

# Evaluation of the Effects of Human-Animal Interaction on Anxiety in Graduate Students

NCT07036354

October 1, 2025

**Date: June 12, 2025**

**Principal Investigator: Nicole Windsor**

**Co-Investigator(s): Noah Spicer, Troy Duncan, Javyn Contreras, Jonathan Prieto, Gannon Metzinger**

**Department: Physical Therapy**

**IRB Number: 6006**

**Review Category: Expedited 3, 4 and 7**

The Wichita State University Institutional Review Board (IRB) has reviewed your research project application entitled, **“Evaluation of Effects of Human-Animal Interaction on Physiological and Psychological Markers in Graduate Students”**. The IRB approves the project according to the Federal Policy for the Protection of Human Subjects. As described, the project also complies with all the requirements and policies established by the University for protection of human subjects in research.

Please keep in mind the following:

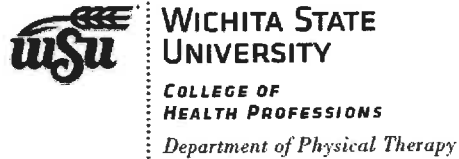
1. Any significant change in the experimental procedure as described must be reviewed by the IRB prior to altering the project.
2. When signed consent documents are required, the principal investigator must retain the signed consent documents for at least three years past completion of the research activity.
3. You will be contacted in one year for a ***project status report***.
4. At the completion of the project, the principal investigator is expected to submit a ***final report***.

Thank you for your cooperation. If you have any questions, please contact the IRB Administrator at [IRB@wichita.edu](mailto:IRB@wichita.edu).

Sincerely,



Michael Rogers, Ph.D.  
Chairperson, IRB



## Consent Form

**Purpose:** You are invited to participate in a research study evaluating the effectiveness of human-animal interaction (HAI) versus general health education (GHE) on physiological and psychological markers in first year graduate students.

**Participant Selection:** You were selected as a potential participant in this study because you are between the ages of 20 and 35, are fluent in English, are a first year Graduate student and did not meet any of the exclusion criteria. Our estimated number of participants for this study will be no more than 30.

### **Explanation of Procedures:**

If you decide to participate and are selected to be in the *HAI group*, you will:

1. Receive an email with information about the study including the start date, end date, and the days you will participate at 213 N. Mead St., Wichita, KS to interact with the therapy dog in training taking part in the research. Each week, the interaction with the therapy dog in training will be approximately fifteen minutes.
2. Complete the Generalized Anxiety Disorder-7 (GAD-7) questionnaire. An example of the questions includes "Feeling nervous, anxious, or on edge". For the GAD-7, you will rate each statement on a scale from 0-3, with 0 being "not at all" and 3 being "nearly every day". This questionnaire will give us a baseline understanding of how anxious you feel overall and should take less than 2 minutes. This questionnaire is completed at the start of the study and at the end of the study. This allows us to compare your answers before and after the study.
3. Complete the Academic Anxiety Scale (AAS) questionnaire. An example of the questions includes "I often worry that my best is not as good as expected in school". For the AAS, you will rate each statement on a scale from 1-4, with 1 being "not at all typical of me" and 4 being "very typical of me". This questionnaire will give us a baseline understanding of how anxious you feel with academics and should take less than 3 minutes. This questionnaire is completed at each of the four sessions. This allows us to compare your answers during each week of study.
4. At each session, blood pressure and heart rate are taken before and after interaction using an automatic blood pressure cuff. This will take no more than a few minutes and give us a quantifiable measurement of anxiety.
5. At each session, a pain pressure threshold measurement will be taken before and after interaction using a pain pressure threshold algometer. This will take no more than a few minutes and give us a quantifiable measurement of tolerance to pressure which can be linked to stress and anxiety.
6. At each session, a salivatory cortisol test will be performed via a cheek swab. This will be completed after the interaction using a test kit provided. You will have the option to swab your own cheek or have your cheek swabbed by a research team member. This will take no more than one minute and gives us a quantifiable measurement of salivatory cortisol which can be linked to stress and anxiety.
7. You will have access to the researchers' emails to ask any questions or to withdraw from the



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Department of Physical Therapy

study at any time.

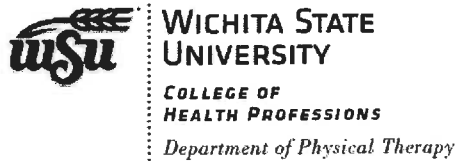
8. Total time, over the 4 weekly sessions, to participate will be approximately 140 minutes.

If you decide to participate and are selected to be in the **GHE group**, you will:

1. Receive an email with information about the study including the start date, end date, and the days you will participate at 213 N. Mead St., Wichita, KS to participate in small group education sessions regarding the management of anxiety and stress. Each week, the interaction with the education group will be approximately fifteen minutes.
2. Complete the Generalized Anxiety Disorder-7 (GAD-7) questionnaire. An example of the questions includes "Feeling nervous, anxious, or on edge". For the GAD-7, you will rate each statement on a scale from 0-3, with 0 being "not at all" and 3 being "nearly every day". This questionnaire will give us a baseline understanding of how anxious you feel overall and should take less than 2 minutes. This questionnaire is completed at the start of the study and at the end of the study. This allows us to compare your answers before and after the study.
3. Complete the Academic Anxiety Scale (AAS) questionnaire. An example of the questions includes "I often worry that my best is not as good as expected in school". For the AAS, you will rate each statement on a scale from 1-4, with 1 being "not at all typical of me" and 4 being "very typical of me". This questionnaire will give us a baseline understanding of how anxious you feel with academics and should take less than 3 minutes. This questionnaire is completed at each of the four sessions. This allows us to compare your answers during each week of study.
4. At each session, blood pressure and heart rate are taken before and after interaction using an automatic blood pressure cuff. This will take no more than a few minutes and give us a quantifiable measurement of anxiety.
5. At each session, a pain pressure threshold measurement will be taken before and after interaction using a pain pressure threshold algometer. This will take no more than a few minutes and give us a quantifiable measurement of tolerance to pressure which can be linked to stress and anxiety.
6. At each session, a salivatory cortisol test will be performed via a cheek swab. This will be completed after the interaction using a test kit provided. You will have the option to swab your own cheek or have your cheek swabbed by a research team member. This will take no more than one minute and gives us a quantifiable measurement of salivatory cortisol which can be linked to stress and anxiety.
7. You will have access to the researchers' emails to ask any questions or to withdraw from the study at any time.
8. Total time, over the 4 weekly sessions, to participate will be approximately 140 minutes.

### **Discomfort/Risks:**

The potential risks of injury for this study are minimal. You may experience allergy symptoms from unknown allergies during the interaction with the therapy dog in training. You may experience mild soreness at the site of the pain pressure threshold testing, but you are alerting the research team member to stop the pressure when it becomes painful to you. You may experience gag reflex during the cheek swab for the cortisol testing. The PI and research team will aim to minimize risk via



supervision, training and allowing the participant to perform their own cheek swab for the cortisol test. If at any point you feel too distressed to continue the study, please inform the researcher and you may discontinue your participation without penalty. If the distress continues after you discontinue or finish participation, you may wish to contact Wichita State University Hope Services. They are located in the Student Wellness Center, phone number (316)-978-4792, email [Annette.Santiago@wichita.edu](mailto:Annette.Santiago@wichita.edu).

**Compensation or Treatment for Research Related Injury:** Wichita State University does not provide medical treatment or other forms of reimbursement to persons injured as a result of or in connection with participation in research activities conducted by Wichita State University or its faculty, staff, or students. If you believe that you have been injured as a result of participating in the research covered by this consent form, you can contact the Office of Research, Wichita State University, Wichita, KS 67260-0007, telephone (316) 978-3285.

**Benefits:** This study may provide a decrease in anxiety for participants. This study may also provide a better understanding of the effects of HAI with individuals experiencing general and academic anxiety.

**Confidentiality:** Every effort will be made to keep your study-related information confidential. However, to ensure the study is done properly and safely, there may be circumstances where this information must be released. By signing this form, you are giving the research team permission to share information about you with the following groups:

- Office for Human Research Protections or other federal, state, or international regulatory agencies.
- The Wichita State University Institutional Review Board.

The researchers may publish the results of the study. If they do, they will only discuss group results. Your name will not be used in any publication or presentation about the study.

**Refusal/Withdrawal:** Participation in this study is entirely voluntary. Your decision to participate or decline to participate will not affect your future relations with Wichita State University. If you agree to participate in this study, you are free to withdraw from the study at any time without penalty.

**Contact:** If you have any questions about this research, you can contact the principal investigator, Dr. Nicole Windsor by phone at (316) 978-5805 or email at [nicole.windsor@wichita.edu](mailto:nicole.windsor@wichita.edu). The student researchers are also available for questions through the email [twduncan@shockers.wichita.edu](mailto:twduncan@shockers.wichita.edu).

If you have questions pertaining to your rights as a research subject, or about research-related injury, you can contact the Office of Research at Wichita State University, 1845 Fairmount Street, Wichita, KS 67260-0007, telephone (316) 978-3285.



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*Department of Physical Therapy*

You are under no obligation to participate in this study. Your signature below indicates that:

- You have read (or someone has read to you) the information provided above,
- You are aware that this is a research study,
- You have had the opportunity to ask questions and have had them answered to your satisfaction,
- You have voluntarily decided to participate.

You are not giving up any legal rights by signing this form. You will be given a copy of this consent form to keep.

\_\_\_\_\_  
Printed Name of Subject

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Witness

\_\_\_\_\_  
Witness Signature

\_\_\_\_\_  
Date



## Wichita State University Institutional Review Board (IRB) New Study Application

Investigator Information			
<i>Principal Investigator must be a WSU faculty member. Students and anyone outside of WSU are listed as Co-Investigators.</i>			
Name (First, MI, Last): <b>Nicole, D, Windsor, PT, DPT, PhD, FAAOMPT</b>			
Title: <b>Assoc. Teaching Prof.</b>		College/Department Affiliation: <b>Department of Physical Therapy</b>	
Campus Phone Number: <b>316-978-5</b>		E-mail Address: <b>nicole.windsor@wichita.edu</b>	MyWSU ID Number: <b>D237F386</b>
Has CITI or NIH Human Subjects Research Training been completed in the last 3 years: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Responsibilities for this study (Choose letters from list below and/or write in any others): <b>A B C D E F G H I J</b>			
<b>Study Responsibilities. Choose all that apply.</b> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">a. Conduct informed consent interview</div> <div style="width: 50%;">f. Draw/collect laboratory specimens</div> <div style="width: 50%;">b. Perform tests, procedures, interventions, questionnaires</div> <div style="width: 50%;">g. Assess unanticipated problems</div> <div style="width: 50%;">c. Obtain medical/surgical history</div> <div style="width: 50%;">h. Data analysis</div> <div style="width: 50%;">d. Manage study database</div> <div style="width: 50%;">i. Report generation</div> <div style="width: 50%;">e. Take vital signs, height, weight</div> <div style="width: 50%;">j. Faculty advisor</div> </div>			
Co-Investigator Information or <input type="checkbox"/> N/A (If there are more than 3 Co-Investigators please provide their information on a separate Word document)			
Name (First, MI, Last): <b>Noah, H, Spicer</b>			
Department Name: <b>Physical Therapy</b>			
E-mail Address: <b>nhspicer@shockers.wichita.edu</b>		MyWSU ID Number: <b>T538G386</b>	
<input type="checkbox"/> Faculty Member <input checked="" type="checkbox"/> Graduate Student <input type="checkbox"/> Undergraduate Student Other: <b>Blood pressure, heart rate,</b>			
Has CITI or NIH Human Subjects Research Training been completed in the last 3 years: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Responsibilities for this study (Choose letters from list above and/or write in any others): <b>A B C E F H I</b>			
Name (First, MI, Last): <b>Troy, W, Duncan</b>			
Department Name: <b>Physical Therapy</b>			
E-mail Address: <b>twduncan@shockers.wichita.edu</b>		MyWSU ID Number: <b>A836Z225</b>	
<input type="checkbox"/> Faculty Member <input checked="" type="checkbox"/> Graduate Student <input type="checkbox"/> Undergraduate Student Other:			
Has CITI or NIH Human Subjects Research Training been completed in the last 3 years: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Responsibilities for this study (Choose letters from list above and/or write in any others): <b>A B C E F H I</b>			
Name (First, MI, Last): <b>Javyn, A, Contreras</b>			
Department Name: <b>Physical Therapy</b>			
E-mail Address: <b>jacontreras2@shockers.wichita.edu</b>		MyWSU ID Number: <b>R698H444</b>	
<input type="checkbox"/> Faculty Member <input checked="" type="checkbox"/> Graduate Student <input type="checkbox"/> Undergraduate Student Other:			
Has CITI or NIH Human Subjects Research Training been completed in the last 3 years: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Responsibilities for this study (Choose letters from list above and/or write in any others): <b>A B C E F H I</b>			
Conflict of Interest			
1. Have all WSU employees, except student employees and graduate students, listed as personnel completed a disclosure of conflict of interest and time commitment for Wichita State University within the last 12 months? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No - submit a form via myWSU. For log on instructions: <a href="#">Annual Conflict of Interest Reporting form</a>			
2. Do any of the personnel (including students or their immediate family members) on the project have financial arrangements with the sponsoring company or the products or services being evaluated which may include consulting agreements, management responsibilities or equity holdings in the sponsoring company? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
If "Yes" please contact Compliance at <a href="mailto:compliance@wichita.edu">compliance@wichita.edu</a> .			

### Project Information

1. Project Title: **Evaluation of Effects of Human-Animal Interaction on Physiological and Psychological Markers in Graduate Students**

2. Expected Completion Date: **04/30/2027**

3. Type of Project: ☐ Class Project ☒ Capstone Project ☐ Research

4. Type of Review Requested: ☐ Exempt  
☒ Expedited  
☐ Full Committee

5. Research Design: ☒ Experimental ☐ Quasi-Experimental ☐ Non-Experimental (e.g. descriptive, correlation)  
☐ Qualitative ☐ Secondary Data/Collection/Analysis ☐ Program Evaluation or QI (STOP here, submit determination form)

6. Is the research funded? ☐ Yes ☒ No ☐ Plan to Submit for funding ☒ Have requested funding, awaiting award decision

Sponsor: **Kansas Health Foundation - Kansas Innovation Fund**

RTT Grant or Proposal # (if unsure ask your RTT contact):

**KHF proposal #251231**

**Please submit a copy of the grant or statement of work from the contract.**

6.1 If you have requested funding but do not receive it, will you still conduct the study? ☒ Yes ☐ No ☐ N/A

6.2 If the funding is from an industry contract, is there an agreement in place? ☐ Yes (fill in sponsor name above) ☐ No

☐ In process, name of your RTT contact: ☒ N/A

7. List all locations where study activities will take place:

**WSU Old Town Campus; 213 N Mead St, Wichita, KS 67202; specific rooms pending.**

7.1. Will multiple institutions (other Universities, Hospitals, etc) participate in the study? ☐ Yes (complete #7.1a - 7.1c)  
☒ No (proceed to #8)

7.1a. Please list all participating institutions:

7.1b. Has the IRB at the institution(s) listed above approved the study? ☐ Yes (please submit copy of approval letter)  
☐ No, explain:

7.1c. Will the WSU PI oversee or coordinate the research being conducted at non-WSU sites? ☐ Yes ☐ No

**If yes**, Describe the PI's oversight plans, including how the PI will ensure adherence to the study protocol, obtain informed consent, secure and maintain IRB approval at the other sites, monitor adverse events or other unanticipated problems, and ensure general coordination of study conduct.

8. Please summarize the purpose of the proposed research using non-technical language that can be readily understood by someone outside the discipline:

The purpose of the study is to evaluate the effects of human-animal interaction on physiological and psychological markers in graduate students.

Graduate students face significant anxiety due to demanding coursework, long hours of studying, intense academic challenges, and the pressure to excel. Chronic stress in this population can contribute to elevated anxiety levels and measurable physiological changes, such as increased heart rate and blood pressure.

Human-animal interaction (HAI) and its effect on student stress, test anxiety, and physiological markers have been studied on college campuses, largely focusing on undergraduate students. However, research investigating the impact of HAI on graduate student stress, test anxiety, and physiological markers in high-stakes programs is limited. This study will evaluate the effectiveness of repeated HAI on graduate students' physiological markers and anxiety. The results of this study will assist participants, students outside this study, and the program administrators to appreciate the immense value of a full-time therapy dog on campus facilitating the human-animal bond in higher education.

9. Describe each procedure step-by-step, including the frequency, duration, and location of each procedure. A numbered or bulleted list of steps is helpful. *Submit a separate Word document if additional space is needed.*

#### Research Study:

\*Location at 213 N. Mead St., Wichita KS, 67202, specific rooms TBD,

\*Completed in the Fall 2025 semester,

\*Frequency 1 time per week for 4 weeks,

\*[https://wichitastate.co1.qualtrics.com/jfe/preview/previewId/fe71f770-cbe3-414e-9174-865c7a4135db/SV\\_e9UIEaLk6Jdx0wu?Q\\_CHL=preview&Q\\_SurveyVersionID=current](https://wichitastate.co1.qualtrics.com/jfe/preview/previewId/fe71f770-cbe3-414e-9174-865c7a4135db/SV_e9UIEaLk6Jdx0wu?Q_CHL=preview&Q_SurveyVersionID=current)

#### Interventions:

Experimental: Human-animal interaction (HAI) - 15 minutes with therapy dog in training in groups of 2-3 participants, spending time doing what the participant wants to do (e.g., sitting quietly with the dog or playing with toys),

Control: General Health Education (GHE) - 15 minutes in groups of 2-3 participants being educated on anxiety-relieving techniques and concepts; handouts provided for the participants reference,

#### Sessions:

1. At session 1, each participant will read and sign the consent form. Each will complete the Generalized Anxiety Disorder-7 (GAD-7) anxiety assessment and the Academic Anxiety Scale (AAS); have blood pressure and heart rate taken with automated blood pressure cuff and O2 monitor respectively (pre- and post-interaction); complete a baseline salivatory cortisol test, complete a baseline pain pressure threshold measurement.

2. At sessions 2 & 3, each participant complete the AAS; have blood pressure and heart rate taken with automated blood pressure cuff and O2 monitor respectively (pre- and post-interaction); complete a salivatory cortisol test, complete a pain pressure threshold measurement.

3. At session 4, each participant will complete the GAD-7 and AAS; have blood pressure and heart rate taken with automated blood pressure cuff and O2 monitor respectively (pre- and post-interaction); complete a final salivatory cortisol test, complete a final pain pressure threshold measurement.  
(Continued on supplemental attachment...)

<b>10. Instruments:</b> <input checked="" type="checkbox"/> Standardized Tests <input checked="" type="checkbox"/> Questionnaire <input type="checkbox"/> Interview <input type="checkbox"/> Internet <input checked="" type="checkbox"/> Other (specify): <b>See supplement...</b>	<b>11. Recorded by:</b> <input checked="" type="checkbox"/> Written Notes <input type="checkbox"/> Audiotape <input type="checkbox"/> Videotape <input type="checkbox"/> Photograph/film <input type="checkbox"/> Standard mail <input type="checkbox"/> Webcam/digital camera	<b>12. Administered:</b> <input checked="" type="checkbox"/> In person (group) <input checked="" type="checkbox"/> In person (individual) <input type="checkbox"/> Telephone <input type="checkbox"/> Mail <input type="checkbox"/> E-Mail <input type="checkbox"/> Other (specify):	<b>13. Findings used for....</b> <input checked="" type="checkbox"/> Publication <input checked="" type="checkbox"/> Dissertation, Thesis <input type="checkbox"/> Needs assessment <input type="checkbox"/> Evaluation <input type="checkbox"/> Results to be released to:		
<b>14. Data will include: (Check all variables, if no personal identifiers will be accessed please mark this box <input type="checkbox"/> )</b>					
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top; border: none;"> <input checked="" type="checkbox"/> Names of People  <input checked="" type="checkbox"/> Mailing or Email Addresses  <input checked="" type="checkbox"/> Phone or Fax Numbers  <input checked="" type="checkbox"/> Age  <input checked="" type="checkbox"/> Gender  <input checked="" type="checkbox"/> Ethnicity  <input type="checkbox"/> Marital Status  <input type="checkbox"/> IP Address  <input type="checkbox"/> Date of Birth  <input type="checkbox"/> License, Certificate or Vehicle ID  <input type="checkbox"/> Social Security Numbers  <input type="checkbox"/> Medical Record Number  <input type="checkbox"/> Admission/Discharge Date  <input type="checkbox"/> Account Numbers           </td> <td style="width: 50%; vertical-align: top; border: none;"> <input type="checkbox"/> Finger or voice print  <input type="checkbox"/> Photographic image  <input type="checkbox"/> Web URL  <input type="checkbox"/> Biometric Identifiers  <input type="checkbox"/> Income  <input type="checkbox"/> Student ID#  <input type="checkbox"/> Job Title  <input type="checkbox"/> Names of employers  <input type="checkbox"/> Types of employers  <input checked="" type="checkbox"/> Other Information:  <b>Blood pressure, heart rate, pain pressure thresholds, salivatory cortisol markers.</b> </td> </tr> </table>				<input checked="" type="checkbox"/> Names of People <input checked="" type="checkbox"/> Mailing or Email Addresses <input checked="" type="checkbox"/> Phone or Fax Numbers <input checked="" type="checkbox"/> Age <input checked="" type="checkbox"/> Gender <input checked="" type="checkbox"/> Ethnicity <input type="checkbox"/> Marital Status <input type="checkbox"/> IP Address <input type="checkbox"/> Date of Birth <input type="checkbox"/> License, Certificate or Vehicle ID <input type="checkbox"/> Social Security Numbers <input type="checkbox"/> Medical Record Number <input type="checkbox"/> Admission/Discharge Date <input type="checkbox"/> Account Numbers	<input type="checkbox"/> Finger or voice print <input type="checkbox"/> Photographic image <input type="checkbox"/> Web URL <input type="checkbox"/> Biometric Identifiers <input type="checkbox"/> Income <input type="checkbox"/> Student ID# <input type="checkbox"/> Job Title <input type="checkbox"/> Names of employers <input type="checkbox"/> Types of employers <input checked="" type="checkbox"/> Other Information: <b>Blood pressure, heart rate, pain pressure thresholds, salivatory cortisol markers.</b>
<input checked="" type="checkbox"/> Names of People <input checked="" type="checkbox"/> Mailing or Email Addresses <input checked="" type="checkbox"/> Phone or Fax Numbers <input checked="" type="checkbox"/> Age <input checked="" type="checkbox"/> Gender <input checked="" type="checkbox"/> Ethnicity <input type="checkbox"/> Marital Status <input type="checkbox"/> IP Address <input type="checkbox"/> Date of Birth <input type="checkbox"/> License, Certificate or Vehicle ID <input type="checkbox"/> Social Security Numbers <input type="checkbox"/> Medical Record Number <input type="checkbox"/> Admission/Discharge Date <input type="checkbox"/> Account Numbers	<input type="checkbox"/> Finger or voice print <input type="checkbox"/> Photographic image <input type="checkbox"/> Web URL <input type="checkbox"/> Biometric Identifiers <input type="checkbox"/> Income <input type="checkbox"/> Student ID# <input type="checkbox"/> Job Title <input type="checkbox"/> Names of employers <input type="checkbox"/> Types of employers <input checked="" type="checkbox"/> Other Information: <b>Blood pressure, heart rate, pain pressure thresholds, salivatory cortisol markers.</b>				
<b>15. Will this study involve the use of existing data, documents, records, and pathological specimen?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If "Yes", include a letter of authorization to access data if not publicly available.</i>					
<b>16. Do you anticipate using any data from this study for other studies in the future?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If "Yes", explain:</b>					
<b>17. Is this study similar or build upon a previous study approved by WSU IRB?</b> <input checked="" type="checkbox"/> Yes - IRB#5778 (similar to) <input type="checkbox"/> No					
<b>18. Do you intend to publish or present the study's findings?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
<b>Subject Selection</b>					
<b>1. Number of Subjects or Records to be accessed:</b> <b>Not more than 30 participants</b>					
<b>2. Age of Subjects:</b> <b>20-35</b>					
<b>3. Will all participants be fluent in English?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
<b>4. Vulnerable populations to be recruited (check all that apply):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Children  <input type="checkbox"/> Cognitively Impaired Persons  <input type="checkbox"/> Prisoners  <input type="checkbox"/> Minorities  <input type="checkbox"/> Educationally or Economically disadvantaged           </td> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> N/A  <input type="checkbox"/> Other –describe:           </td> </tr> </table>				<input type="checkbox"/> Children <input type="checkbox"/> Cognitively Impaired Persons <input type="checkbox"/> Prisoners <input type="checkbox"/> Minorities <input type="checkbox"/> Educationally or Economically disadvantaged	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Other –describe:
<input type="checkbox"/> Children <input type="checkbox"/> Cognitively Impaired Persons <input type="checkbox"/> Prisoners <input type="checkbox"/> Minorities <input type="checkbox"/> Educationally or Economically disadvantaged	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Other –describe:				
<b>5. If vulnerable populations are targeted for the study, discuss the special protections being implemented to minimize risk of coercion or undue influence or</b> <input checked="" type="checkbox"/> N/A.					

6.1 What are the primary inclusion criteria?

Enrolled and active first-year graduate students at Wichita State University,  
Participants between the ages of 20 and 35.

6.2 What are the primary exclusion criteria?

Students with diagnosed dog allergies; students with a fear of dogs; students diagnosed with mental health disorders; students with ongoing mental health treatment including (con't...)

7. Is Compensation Offered? ☐ Yes ☒ No If "Yes", describe amount, type (gift card, greenphire, etc) and when:

8. Describe the recruitment process, including any advertisements (flyers, emails, phone scripts, Strategic Communications Ads, etc.) to be used for this study. Include the flyer and text of the ads, emails, scripts as applicable in a separate document. Participants will be recruited via an in-person presentation and explanation of the study by the research team.

Participants will be given the opportunity to sign up and navigate inclusion/exclusion criteria via a Qualtrics survey via a link sent through email from the PI.

[https://wichitastate.co1.qualtrics.com/jfe/preview/previewId/fe71f770-cbe3-414e-9174-865c7a4135db/SV\\_e9UIEaLk6Jdx0wu?Q\\_CHL=preview&Q\\_SurveyVersionID=current](https://wichitastate.co1.qualtrics.com/jfe/preview/previewId/fe71f770-cbe3-414e-9174-865c7a4135db/SV_e9UIEaLk6Jdx0wu?Q_CHL=preview&Q_SurveyVersionID=current)

#### Risks/Benefit Information

1. Potential Risk Exposure: ☒ Physical (cognitive or motor) ☐ Psychological ☐ Economical ☐ Legal ☐ Social

2. Describe the nature and degree of the risks. (Do not say N/A - It cannot be assumed that there are no risks). Be sure all items listed are described in the informed consent document.

1. Minor physical risk from the human-animal interaction,
2. Minor physical risk from the salivatory cortisol test,
3. Minor physical risk for pain due to the pain pressure threshold testing/algometer.

3. Describe how risks and discomforts (physical, psychological, or social) will be minimized:

1. Risks due to animal interaction are minimized by having the animals trainer present, the animal having canine good citizen certification, and currently working through progression towards therapy dog certification.
- 2 & 3. Physical risks will be limited by training researchers and educating participants on research parameters.
2. All researchers will be properly trained how to obtain a salivatory cortisol test.
3. All researchers will be properly trained on the use of the pain pressure threshold algometer.

4. Please describe the benefits of the research to human subjects, if any, and of the benefits to human or scientific knowledge:

The anticipated findings may demonstrate the beneficial effects of HAI on student well-being, potentially encouraging universities to offer such opportunities regularly throughout the academic year. Beyond reducing stress, these interactions may enrich the overall student experience, foster positive relationships with animals, and promote the adoption of healthy coping strategies for managing academic-related stress. Further, for the animals involved, it facilitates socialization and play.

Ultimately, the translation of these findings could benefit students not only at Wichita State University but also across other Kansas universities and community colleges. The results are

### Confidentiality

1. How will you safeguard data that includes identifying or potentially identifying information (e.g. coding)? ☐ N/A

All data containing participant information will be password protected and only available to the PI/co-investigators. All data will be released only in aggregate form. Participants will be assigned an identification number. The co-investigators involved in data analysis will only have access to the scores and measurements associated with the assigned identification numbers.

2. When will identifiers be separated or removed from the data? ☐ N/A

During the first session. During all subsequent sessions, the participants will be referred to via their unique identification number.

3. Where and how will you store the data?

All paper data collection will be kept in a locked file cabinet in the principal investigator's locked office; electronic data will be in a password protected, WSU-owned laptop.

4. How long do you plan to retain the data? *Research Records must be maintained for a minimum of 5 years after completion of the study. This is based on the longest required retention period under the various applicable federal regulations.*

5 years

5. Describe how you will dispose of the data (e.g. erasing tapes, shredding data)?

Paper data will be shredded after 5 years and computer data will be deleted with the assistance of WSU's Information Technology department.

### Informed Consent

1. What type of informed consent will be obtained (may select more than one):

- ☒ Written consent with signatures obtained  
☐ Consent document given but no signature obtained  
☐ N/A - explain:

2. Specify the consent forms included with this submission: ☒ Adult ☐ Parent ☐ Child Assent ☐ Foreign Language  
 Other:

3. Are you requesting a waiver of consent or assent? ☐ Yes ☒ No *If yes, explain how the research meets the federal criteria (45 CFR 46.116(d)) for waiving the informed consent requirement:*

a) The research involves no more than minimal risk to subjects. ☐ Yes ☐ No

b) The research could not practicably be carried out without the requested waiver or alteration. ☐ Yes ☐ No

c) If the research involves using identifiable private information or identifiable biospecimens, the research could not practicably be carried out without using such information or biospecimens in an identifiable format ☐ Yes ☐ No

d) The waiver will not adversely affect the rights and welfare of the subjects. ☐ Yes ☐ No

e) Whenever appropriate the subjects or legally authorized representatives will be provided with additional pertinent information after participation. ☐ Yes ☐ No

4. Describe the informed consent **process**. How and by whom will initial contact with potential subjects take place? Where and when will the consent interview take place? Or mark ☐ N/A

After the participants have met inclusion criteria, verbally consented to participate, met the requirements to be a participant, and signed the consent form they will be sent an acceptance email, from the PI, with the study start date, instructions, contact information of one of the researchers for questions and a copy of the consent form for their records. The participants will have the ability to ask any clarifying questions via email before the study starts and throughout the entirety of the study.

If you are requesting an **Exempt** review please check the categories of exemption for which you are applying. You may check more than one box. See Category descriptions below. Note – these descriptions are truncated. The full text can be found under 45 CFR 46.104  
☒ **N/A if not Exempt**

☐ **Category 1.** Research conducted in established or commonly accepted educational settings that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction, involving normal educational practices. This includes most research on regular and special education instructional strategies and research on the effectiveness of or the comparison among instructional techniques, curricula or classroom management methods.

☐ **Category 2.** Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

- a. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;
- b. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; **or**
- c. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination.

**PLEASE NOTE: the only research activities involving children that may fall under this exemption are those involving educational tests or observation of public behavior where the investigators do not participate in the activity being observed.**

☐ **Category 3(i).** Research involving benign behavioral interventions in conjunction with the collection of information from an **adult** subject through verbal or written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collection and at least one of the following criteria is met:

- a. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; **or**
- b. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; **or**
- c. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination.

(ii) For the purpose of this provision, benign behavioral interventions are brief in duration, harmless, painless, not physically invasive, not likely to have a significant adverse lasting impact on the subjects, and the investigator has no reason to think the subjects will find the interventions offensive or embarrassing. Provided all such criteria are met, examples of such benign behavioral interventions would include having the subjects play an online game, having them solve puzzles under various noise conditions, or having them decide how to allocate a nominal amount of received cash between themselves and someone else.

(iii) If the research involves deceiving the subjects regarding the nature or purposes of the research, this exemption is not applicable unless the subject authorizes the deception through a **prospective agreement** to participate in research in circumstances in which the subject is informed that he or she will be unaware of or misled regarding the nature or purposes of the research.

**Please Note: research activities involving children do not qualify under this exemption**

☐ **Category 4.** Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:

- a. The identifiable private information or identifiable biospecimens are publicly available; **or**
- b. Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects; **or**
- c. The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated by HIPAA "health care operations" or "research" or for "public health activities and purposes"; **or**
- d. The research is conducted by, or on behalf of, a Federal department or agency using government generated or government-collected information obtained for nonresearch activities, if the research generates identifiable private information that is or will be maintained on information technology that is subject to and in compliance with specified federal privacy laws.

☐ **Category 5.** Research and demonstration projects that are conducted or supported by a Federal department or agency, or otherwise subject to the approval of department or agency heads, and that are designed to study, evaluate, improve, or otherwise examine public benefit or service programs. **Note: these must be posted on a Federal Web site.**

☐ **Category 6.** Taste and food quality evaluation and consumer acceptance studies

Describe how the proposed research meets the criteria for **exemption**. Reference the exemption category or categories (above and on page 7) and the category's corresponding requirements.

If you are requesting an **Expedited** review please check the categories for which you are applying. See category descriptions below. You may check more than one box.

☐ **N/A if not Expedited review**

☐ **Category 1.** Clinical studies of drugs and medical devices only when condition (a) or (b) is met. a. Research on drugs for which an investigational new drug application (21 CFR Part 312) is not required. (Note: Research on marketed drugs that significantly increases the risks or decreases the acceptability of the risks associated with the use of the product is not eligible for expedited review.) b. Research on medical devices for which (i) an investigational device exemption application (21 CFR Part 812) is not required; or (ii) the medical device is cleared/approved for marketing and the medical device is being used in accordance with its cleared/approved labeling.

☐ **Category 2.** Collection of blood samples by finger stick, heel stick, ear stick, or venipuncture as follows: a. from healthy, nonpregnant adults who weigh at least 110 pounds. For these subjects, the amounts drawn may not exceed 550 ml in an 8 week period and collection may not occur more frequently than 2 times per week; or b. from other adults and children<sup>2</sup>, considering the age, weight, and health of the subjects, the collection procedure, the amount of blood to be collected, and the frequency with which it will be collected. For these subjects, the amount drawn may not exceed the lesser of 50 ml or 3 ml per kg in an 8 week period and collection may not occur more frequently than 2 times per week.

☒ **Category 3.** Prospective collection of biological specimens for research purposes by noninvasive means. Examples: (a) hair and nail clippings in a nondisfiguring manner; (b) deciduous teeth at time of exfoliation or if routine patient care indicates a need for extraction; (c) permanent teeth if routine patient care indicates a need for extraction; (d) excreta and external secretions (including sweat); (e) uncannulated saliva collected either in an unstimulated fashion or stimulated by chewing gumbase or wax or by applying a dilute citric solution to the tongue; (f) placenta removed at delivery; (g) amniotic fluid obtained at the time of rupture of the membrane prior to or during labor; (h) supra- and subgingival dental plaque and calculus, provided the collection procedure is not more invasive than routine prophylactic scaling of the teeth and the process is accomplished in accordance with accepted prophylactic techniques; (i) mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings; (j) sputum collected after saline mist nebulization.

☒ **Category 4.** Collection of data through noninvasive procedures (not involving general anesthesia or sedation) routinely employed in clinical practice, excluding procedures involving x-rays or microwaves. Where medical devices are employed, they must be cleared/approved for marketing. (Studies intended to evaluate the safety and effectiveness of the medical device are not generally eligible for expedited review, including studies of cleared medical devices for new indications.) Examples: (a) physical sensors that are applied either to the surface of the body or at a distance and do not involve input of significant amounts of energy into the subject or an invasion of the subject's privacy; (b) weighing or testing sensory acuity; (c) magnetic resonance imaging; (d) electrocardiography, electroencephalography, thermography, detection of naturally occurring radioactivity, electroretinography, ultrasound, diagnostic infrared imaging, doppler blood flow, and echocardiography; (e) moderate exercise, muscular strength testing, body composition assessment, and flexibility testing where appropriate given the age, weight, and health of the individual.

☐ **Category 5.** Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis). (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(4). This listing refers only to research that is not exempt.)

☐ **Category 6.** Collection of data from voice, video, digital, or image recordings made for research purposes.

☒ **Category 7.** Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.)

Describe how the proposed research meets the criteria for **expedited** review. Reference the category or categories (on page 8) and the category's corresponding requirements.

#3 - The participants will participate in a buccal cheek swab to obtain salivatory cortisol swabs.

#4 - The participants will have pain pressure thresholds measured using a noninvasive digital pressure algometer on the skin. Participants will also have their blood pressure and heart rate measured via automated blood pressure machines and fingertip oxygen saturation monitors.

#7 - The participants will be asked to complete the Generalized Anxiety Disorder-7 assessment and the Academic Anxiety Scale.

#### Principal Investigator's Assurance

I certify that the information provided in this application is complete and correct to the best of my ability and knowledge.

I understand that as Principal Investigator, I have ultimate responsibility for the conduct of the study, the ethical performance of the project, the protection of the rights and welfare of human subjects, and strict adherence to any stipulations imposed by the IRB. I accept responsibility to ensure that all study personnel are adequately trained for their role and have read this application.

I agree to comply with all Wichita State University's policy and procedures, as well as all applicable federal, state and local laws regarding the protection of human subjects in research including, but not limited to, the following:

- Implementing no changes in the approved protocol or consent form without prior Wichita State University Institutional Review Board (IRB) approval (except in emergency, if necessary to safeguard the well-being of human subjects).
- Obtaining the legally effective informed consent from human subjects or their legally responsible representative, and using only the currently approved consent form with human subjects.
- Promptly reporting significant or untoward adverse affects to the Wichita State University Institutional Review Board (IRB) in writing within 10 working days of occurrence. See SOP 12.0 Event Reporting and Non-compliance.

If I will be unavailable to direct this research personally, as when on sabbatical or vacation, I will arrange for a co-investigator to assume direct responsibility in my absence. Either this person is named as a co-investigator in this application, or I will advise the Wichita State University's Institutional Review Board (IRB) by letter, in advance of such arrangements.

I assure that I will retain research related records for audit including all documents subject to Human Subject welfare pursuant to the requirements of Code of Federal Regulations TITLE 45 PART 46 PROTECTION OF HUMAN SUBJECTS and Wichita State University Policy.

Signature of Principal Investigator: **Nicole D. Windsor** Digitally signed by Nicole D. Windsor  
Date: 2025.06.03 13:45:22 -05'00' Date: **06/03/2025**

Questions and completed Forms should be emailed to the IRB Administrator at [IRB@wichita.edu](mailto:IRB@wichita.edu)

Co-Investigator Information:

Name (First, MI, Last): **Jonathan, X, Prieto**

Department Name: **Physical Therapy**

E-mail Address:

*MyWSU* ID Number: **T495Y987**

**jxprieto@shockers.wichita.edu**

Faculty Member Graduate Student Undergraduate Student Other: **Graduate Student**

Has CITI or NIH Human Subjects Research Training been completed in the last 3 years:

**Yes** No

Responsibilities for this study (Choose letters from list above and/or write in any others):

**A B C E F H I**

Name (First, MI, Last): **Gannon, X, Metzinger**

Department Name: **Physical Therapy**

E-mail Address:

*MyWSU* ID Number: **C945A246**

**gxmetzinger@shockers.wichita.edu**

Faculty Member Graduate Student Undergraduate Student Other: **Graduate Student**

Has CITI or NIH Human Subjects Research Training been completed in the last 3 years:

**Yes** No

Responsibilities for this study (Choose letters from list above and/or write in any others):

**A B C E F H I**

# Evaluation of Effects of Human-Animal Interaction on Physiological and Psychological Markers in Graduate Students

## AHI - GHE Research Protocols

### Question 9 continued:

#### Protocol parameters:

- [https://vitaltrackusa.com/product/vitaltrack-blood-pressure-monitor/?\\_gl=1\\*fevef8\\*\\_gcl\\_au\\*R0NMLjE3NDczMzU5ODMuQ2owS0NRandvWmJCQmhEQ0FSSXNBT3FNRVpXdTI3Mjg1NFFMcnhmcDJjNXRocE5xVHFQSZNIMWJKMENEBUpub3A4UUZiaTAtb3N2aURIVWFBdlldhRUFMd193Y0I.\\*\\_gcl\\_au\\*MTcxOTE0NTI1Ni4xNzQ3MzM1OTgz\\*\\_ga\\*MTg5ODcxMTkxNC4xNzQ3MzM1OTgz\\*\\_ga\\_RFZQ8VX21D\\*czE3NDczMzU5ODMkbzEkZzAkDE3NDczMzU5ODMkaYwJGwwJGgw](https://vitaltrackusa.com/product/vitaltrack-blood-pressure-monitor/?_gl=1*fevef8*_gcl_au*R0NMLjE3NDczMzU5ODMuQ2owS0NRandvWmJCQmhEQ0FSSXNBT3FNRVpXdTI3Mjg1NFFMcnhmcDJjNXRocE5xVHFQSZNIMWJKMENEBUpub3A4UUZiaTAtb3N2aURIVWFBdlldhRUFMd193Y0I.*_gcl_au*MTcxOTE0NTI1Ni4xNzQ3MzM1OTgz*_ga*MTg5ODcxMTkxNC4xNzQ3MzM1OTgz*_ga_RFZQ8VX21D*czE3NDczMzU5ODMkbzEkZzAkDE3NDczMzU5ODMkaYwJGwwJGgw)



- 5-minute rest before each BP measurement
- Use the same BP cuff for consistency
  - If we have 2 BP cuffs, we'll mark them A and B for tracking purposes
- Automated BP (check with manual cuff if BP is high)
- Pulse Oximeter:
  - [https://vitaltrackusa.com/product/vitaltrack-pulse-oximeter/?\\_gl=1\\*1avkaig\\*\\_gcl\\_au\\*R0NMLjE3NDczMzYxNDluQ2owS0NRandvWmJCQmhEQ0FSSXNBT3FNRVpYR3Qza2R1VDFULTRzNENEUDIWFdvNW8yZ0VPaGhRZkIKUWtMenp2Q3p1YTJpOEEzRzZmZ2FBa1FFRUFMd193Y0I.\\*\\_gcl\\_au\\*MTcxOTE0NTI1Ni4xNzQ3MzM1OTgz\\*\\_ga\\*MTg5ODcxMTkxNC4xNzQ3MzM1OTgz\\*\\_ga\\_RFZQ8VX21D\\*czE3NDczMzU5ODMkbzEkZzEkDE3NDczMzYxNDIkaYwJGwwJGgw](https://vitaltrackusa.com/product/vitaltrack-pulse-oximeter/?_gl=1*1avkaig*_gcl_au*R0NMLjE3NDczMzYxNDluQ2owS0NRandvWmJCQmhEQ0FSSXNBT3FNRVpYR3Qza2R1VDFULTRzNENEUDIWFdvNW8yZ0VPaGhRZkIKUWtMenp2Q3p1YTJpOEEzRzZmZ2FBa1FFRUFMd193Y0I.*_gcl_au*MTcxOTE0NTI1Ni4xNzQ3MzM1OTgz*_ga*MTg5ODcxMTkxNC4xNzQ3MzM1OTgz*_ga_RFZQ8VX21D*czE3NDczMzU5ODMkbzEkZzEkDE3NDczMzYxNDIkaYwJGwwJGgw)



- We need a 1st year schedule checker for subject availability.
  - Perhaps their V.P. could help?
- Qualtrics survey for inclusion/exclusion from the study.
- Randomization? [www.Random.org](http://www.Random.org)

**Outcome Measures:**

The physiological outcomes of interest in this project are salivatory cortisol levels, pain pressure thresholds, heart rate, and blood pressure. These objective measures will be tested (pre-intervention and post-intervention) at each of the four interaction sessions for both the control group (GHE) and experimental group (HAI). Once the data are collected, the researchers will evaluate each of the four parameters. Researchers would anticipate cortisol levels, blood pressure, and heart rate to decrease in response to decreased anxiety affiliated with HAI. On the other hand, pain pressure thresholds will likely increase in response to decreased anxiety.

The psychological outcomes of interest are the subjective reports on the Generalized Anxiety Disorder-7 (GAD-7) and Academic Anxiety Scale (AAS). The GAD-7 will be completed in the initial session and ending session only. The AAS will be completed at each of the four sessions to track the graduate students' academic anxiety week to week. For both subjective outcome measures, the lower the score the more indicative of decreased anxiety. Thus, researchers will be tracking scores weekly on the AAS and pre- to post-study for the GAD-7.

The short form C-BARQ is a 42-item survey completed by the owner/handler of a dog that specifically assesses Canine behaviors. The short form C-BARQ is a valid evaluation tool with higher scores indicating more severe behavioral problems.

**Study Protocol:****Session 1:**

Read and sign consent form	
GAD-7	
AAS	
HR & BP	PRE-interaction
PPT	PRE-interaction
Cortisol test	
15-minute HAI (Room?)	
15-minute GHE (Room?)	
HR & BP	POST-interaction
PPT	POST-interaction

**Session 2 & 3:**

AAS	
HR & BP	PRE-interaction
PPT	PRE-interaction
Cortisol test	
15-minute HAI (Room?)	
15-minute GHE (Room?)	
HR & BP	POST-interaction
PPT	POST-interaction

**Session 4:**

GAD-7	
AAS	
HR & BP	PRE-interaction
PPT	PRE-interaction
Cortisol test	

15-minute HAI (Room?)  
15-minute GHE (Room?)  
HR & BP      POST-interaction  
PPT          POST-interaction

### Question 10 continued:

#### Pressure algometer:

Beslands AMF-500 Digital Force Guage

[https://www.amazon.com/live/video/0e288b878fc34c71b91fcfc9fa7d0e74?ref=vs\\_cards\\_2](https://www.amazon.com/live/video/0e288b878fc34c71b91fcfc9fa7d0e74?ref=vs_cards_2)

Please see attached manual.



#### Salivatory cortisol tests:

<https://salimetrics.com/assay-kit/salivary-cortisol-elisa-kit/>

Salivatory Cortisol Test Kits - <https://www.youtube.com/watch?v=azj5b0vA2Hk>



#### SALIMETRICS ASSAY #1-3002

Using a small sample volume, this assay kit has an extended range that spans the expected cortisol levels found in human saliva. The average inter- and intra-assay precision coefficients of variation are low with no deleterious matrix effects often found in saliva which are characterized through dilution- and spike-recovery validation procedures. The Salimetrics cortisol assay kit has also been formatted to minimize cross reactivity for related steroids. Salimetrics salivary assay kits are expertly designed, developed and validated to ensure accuracy in saliva and proven to deliver precision results for biomarkers in saliva. Read More...

### Subject selection 6.2 continued...

...counseling or medications; students with known history of cardiac pathology and/or on cardiac medications.

### **List of included documentation:**

- Co-investigator documentation
- Consent form
- Kansas Innovation Fund grant application
- Qualtrics email and Facebook announcement
- Non-acceptance email
- Generalized Anxiety Disorder (GAD-7)
- Academic Anxiety Scale (AAS)
- C-Barq questionnaire for therapy dog in training
- Algometer manual
- Algometer picture
- VitalTrack blood pressure cuff and pulse oximeter
- General Health Education (control group) documents:
  - 20 Benefits of Walking 30
  - How to deal with stress and anxiety
  - Sleep Hygiene
  - StressLess

## GAD-7 Anxiety

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid, as if something awful might happen	0	1	2	3

Column totals    \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ =

*Total score*    \_\_\_\_\_

If you checked any problems, how difficult have they made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all

☐

Somewhat difficult

☐

Very difficult

☐

Extremely difficult

☐

Source: Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD-PHQ). The PHQ was developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke, and colleagues. For research information, contact Dr. Spitzer at [rs8@columbia.edu](mailto:rs8@columbia.edu). PRIME-MD® is a trademark of Pfizer Inc. Copyright© 1999 Pfizer Inc. All rights reserved. Reproduced with permission

## Scoring GAD-7 Anxiety Severity

This is calculated by assigning scores of 0, 1, 2, and 3 to the response categories, respectively, of "not at all," "several days," "more than half the days," and "nearly every day."  
GAD-7 total score for the seven items ranges from 0 to 21.

0–4: minimal anxiety

5–9: mild anxiety

10–14: moderate anxiety

15–21: severe anxiety

### Academic Anxiety Scale

Please complete the following items using the four-point scale below.

**1 = Not at all typical of me**

**2 = Somewhat typical of me**

**3 = Quite typical of me**

**4 = Very typical of me**

1	I often worry that my best is not as good as expected in school.	1	2	3	4
2	I tend to put off doing schoolwork because it stresses me.	1	2	3	4
3	I often worry that I am not doing assignments properly.	1	2	3	4
4	I am less confident about school than my classmates.	1	2	3	4
5	I have a sense of dread when I am in my classrooms.	1	2	3	4
6	I tend to find my instructors intimidating.	1	2	3	4
7	I spend much of my time at school worrying about what is next.	1	2	3	4
8	There is something about school that scares me.	1	2	3	4
9	I'm concerned about what my classmates think about my abilities.	1	2	3	4
10	I often feel sick when I need to work on a major class assignment.	1	2	3	4
11	I have a hard time handling school responsibilities.	1	2	3	4

Scoring – simple addition of each item – no recoding required (range = 11-44). Finch et al (see below) have identified cut scores for different “levels” of Academic Anxiety based on the total score:

- Not Anxious – 11-14
- Mild Academic Anxiety – 15 – 20
- Moderate Academic Anxiety – 21 – 29
- High Academic Anxiety – 30 - 44

### Citation Information for the Academic Anxiety Scale:

Cassady, J.C. (2020). *Academic Anxiety Scale*. Academic Anxiety Resource Center.  
<https://sites.bsu.edu/aarc/research/academic-anxiety-scale/>

### Related publications:

Cassady, J.C., Pierson, E. E., & Starling, J. M. (2019). Predicting student depression with measures of general and academic anxieties. *Frontiers in Education: Educational Psychology*, 4(11). doi: 10.3389/feduc.2019.00011  
<https://www.frontiersin.org/articles/10.3389/feduc.2019.00011/full>

Finch, W.H., Cassady, J.C., & Helsper, C. A. (2023; *in review*). Identification and Validation of Severity Standards for the Academic Anxiety Scale. *Note – this is the article identifying the “cut scores” for the AAS noted above.*



American Heart Association  
Healthy for Good™

# STRESS LESS WITH HEALTHY HABITS



## 1. Slow down.

Plan ahead and allow enough time to get the most important things done without having to rush.

## 2. Sleep well.

Try to get seven to nine hours of sleep each night. To fight insomnia, get regular physical and activity during the day.

## 3. Let worry go.

The world won't end if a few things fall off your plate. Give yourself a break and just breathe.

## 4. Laugh it up.

Laughter makes us feel good. Don't be afraid to laugh out loud, even when you're alone.

## 5. Get connected.

A daily dose of friendship is great medicine. Make time to call friends or family so you can catch up.

## 6. Get organized.

Use "to do" lists to help you focus on your most important tasks and take big projects one step at a time.

## 7. Practice giving back.

Volunteer your time or spend time helping a friend. Helping others helps you.

## 8. Be active every day.

Exercise can relieve mental and physical tension. Find something you enjoy and stick with it.

## 9. Give up the bad habits.

Too much alcohol, tobacco or caffeine can increase blood pressure. Cut back or quit to decrease anxiety.

## 10. Lean into things you can change.

Make time to learn a new skill, work toward a goal, or to love and help others.

EAT SMART MOVE MORE BE WELL

Learn more at  
**[heart.org/HealthyForGood](https://heart.org/HealthyForGood)**

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# 20 BENEFITS OF WALKING 30 MINUTES A DAY

@BELIEVING



**01**  
REDUCES RISK  
OF HEART  
DISEASE



**02**  
HELPS TO  
MAINTAIN WEIGHT



**03**  
REDUCES YOUR  
STRESS LEVELS



**04**  
INCREASES YOUR  
ENERGY LEVELS



**05**  
HELPS TO BOOST  
YOUR MOOD



**06**  
GETS THE  
BLOOD  
PUMPING



**07**  
PREVENTS  
OBESITY



**08**  
CAN HELP TO  
REDUCE  
ANXIETY



**09**  
INCREASES  
FUNCTIONING  
OF THE LUNGS



**10**  
INCREASES THE  
BODY'S ACCESS  
TO VITAMIN D



**11**  
REDUCES THE  
RISK OF  
CANCER



**12**  
CAN IMPROVE  
QUALITY OF  
SLEEP



**13**  
GIVES YOU TIME  
TO PRACTICE  
SELF CARE



**14**  
IMPROVES  
COORDINATION  
AND BALANCE



**15**  
IMPROVES  
QUALITY OF  
LIFE



**16**  
REDUCES  
CHANCE OF  
DIABETES



**17**  
WALKING CAN  
SPARK  
CREATIVITY



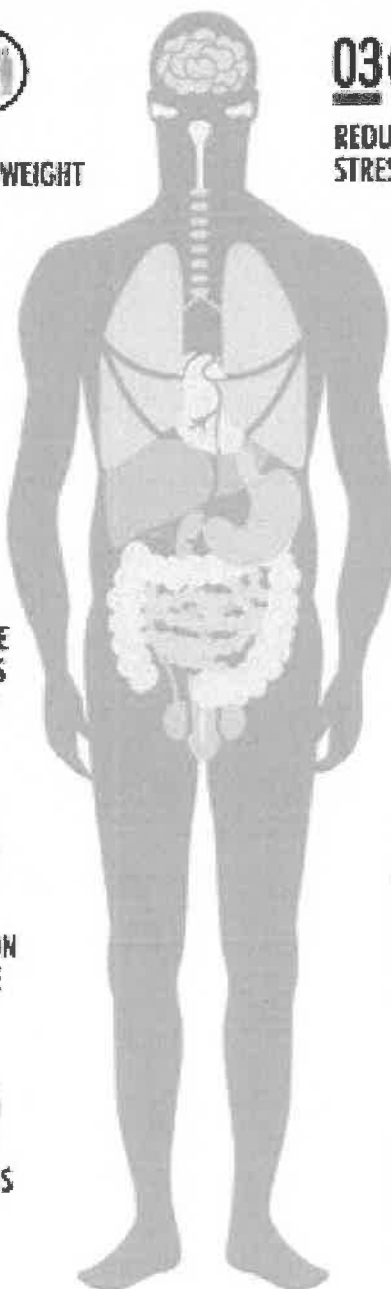
**18**  
STRENGTHENS  
BONES AND  
MUSCLES



**19**  
CAN IMPROVE  
BLOOD  
PRESSURE



**20**  
CAN HELP TO  
BOOST YOUR  
IMMUNE SYSTEM





## Sleep Hygiene



### Recommendation 1: CHOOSE A STANDARD TIME TO WAKE UP

- Stick to it every day regardless of how much sleep you actually get
- Helps you develop a more stable sleep pattern
- You will train your brain to become sleepy at about the same time each evening

### Recommendation 2: AVOID DOING THINGS YOU DO WHEN AWAKE

- Don't read, watch T.V., eat, study, use the phone, etc.
- Cut off the caffeine in the late morning/early afternoon
- If you avoid these activities while in bed, your bed will eventually become a place where it is easy to go to sleep and stay asleep.

### Recommendation 3: NEVER STAY IN BED WHEN YOU'RE NOT SLEEPING

- Long periods of being awake in bed usually lead to frustration or worry about not sleeping
- These reactions make it more difficult to fall asleep.
- If you lie in bed awake for long periods, you are training your brain to be awake in bed
- You should get up if you find yourself awake for 20 minutes or more and you don't feel sleepy



### Recommendation 4: SLOW THE BRAIN!

- Don't worry, mull over your problems, plan future events, or do other thinking
- If your mind seems to be racing or you can't seem to shut off your thoughts, get up and go to another room until you can return to bed without anything interrupting your sleep
- If disruptive thinking occurs frequently, you may find it helpful to routinely set aside a time each evening to do the thinking, problem-solving, and planning you need to do



### Recommendation 5: AVOID DAYTIME NAPPING

- Sleeping during the day partially satisfies your sleep needs and will weaken your sleep drive at night

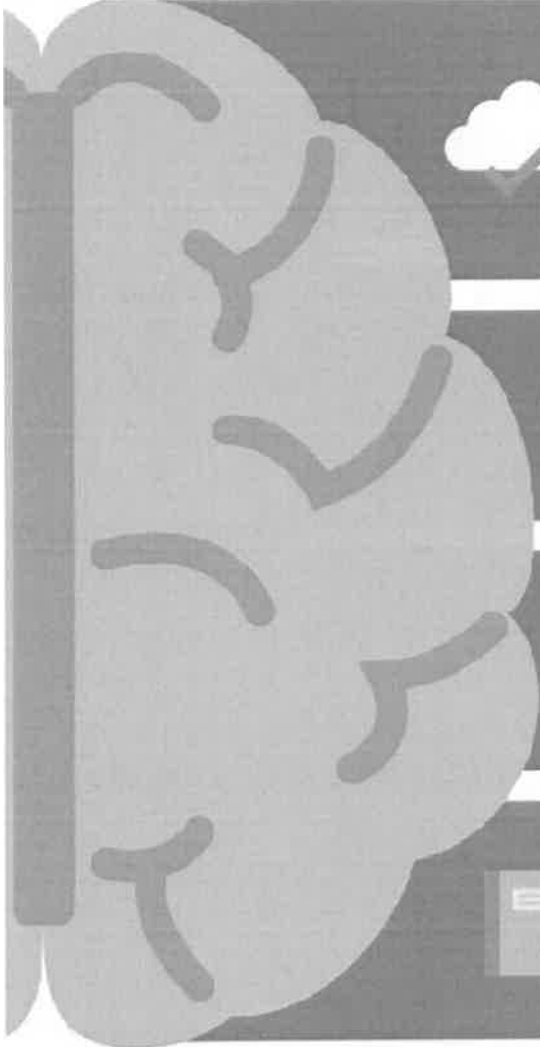
### Recommendation 6: GO TO BED WHEN YOU ARE TIRED

- Keep a sleep log
- Decide the amount of time to spend in bed, what time you should go to bed at night, and what time to get out of bed in the morning
- Be consistent



# HOW TO DEAL WITH STRESS AND ANXIETY

## MIND



**Accept that you cannot control everything.**

Put your stress in perspective: Is it really as bad as you think?



**Do your best.**

Instead of aiming for perfection, which isn't possible, be proud of however close you get.



**Maintain a positive attitude.**

Make an effort to replace negative thoughts with positive ones



**Learn what triggers your anxiety.**

Is it work, family, school, or something else you can identify? Write in a journal when you're feeling stressed or anxious, and look for a pattern.

For mental health information and resources visit:  
[www.mentalhealthamerica.net](http://www.mentalhealthamerica.net)



# HOW TO DEAL WITH STRESS AND ANXIETY

## BODY



### Limit alcohol and caffeine.

Alcohol and caffeine can aggravate anxiety and trigger panic attacks. Instead, drink water.



### Eat well-balanced meals.

Do not skip any meals and always keep healthy, energy-boosting snacks on hand.



### Get enough sleep.

When stressed, your body needs additional sleep and rest. It's important to get 8 hours of sleep per night!



### Exercise daily.

Exercising can help you feel good and maintain your health.

For more mental health information and resources visit:  
[www.mentalhealthamerica.net](http://www.mentalhealthamerica.net)



# HOW TO DEAL WITH STRESS AND ANXIETY

## ACTION



### Take deep breaths.

Inhale and exhale slowly throughout the day when you are feeling stressed.

# 10

### Slowly count to 10.

Repeat, and count to 20 if necessary.



### Give back to your community.

Volunteer or find another way to be active in your community, which creates a support network and gives you a break from everyday stress.



### Take a time out.

Practice yoga, listen to music, meditate, get a massage, or learn relaxation techniques. Stepping back from problems helps clear your head.



### Get help online.

If you are struggling with stress and anxiety in your life, consider taking a mental health screen. Screening is an anonymous, free, and private way to learn about your mental health. [www.mhascreening.org](http://www.mhascreening.org)



### Talk to someone.

Tell friends and family you're feeling overwhelmed, and let them know how they can help you. Talk to a physician or therapist for professional help.

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