Abstract
Equine-assisted therapy has been found to be an effective intervention in many clinical populations, including children and adults with autism, and veterans with and without PTSD diagnoses. It is supposed that this intervention is effective, in part, because it alleviates stress, and minimizes its physiological correlates. This, however, has not been directly examined. The current study fills this gap, assessing stress hormone (cortisol) levels in equine-assisted therapy clients and a non-riding control group. Saliva samples were collected from riders immediately prior to their riding sessions, and immediately afterward (N = 25). Samples were similarly collected from controls, before and after a 45-minute college lecture (N = 22). Samples will be assessed for cortisol, the primary human stress hormone, using immunoassay techniques.

Materials & Methods

Participants
• 25 TEC clients (32.4±4.45 yo)
• 22 Control participants (21.6±0.27 yo)

Cortisol
• Saliva collected using salivette
• Two sample times
• Assessed using immunoassay

Procedure
Participants were recruited from Thorncroft Equestrian Center (TEC) and West Chester University (WCU). Each participant filled out informed consent forms. For minor participants parents also provided informed consent. Immediately afterward, participants provided the first saliva sample using a cotton roll, which was placed in a small plastic tube. Participants rode (TEC) or listened to a lecture (WCU), and then provided a second saliva sample. All participants were offered opportunity to view mean results once the study was concluded. Participants were not offered any monetary compensation.

Results/Discussion
Equine-assisted therapy (EAT) is demonstrated to improve behavioral assessments in individuals with ASD diagnoses and veterans with and without PTSD diagnoses. Moreover, animal-assisted therapy reduces cortisol in populations with ASD diagnoses (Viau, Arsenault-Lapiere, Fecteau, Champagne, Walker, & Lupien, 2010). An 11-week course of EAT decreases afternoon cortisol in normative adolescents (Pendry, Smith, & Roeter 2014). We predict that our results will demonstrate an immediate decrease in cortisol as a result of an EAT session, replicating similar results from our lab. In previous studies (Gans & Johnson, under review), we have found that a respite with family can decrease mean cortisol levels. Without such a respite, cortisol levels remain constant; t_{101}=1.0, NS; t_{101}=4.4, p<0.01

Acknowledgements
The authors gratefully acknowledge the help of the staff and clients of the Thorncroft Equestrian Center and generous funding from West Chester University College of Arts & Sciences and Technology Fee Awards.

References


