs. There are many different forms of coping with stress besides participating in physical activity. Some
examples include meditation, smoking, alcohol consumption, and art therapy. Other stress coping mechanisms were not controlled in study. By only examining the amount of physical activity, other forms of stress relief techniques were not considered.

The sample of nursing students was exclusive in that they had the same course load, nursing school pressures, and similar educational lifestyles based on mean age. With these similarities, the results may not vary enough for a significant relationship to form. Also, the tools used may not have adequately measured the perceived stress or amount of physical activity performed by undergraduate nursing students. By reevaluating these limitations, the results may have shown a significant relationship between perceived stress and physical activity.

**Conclusion**

For this sample of nursing students, the results showed there was no significant relationship between physical activity and perceived stress. The results may have been skewed based on limiting the population and stress-relieving variables to only physical activity. Undergraduate nursing students may need to have individual stress-relieving activities besides exercise. While exercise has shown to have multiple positive effects on reducing stress, other activities may be more effective for reducing stress in certain individuals. This is important to the nursing practice because nursing students need a healthy way to cope with perceived stressors related to the college program in order to learn and participate successfully. Nurses should emphasize to their patients the importance of stress relieving activities and the many different forms of them so that patients can implement healthy coping mechanisms to keep a healthier lifestyle. In future studies, other factors besides physical activity for stress reduction should be measured.
References


Appendix A

Summary Table

Review of the Literature

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Year</th>
<th>Theoretical Framework</th>
<th>Problem Question</th>
<th>Sample Design</th>
<th>Variables</th>
<th>Reliability Validity Statistics</th>
<th>Findings Conclusion</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Student Stress and academic performance: home hospital program</td>
<td>2009</td>
<td>N/A</td>
<td>Problem: The stress caused by nursing school curriculum may impede learning and functioning of the students and may lead to attrition.</td>
<td>Sample: Convenience sample Students admitted to the upper division four semester nursing program between fall 2005 and fall 2006</td>
<td>Design: Quasi-experimental, two group design</td>
<td>Stress: Measured using the Student Nurse Stress Index (SNSI) Anxiety: Spielberger's State Anxiety Inventory Academic Performance: Measured using Nursing Grade Point Average, Nurse Entrance Test (NET), RN CAT (mock NCLEX), NCLEX-RN</td>
<td>SNSI shows cross-sample factor and congruence and good internal consistency Spielberger's internal consistency between 0.83 and 0.92, test-retest reliability between 0.16 and 0.62 NET is validated by showing a substantial relationship with ACT scores.</td>
<td>The students in the home hospital group showed greater reduction of state of anxiety and perception of academic load. There was no difference in academic performance from the home hospital group and the control group</td>
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<tr>
<td>2</td>
<td>Problem: The difficult nursing curriculum required in universities may be leading to a decrease in people choosing nursing as their profession.</td>
<td>Design: Longitudinal cohort survey, using questionnaires, psychometric tests, and college information.</td>
<td>Mental ability: Measured using Alice Heim 4 test.</td>
<td>Students experienced increasing levels of stress and use of negative coping mechanisms as the program progressed and psychological morbidity increased.</td>
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<td></td>
<td>Sample: Nursing students that attended a nursing school in Scotland from 1996-1999. Students of adult and mental health nursing were used as well as students in a foundation program.</td>
<td>General Health: general health questionnaire.</td>
<td>Burnout: measured using Maslach Burnout Inventory.</td>
<td>Cognitive ability was found not to be as important as personality when it came to attrition.</td>
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<td></td>
<td>Stress: 43 item questionnaire made by one of the authors using a scale of 1 to 5.</td>
<td>All the comparisons were based on t-tests for related samples.</td>
<td>All of the stability coefficients showed significance with a p value less than 0.001.</td>
<td>Conclusions: Stress, attrition and burnout may not be directly related.</td>
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<td></td>
<td>Statistics: entered into an</td>
<td>The general health questionnaire was not based on a t-test but was compared using the Wilcoxon Signed Ranks test with Monte Carlo significance.</td>
<td></td>
<td>Personality led to attrition and burnout, but the findings were not significant enough to be</td>
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</table>

their clinical there.

The measurement of attrition, small number of males involved, the fact that there were different programs within the overall program
<table>
<thead>
<tr>
<th>3</th>
<th>Programme-related stressors among part-time undergraduate nursing students</th>
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<tbody>
<tr>
<td>Nicholl, Honor Timmins, Fiona</td>
<td>2005</td>
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</table>

- theoretical model N/A
  - described as "curiosity-driven research"

The problem: program-related stressors among part-time undergraduate nursing students

The purpose of the study: to explore the perceived stressors in nursing students at an Irish University

Convenience sample: 70 Registered Nurses who were undertaking a part-time Bachelor of Nursing Science program at a Irish University. 91% were female and 85.7% of the participants were under 40 years old.

Design: A descriptive exploratory design using questionnaires based on different stressors related to the program was used

The program stress makers including the structure, process, and product of the program and the personal issues and the level of stress experienced by the students

The questionnaire was modeled off the Nurse Stress Index and General Health Questionnaire.

- validity of questionnaire was tested by having four nurse experts examine the survey.
- reliability had a α coefficient was .95 which is greater than the acceptable level of .5.

The findings of the study ended up ranking the reported stressors.

- The overall highest rank was 'trying to balance work commitments and the required study'.
- Overall, it appeared that work/study balance affected their management of the programme in general rather than specific aspects.

Small sample size does not accurately represent the college.

- It only collected subjective perceptions of the topic.
- Students also might have answered based on what they thought the researchers wanted instead of their true feelings.
The problem: challenging environments that cause students to experience stress and anxiety. The purpose of this study: to provide clinical nursing faculty with strategies to decrease undergraduate student nurse anxiety in the clinical setting.

The design: educative piece for clinical nursing instructors to decrease student stress and anxiety. Used 10 peer-reviewed literature pieces dated from 2001 to 2006 that described the contributing factors to anxiety and what strategies are effective for reducing that anxiety.

The nursing student’s levels of stress and anxiety in the clinical setting and the strategies used by the clinical instructor to reduce that stress and anxiety.

The validity and reliability of the strategies suggested by the author are evaluated from the literature researched. No specific tools were used, other than the statistics and results found in other research studies.

The use of humor, peer instructors and mentors, and mindfulness training are the three strategies described as effective ways to decrease stress and anxiety in nursing students. These strategies will allow the student to have higher success in the clinical settings thus learning more and being more confident in their skills.

There is research suggesting how effective these strategies are mentioned by the author. While they might be helpful, there needs to be a study to describe the extent of using them to be truthfully effective at reducing stress and anxiety in nursing students.
<table>
<thead>
<tr>
<th>Study</th>
<th>Job-Demand-Control-Support Model</th>
<th>Problem: stress in nursing students</th>
<th>Purpose Statement: to identify experiences that led to both distress and eustress and to make recommendation to help students cope with course demands</th>
<th>Design: a qualitative research design including focus group interviews</th>
<th>Experiences of stress and coping measures -students shared experiences and causes of stress and the researcher guided conversation about how to cope with it</th>
<th>Focus groups were audio recorded and transcribed. -validity and reliability N/A -two researchers transcribed the recordings independently to evaluate themes discussed</th>
<th>Four themes were identified: Clinical experience, levels and sources of support, learning and teaching experiences, and course structure -students who cope well draw on effective support networks and adopt a positive, optimistic perspective towards course demands</th>
<th>-convenience sample was small and all female -expression of stress sources and experiences might limit the student to fully express their feelings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress and Eustress in Nursing Students</td>
<td>Gibbons, C Dempster, M Moutray, M</td>
<td>2007</td>
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<td></td>
<td>Problem: College students are not getting as much physical activity as they should be getting.</td>
<td>Design: 1 longitudinal study and 2 cross-sectional studies. Procedures varied across each study, but the results of the studies were identical.</td>
<td>Perceived benefits and perceived barriers: measured using the Exercise Benefits/Barriers Scale (EBBS)</td>
<td>Conducted tests of internal consistency, factor analysis, and test-retest reliability. Examined relationship between an established measure of self-efficacy and EBBS</td>
<td>Findings: College students have the ability to engage in physical activity due to access to fitness centers and low rates of chronic illness.</td>
<td>Conclusion: Perceived benefits and barriers still play a significant role in whether individuals choose to participate in physical activity</td>
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<td>6</td>
<td>Measuring perceived benefits and perceived barriers for physical activity</td>
<td>Sample: 398 undergraduate students from introductory psychology classes at a Midwestern university, ages 18-35, 57% female, mostly white</td>
<td>Self-efficacy: measured using the Physical Exercise Self-efficacy Scale</td>
<td>EBBS had good reliability, convergent validity and internal consistency</td>
<td>The researchers used only 5 of the 14 factors on the EBBS. If they would have used all of them or different factors they may have had different results.</td>
<td>The physical activity recall could have been more specific by including more sports in various categories.</td>
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<td>Seth Brown</td>
<td>Question: What is the psychometric relationship between physical activity levels of the Exercise Benefits/Barriers Scale and college students?</td>
<td>Physical Activity: Seven-day Physical Activity Recall</td>
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<td>The Relationship of Perceived Benefits to Reported Exercise Behaviors in College Undergraduates</td>
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<td>Grubbs, L. &amp; Carter, J. 2002</td>
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</table>

- **Health promotion model (HPM) developed by Pender**
- **Convenience sample used at southeastern university 147 college undergrads 18 to 24**
- **Descriptive correlational study**
- **-exercise (self report of exercise defined as involvement of a large muscle group for 20 minutes or more 3 days a week or more; self report)**
- **-no exercise**
- **-perceived stress (measured using EEBS)**
- **Correlation coefficient of .889 for the EEBS, .893 for the 23 benefits and .772 for the barriers**
- **-ANOVA used**

- **The college students’ results were more similar to the results of adolescents and higher activity rates were reported than adults and older adults. The researchers found that the more perceived barriers a student has the less likely they are to exercise. The most frequent barrier was time restraints. The most frequent motivation factors were prevention of weight gain, stress relief, or improvement in sense of well being and self esteem.**
- **Data was self reported**
- **82% female**
- **enrolled in either anatomy/physiology or an ethics class**
- **convenience sampling.**
| 8 | **Stages of change approach to understanding college students’ physical activity**
   | **Pinto, B. & Marcus, B. 1995** |
|---|---|
| **Stages of change approach** | How will a college student population fit into a stages of change model regarding exercise? |
| **Convenience sample of 217 students from a private university**
   | **-secondary analysis**
   | -amount of exercise (measured as 20 minutes a day or longer three or more times a week; self-report)
   | -self-selected respondents - stages of change measured as; precontemplators- those who did not respond to the question on exercise; contemplators- those who endorsed responses indicating that they exercised up to three times per month; preparation- those who exercised up to twice per week; action- exercised three or more times per week;
   | -type of exercise measured by self-report
| **-to determine distribution across stages of change frequency counts were used**
   | -stage of exercise, adoption, gender and year in school were tested using chi-squares
| **-54% of participants in active phase, no difference in year in school**
   | -stages of exercise adoption did not vary across academic status
| **-SES (private college)**
   | -respondents were self-selected
| **At what stage will college students be in a stages of changes model related to exercise.** | **-amount of exercise (measured as 20 minutes a day or longer three or more times a week; self-report)**
   | -self-selected respondents - stages of change measured as; precontemplators- those who did not respond to the question on exercise; contemplators- those who endorsed responses indicating that they exercised up to three times per month; preparation- those who exercised up to twice per week; action- exercised three or more times per week;
   | -type of exercise measured by self-report
| **-to determine distribution across stages of change frequency counts were used**
   | -stage of exercise, adoption, gender and year in school were tested using chi-squares
| **-54% of participants in active phase, no difference in year in school**
   | -stages of exercise adoption did not vary across academic status
| **-SES (private college)**
   | -respondents were self-selected
<p>| Associations between physical activity and perceived stress/hassles in college students | None noted | Physical activity can help college student deal more effectively with perceived stress and hassles, although available literature suggests that college students and young adults do not meet the recommendation for physical activity. The purpose of this study is to examine the relationship between physical activity and perceived stress/hassles in college students. | Convenience sample from three southern California colleges (1 private, 1 public, 1 community) -cross sectional study | &quot;developed and validated by Godin and Shephard&quot; -Graduate stress inventory &quot;was developed and validated extensively with graduate student populations&quot; (no statistics given) | Tests did not show statistical significance ($p=0.1201$) regarding relationships of physical activity and measures of perceived hassles, like other studies. Students in the private university reported higher levels of activity and higher stress levels. Students in the community college reported decrease stress and exercise. Other variables associated with lower levels of stress include non white ethnicity, age, and lower parental SES | Convenience sampling -all participants from Southern California |</p>
<table>
<thead>
<tr>
<th>Study</th>
<th>Title</th>
<th>Problem</th>
<th>Research Question</th>
<th>Design</th>
<th>Sample</th>
<th>Validity and Reliability</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>The Effects of Exercise on Stress in Working Women</td>
<td>Women who work and have other responsibilities that cause stress</td>
<td>The effect of health care professionals to encourage working women to develop a daily physical activity plan to decrease stress</td>
<td>Case Study</td>
<td>A 34-year-old paralegal woman was examined. She was a working mother with 2 children under the age of 5.</td>
<td>N/A</td>
<td>The nurse practitioner helped the client establish physical activity into her daily routine. She was supportive and informative. Collaboration between nurses, advanced practice nurses and clients aid in implementing preventive health measures</td>
</tr>
</tbody>
</table>
Appendix B

Example of Survey including Student Nurse Stress Index

Demographics

Age: ________

Race:

- African American
- Caucasian
- Asian
- Latino
- Other

Year in school:

- Sophomore
- Junior

Gender:

- Male
- Female

Residence:

- On Campus
- Off Campus

Marital Status:

- Single
- Married
- Divorced
- Widowed
- Separated
- Other

Current Academic workload:

- Full time
- Part time
Employment Status:

- Full time
- Part time
- Not employed

Health Assessment

Do you currently Smoke? Yes  No

If yes, how many years? ____ years

How many packs per day? ______

If no, have you ever smoked? Yes  No

How many years has it been since you smoked? ____ years

How many Packs per day did you smoke?

Do you drink alcohol? Yes  No

If yes, how many times per week? ________

Measurement of Physical Activity

How many times per week do you participate in physical activity?

______ times/week

If you participate in physical activity for how long do you do so?

_______ minutes

What kind of physical activity do you participate in?

- Cardiovascular (Running, Elliptical, Bike, Stair Master etc.)
- Weight lifting
- Yoga
- Sports (Baseball, Basketball, Volleyball, Football, etc.)
- Other
How would you rate the intensity of your physical activity?

- Minimal intensity
- Medium intensity
- High intensity
**Student Nurse Stress Index:**

Below is a list of items that may be associated with stress by students such as yourself.

Think of real events which have occurred in the past month in your role as a student. For each item please circle the rating that applies to **YOU**. Answer all 22 items.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NOT STRESSFUL</th>
<th>EXTREMELY STRESSFUL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Amount of classwork material to be learned</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Difficulty of classwork material to be learned</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. Examination and/or grades</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. Peer competition</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5. Attitudes/expectations of other professionals towards nursing</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6. Lack of free time</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. College/School response to student needs</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8. Fear of failing in course</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9. Actual personal health problems</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10. Physical health of other family members</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11. Relationships with parents</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12. Other personal problems</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13. Relations with other professionals</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14. Too much responsibility</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>15. Lack of timely feedback about performance</td>
<td>1</td>
<td>2</td>
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Answer the following questions from your reflections on your clinical experience:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NOT STRESSFUL</th>
<th></th>
<th></th>
<th></th>
<th>EXTREMELY STRESSFUL</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
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<td>3</td>
<td>4</td>
<td>5</td>
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<td>19</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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Other academic and related items:

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</thead>
<tbody>
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<td>3</td>
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<tr>
<td>22</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix C

Demographic and Correlation Results

Table 1: Demographic Results

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>98</td>
<td>18</td>
<td>50</td>
<td>22.26</td>
<td>4.857</td>
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<tr>
<td>X per week PA</td>
<td>98</td>
<td>0</td>
<td>7</td>
<td>2.56</td>
<td>1.639</td>
</tr>
<tr>
<td>How Long(minutes)</td>
<td>98</td>
<td>0</td>
<td>240</td>
<td>50.30</td>
<td>37.542</td>
</tr>
<tr>
<td>Total Stress Score</td>
<td>98</td>
<td>34</td>
<td>95</td>
<td>61.94</td>
<td>11.035</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
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<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>How Long(minutes)</td>
<td>50.30</td>
<td>37.542</td>
<td>98</td>
</tr>
<tr>
<td>Total Stress Score</td>
<td>61.94</td>
<td>11.035</td>
<td>98</td>
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</tbody>
</table>

Table 2: Correlation Results

<table>
<thead>
<tr>
<th></th>
<th>How Long(minutes) Pearson Correlation</th>
<th>Total Stress Score Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>How Long(minutes)</td>
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<td>-.077</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.449</td>
<td></td>
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<tr>
<td>N</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>Total Stress Score</td>
<td>-.077</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.449</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>98</td>
<td>98</td>
</tr>
</tbody>
</table>