

Apr 11th, 11:00 AM - 2:00 PM

# Effects of Therapy Dogs on Participants' Anxiety in Group Discussion

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Renne, Kailee Grace, "Effects of Therapy Dogs on Participants' Anxiety in Group Discussion" (2018). *The Research and Scholarship Symposium*. 13.

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## Literature Review

- Many studies have shown that the buffer effect of therapy dog exposure on stress reactivity in undergraduate students. Just one-hour with a therapy dog has been shown to decrease self-report ratings of depression, anxiety, and pain in patients admitted to a mental health hospital. (Fiocco and Hunse, 2017).
- There is a close relationship between people’s attachment in human-pet relationships and their attachment in human-human relationships. (Zilcha-Mano, Mikulincer, & Shaver, 2011), .
- Zilcha-Mano, Mikulincer, & Shaver (2011) found, when an anxiously attached, individual has a relationship with a therapy pet, the individual may feel secure because the relationship is under their own control.
- Gajifoner, Harte, Potter, and McGuigan (2017) conducted research on the effect of dog-assisted intervention on student well-being, mood, and anxiety.
- Gajifoner, Harte, Potter, and McGuigan (2017) , concluded that there was a positive influence of the presence of a dog in terms of well-being.

## Research Focus

- The purpose of this study was to explore if those who score high on the Social Anxiety Interaction Scale benefit from having a dog present during a group discussion.

## Participants

- An online survey was sent to all undergraduate students at Cedarville University. The survey collected the demographics of the participants and also had the Social Interaction Anxiety Scale and the Perceived Stress Scale.
- The scores from the SIAS were calculated and those who scored high were contacted by e-mails to ask if they would like to participate further.
- Eight students (3 males and 5 females) who responded with willingness to participate were brought in to continue the study. Upon arrival participants were required to sign the consent form indicating that they volunteered to the study.

## Method

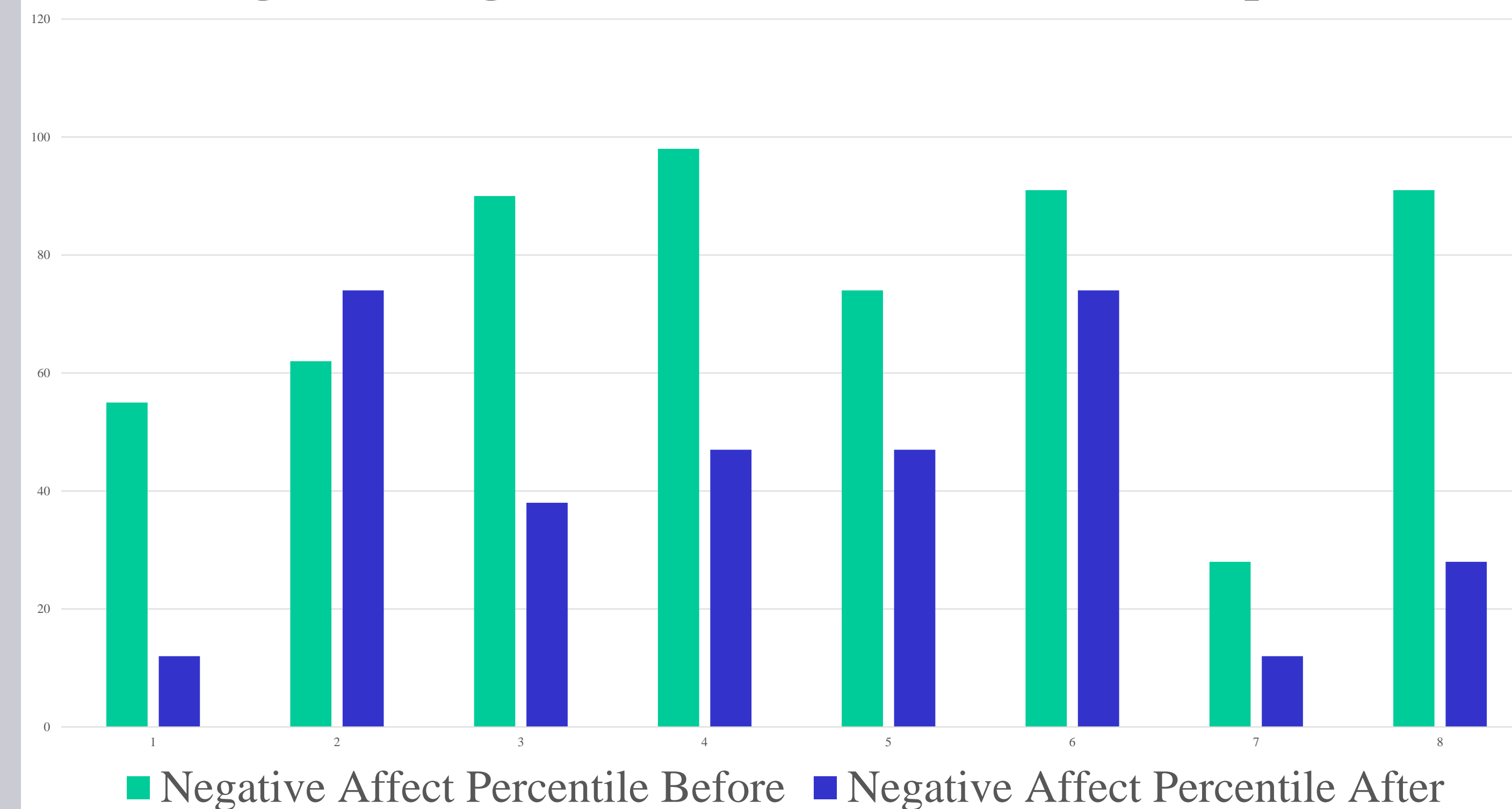
- The experiment used a pre-test and post-test design.
- Upon arrival participants were asked to sign the consent form and take the Positive and Negative Affect Schedule (PANAS). The PANAS yields two measures: Positive Affect (PA) and Negative Affect (NA).
- Once the participant completed the PANAS, blood pressure was taken.
- As participants sat in a circle, a dog came into the room and four discussion questions were shown on the screen in the front.
- The discussion lasted for 20 minutes.
- Once 20 minutes passed, blood pressure and the PANAS were retaken.

### Table 1: Means, Standard Deviations, and *t*-scores

	Mean	SD	<i>t</i>	df	Sig (2-tailed)
PA Raw Before	26.63	10.31	-1.00	7	.351
PA Raw After	27.88	10.41			
NA Raw Before	21.00	6.93	3.12	7	.017*
NA Raw After	13.63	3.11			
PA Percentile Before	33.38	37.36	-1.00	7	.351
PA Percentile After	38.63	37.36			
NA Percentile Before	73.63	23.99	3.67	7	.008**
NA Percentile After	41.50	24.23			

\**p*<.05, \*\**p*<.01

### Figure 1: Negative Affect Percentile of 8 Participants



## Results

- Twelve sets of measures were taken from each of the participants: PA Raw Score-Before, PA Percentile-Before, PA Raw Score-After, PA Percentile-After, NA Raw Score-Before, NA Percentile-Before, NA Raw score-After, NA Percentile-After, Systolic Blood Pressure-Before, Systolic BP-After, Diastolic BP-Before, and Diastolic BP- After.
- No gender differences were found except that females showed lower Diastolic BP-After. Therefore all analyses were proceeded with the combined group.
- Paired-samples t-tests were performed on the pre-test and post-test measures of PA Raw Scores, PA percentiles, NA Raw Scores, NA Percentiles, Systolic BP and Diastolic BP.
- Only significant differences between pre-test and post-test scores were found in NA Raw Scores (*p*<.05) and in NA Percentiles (*p*<.01). Participants had decreased NA Raw Scores and Percentiles in post-test. Table 1 presents the mean, standard deviation, and *t*-scores of the PANAS measures.
- There were significant negative correlations (*p*<.01) between the PA and NA scores.

## Conclusions

- Results from this study showed that there was a significant decrease of negative affect in all participants by the end of this study.
- Lacking a control group made it hard to attribute the effect to the dog, but participants’ responses to follow-up questions affirmed that the presence of the dog helped.
- We found no significant changes in positive affect. But according to past studies, NA is a more sensitive measure of anxiety (Crawford & Henry, 2010 ).

## Limitations & Future Studies

### Limitations

- The sample was very small which limited the presence of a control group.
- Because the puppy was a 4-Paws Ability Dog the puppy was not able to be off the leash and play with the participants that much.
- This study was conducted in a small, conservative university in the Midwest.

### Future Studies

- It would increase validity if there is a control group included in the study.
- It would be good to include interviews pre-study and post-study to hear accurately what participants are feeling about the procedure. This would help determine whether or not participants were actually at ease with the presence of a dog or if it did not help at all.
- It would interesting to try different animals or objects to see if that effects anxiety levels.