The Effect of Brief Human-Animal Interaction on the Stress, Mood, and Anxiety levels of Undergraduate Students during a Finals Examination Period

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INTRODUCTION
Student mental health is a significant concern on college campuses across the United States with approximately one-third of undergraduate students displaying symptoms of mental health problems [1][5]. Evidence suggests that a person's mental health is related to their social connectedness, academic performance and retention, and overall health and well-being [2]. As transitioning to college life can produce many psychological stresses related to a new environment and academic demands as well as changing social expectations, it is important to find ways that college students can reduce their anxiety and stress. Research has shown that human-animal interactions positively influence people in a variety of ways. The presence of animal may improve a person's behavior, social skills, and emotions [4][6][9].

OBJECTIVE
To determine if briefly interacting with an animal will work to effect the stress, mood, and anxiety levels in undergraduate college students during periods of elevated stress.

PARTICIPANTS
Undergraduate students (n=83) of varying majors and academic interests participated in this study during the Ohio State University's finals examination period of Autumn 2019. Table 1 below shows several demographic distributions of the participants.

MATERIALS
After consenting to participate in the study, a pre-interaction survey was given to collect demographic information and include the self-reporting measures of stress, anxiety, mood, species attitude.

METHODS
Animal interaction occurred through whatever means the person desired (physical contact, petting the animal, feeding the animal, etc.). After the interaction was complete, the participant was led back to the survey area to complete a post-interaction survey. The participant was given 5 minutes to be with the animals.

RESULTS AND DISCUSSION
The following associations were shown as a result of the analysis:

• While anxiety levels decreased in both interaction (p = 0.0008) and video (p = 0.0001) groups from pre- to post-measures, changes were not shown in the mean difference in pre/post anxiety level between groups (p = 0.3024), as in Figure 1.

• Positive affect decreased in the video group but not change in the interaction group (p = 0.1965), showing change in scores between groups, as in Figure 2.

• While negative affect decreased in both interaction (p = 0.0001) and video (p = 0.0036) groups from pre to post measures, changes were not shown between pre/post negative affect level between treatment groups (p = 0.2928), as in Figure 3.

• Energetic arousal mean score decreased from pre-to post-measures in the interaction group (p = 0.0003) and did not present differences in the mean pre/post in the video group (p = 0.9717), as in Figure 4.

• While tension levels decreased in both interaction (p = 0.0002) and video (p = 0.0001) groups from pre-to post-measures, changes were not shown in the mean difference in pre/post between the animal interaction and video control groups (p = 0.5719), as in Figure 5.

• While task-related thought did not significantly change either the interaction or video groups from pre-to post-measures, and changes were not shown in the mean difference in pre/post between the animal interaction and video control groups (p = 0.3635), as in Figure 6.

CONCLUSIONS
This model of brief human-animal interaction was shown to be associated with a decrease in stress arousal based in energy, an increasing trend in positive affect, and was shown to effect cognitive stress in task-based thought overall, indicating that physical animal interaction may have an effect on both the mood and overall stress when compared to indirect animal viewing.

REFERENCES

Table 1. Demographic distribution based on survey response frequencies.

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<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Percentage</th>
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