

Clinical Trial: Effects of Therapy Dog on Therapist when Integrating a Therapy Dog into Social Skills Classes for Adolescents with Autism Spectrum Disorder



Paige Huckaby, M.S.^{1,2}, Paige Dotson, B.S.^{1,2}, Alexandra Protopopova, Ph.D.³, Wesley H. Dotson, Ph.D, BCBA-D.,^{1,2}
¹Texas Tech University, ²Burkhart Center for Autism Research & Education, ³The University of British Columbia



Abstract:

Therapy dogs have been found to decrease stress levels in adults (Polheber & Matchock, 2014, Richeson, 2003). The purpose of this project is to determine if having a Therapy Dog in a social skills class will decrease teacher stress levels, increase teacher social engagement with the students, and lead to higher quality instruction. Three teachers each teach one small group of adolescents with autism spectrum disorder (ASD) during a ten-week social skills class. In one class the therapy dog is present during the first five weeks, in another class the therapy dog is present the last five weeks, and in another class the therapy dog is not present at all. We hypothesize that only when the dog is present during sessions the teachers will experience less stress, engage in more social and affiliated behavior towards the children, and deliver higher quality instruction. Social behavior, stress behavior, heart rate, electrodermal activity, and salivary cortisol concentrations of adolescents and teachers were gathered and will be assessed and compared across conditions. Preliminary data shown here represents the analysis of teacher salivary cortisol levels during classes.

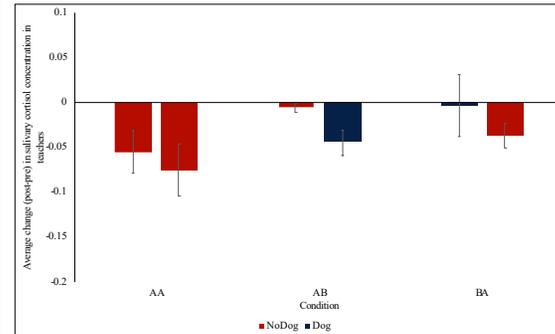


Figure 1: Average overall change in teachers' cortisol concentration by condition

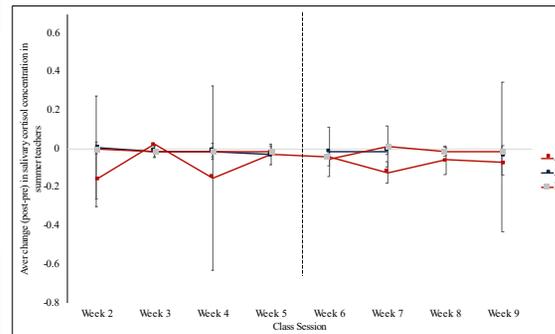


Figure 2: Average overall change in teachers' cortisol concentration across each week by condition for the first semester

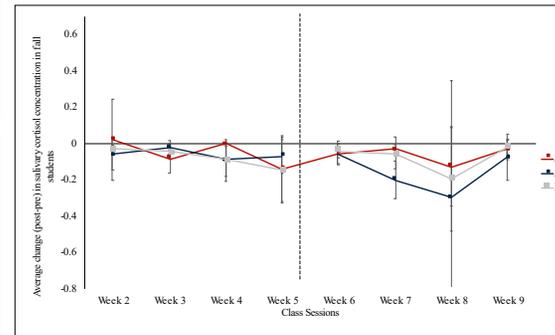


Figure 3: Average overall change in teachers' cortisol concentration across each week by condition for the second semester

Aim:

Identify the effects of the dog on the therapist.

- Hypothesis: During repeated sessions with dog, teacher will experience less stress, engage in more social and affiliative behavior toward children, and deliver higher quality instruction*

Dependent Variable:

Physiological Response

- Pre/Post Salivary Cortisol
 - Cortisol swab done five minutes prior to class starting and 5 minutes after class ended.
 - Change in Salivary Cortisol recorded: increase equals higher stress at end of class, decrease equals lower stress at the end of class.

Additional data still being analyzed: Implementation of teaching procedure and social and stress behavior.

Discussion:

- There was no consistent difference observed in stress behavior regardless of the presence of the dog (Fig. 1, Fig. 2, Fig. 3).
- Cortisol concentration showed a slight decrease for teachers as the weeks progressed, regardless of condition (Fig. 2, Fig 3).
- Our current data suggests the dog may function to reduce stress in students during group social skills instruction (See Paige Dotson's Poster) but does not appear to consistently have the same impact on teachers.

Materials & Methods:

Participants:

- Teachers: 7 adult therapists (undergrad/grad practicum students) trained in autism intervention

Research Design:

- 10-week social skills class repeated across 3 semesters (current data=first two semesters)
 - Teachers participate for 30-weeks, new students with ASD each semester

Condition	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
Experimental; A-B	Probes	Standard instruction				Standard instruction with dog				Probes
Experimental; B-A	Probes	Standard instruction with dog				Standard Instruction				Probes
Control; A-A	Probes	Standard instruction								Probes

Class Instruction:

- First and last week included a probes of 8 skills taught in weeks 2-9 (Tierney, 1992)
- Weeks 2-9 began with 5min of unstructured free time, then three structured activities (i.e. ice breaker, lesson, and behavior jeopardy), and finally ended with 5min of unstructured free time
- All classroom instruction delivered via Behavior Skills Training (BST).
- When dog is present, dog is available for students to interact with during all activities and can be used as a non-judgmental partner when role playing skills
- Class wide token economy used to reinforce desired behaviors (e.g. answering questions, participating in role play)

Future Work:

- Complete analysis of physiological and behavioral and social data for all semesters.
- Complete analysis of quality of teaching procedure utilizing treatment integrity rubric.
- Conduct detailed statistical analysis between intervention and variables.

Acknowledgements:

- Thank you to the National Institute of Child Health and Human Development (NICHD) for funding this research (R21HD095206)
- This research wouldn't be possible without Dr. Rebecca Beights and Kirsten Leatherwood as well as the Burkhart practicum students
- Thank you to my participating families, teachers, and therapy dog and handler as well as research assistants Ashley McGuire, Sarah George, Maky Haynes, **