

Horses and Humans Research Foundation: Midway Grant Report

Title of Project: Effects of Equine-Facilitated Psychotherapy on Post-Traumatic Stress Symptoms in Youth

Dr. Megan Mueller, PhD, Tufts University: Principal Investigator

Dr. Leslie McCullough, PhD, MSSW, LCSW, Washburn University: Co-Investigator

Project dates: November 1, 2013 to April 30, 2015

1. Summary of research project progress

During the first nine months of the grant period, the primary goals of our research team were to train staff and volunteers, finalize the study protocols, recruit the first segment of participants for the study, and use feedback from the first groups to improve the program in terms of efficiency and effectiveness. We believe that we have successfully achieved all of these goals, and look forward to continuing to conduct high-quality research in the remainder of the project period. Our progress is summarized below in detail.

Training of Staff and Volunteers:

All volunteers and staff received an intensive three-day training session in December led by Dr. Leslie McCullough and hosted by Touchstone Farm. The training session included an overview of equine-facilitated therapy (EFP), including lectures and skill-building activities to foster a nuanced understanding of the differences between EFP and other types of equine-assisted activities and equine-assisted therapy. Study personnel received training on trauma and post-traumatic stress disorder to help prepare the team for the intense nature of working with clients who are experiencing the effects of trauma. The training seminar included hands-on demonstrations with horses, role-playing common scenarios, and a discussion of specific session activities. In addition, the roles and responsibilities for the therapist, therapeutic riding instructor (TRI), and volunteer horse handlers were all discussed.

Study Protocols:

During and subsequent to the December training session, Dr. McCullough worked with the therapist and TRI to develop specific lesson plans for each of the ten sessions that focused on addressing particular domains of relevance to the clients (e.g., relationship building). Furthermore, the therapist and TRI create detailed reports after each weekly session documenting the treatment sessions and feedback from the debriefing.

As the study protocols were refined in collaboration with the whole therapy team and working with the Wediko School, the decision was made that the sessions would be more productive if they were limited to 5 participants each. We felt that 10 participants per session would not allow for enough individual contact time with the therapist, especially for youth who are coping with severe issues. We felt this decision was necessary to ensure that we were delivering the most high quality program possible. As a result, we will now be running 6 sessions of 5 participants each (with 5 in the control group) instead of 3 sessions of 10 participants each. This will maintain the original sample size, while delivering what we believe to be a higher quality program. This change was approved by the grant advisors on March 25, 2014. Although this change will extend the proposed timetable for the sessions, it will still allow us to complete the data collection well within the grant period.

Staffing:

During the training process, a lot of thought was given to creating the most experienced and effective treatment team possible for the study. Therefore, the decision was made to hire Susanne Riemer, MSW, LICSW as the therapist for the project, and have Winter Keeler transition to the role of therapeutic riding instructor (TRI). The purpose of this change was twofold. First, Susanne Riemer has over 30 years of clinical experience working with adolescents, specifically those who are coping with PTSD and associated symptoms of depression and anxiety. Furthermore, Susanne has extensive experience working in the context of EAA/T and is EAGALA certified. In our view, bringing on a team member with such an extensive background working with this population significantly strengthens the study and the effectiveness of our equine-facilitated psychotherapy intervention. Second, this staffing decision would allow Winter Keeler to serve as TRI for the sessions. Winter's extensive experience working in the TRI role, as well as her familiarity with the students from the Wediko school makes her an excellent individual for this position. We believe that Susanne and Winter have excellent complimentary skills, and they work extremely well together as a team. Both have devoted countless donated hours to coordinating and executing the study.

Recruitment:

We have currently completed two of the six treatment groups, with five clients per group (in addition to five control group participants per group). We will complete the remaining four treatment groups (with control participants) in the fall and winter, as there will be no sessions over the summer due to school and farm scheduling. Our goal in scheduling the sessions in this way was to be able to gather feedback from the school, farm facility, volunteers, and staff regarding the logistics and content of the EFP sessions and be well-prepared to launch the final four groups in the fall. In addition, this schedule will allow us to conduct an additional training session in August for new volunteers.

Feedback from Session 1 and 2:

Subsequent to completing the first two sessions, we held a formal debriefing/feedback session for all study staff and volunteers, as well as the opportunity to provide written feedback. The experience was meaningful and moving for everyone involved.

The therapist, TRI, and Dr. McCullough have reviewed the treatment reports and discussed several logistical changes to improve the curriculum and maximize the available time. The volunteers all reported developing a strong sense of teamwork, and it was clear that the therapist, TRI, and horse handlers all communicated extremely well and worked together as a functioning team. It was recommended that we build in a team-building exercise for new volunteers prior to starting the third session to ensure that this strong community approach is maintained, and we will act on this recommendation.

A primary goal of this study is to contribute to the field of EAA/T by disseminating information that will inform best practice. Themes that have emerged as important include: clear communication, well-trained and prepared horses, and an experienced staff.

Collaboration Sessions:

A key goal of this study is to facilitate the dissemination of evidence-based best practice in the field of EFP and increase the scope of research in this area via training and collaboration sessions. The purpose of the collaboration sessions is to facilitate dissemination of knowledge collaboration, and infrastructure development around supporting evidence-based practice in EAT and conducting research on the efficacy existing EAT programs. The goal of the three proposed collaboration settings is to support a network of EAA/T facilities that promote research-practice integration, and to create opportunities for promoting larger-scale research that will provide more generalizable findings about best practice in EAA and EAT.

Collaboration Session 1: The first collaboration session was held in conjunction with the Horses and Healing Summit in February, 2014 at Touchstone Farm. By capitalizing on having a nationally-representative sample of the top EAA/T practitioners in the country in one location, we were able to maximize our resources and increase the scope of dissemination. During the collaboration session, we addressed the following topics:

- 1) Research design and protocol for our HHRF funded project.
- 2) Issues of research design and methodology in equine-assisted therapy research more generally.
- 3) Specific design and implementation considerations for equine-facilitated psychotherapy in particular.
- 4) Logistics of successful recruitment and collaboration with outside partners (schools, programs, etc.)
- 5) Strategies for successful grant writing.
- 6) Collaborative discussion of others' ongoing initiatives and brainstorming how facilities and practitioners can support each other with the goal of increasing research capacity.
- 7) Discussion of ideas for multi-center studies.

The session provided some very fruitful conversation about how to expand the field of EAA/T to foster high-quality research, and beneficial partnerships between universities and facilities in conducting such research. We also discussed the importance of assessing the well-being of the horses partnering with us in research, and this discussion led to the development of a now ongoing study of stress in therapeutic riding horses (measured by salivary cortisol and behavior).

Collaboration Session 2: The second collaboration session was held in July, 2014 at Touchstone Farm in conjunction with Strongwater Farm, a PATH accredited facility in Tewksbury, MA. The purpose of conducting a collaboration session with Strongwater Farm was to share experiences and brainstorm plans for a multi-center study. Strongwater Farm's partnership with the Tewksbury Hospital and access to the hospital's patients is a unique strength. The goal of collaborating with Strongwater Farm is to extend the findings from our current EFP study and adapt the protocol for use with military veterans. Strongwater Farm has extensive experience working with PATH's Wounded Warrior program. We outlined a plan for developing a treatment protocol that will be consistent across both facilities that builds off of our HHRF-funded project. We have set the goal of applying for an already identified private sector foundation grant in 2015 that will provide preliminary data for utilizing this model in military veterans, and then will subsequently apply for an NIH grant through the R21 or R03 funding mechanisms.

2. Time line, both completed items and planned project completion, with any changes from original application noted and explained.

Time Line

<p>November 1, 2013 – December 1, 2013</p>	<p>Task: Planning and preparation for training sessions and recruitment.</p>
	<p>Status: Completed</p> <ul style="list-style-type: none"> ✓ Institutional Review Board (IRB) and Institutional Animal Care and Use Committee (IACUC) approval secured ✓ Volunteers and staff coordinated for training sessions ✓ Recruitment plan developed with Wediko
<p>December 9-13, 2013 Actual dates: December 18-20</p>	<p>Task: Training session for program therapy assistants, therapists, and paraprofessionals (conducted by Dr. McCullough).</p>
	<p>Status: Completed</p> <p>Leslie McCullough conducted a three day training session with staff and volunteers for the winter/spring sessions.</p>
<p>January 6 to March 31, 2014 Actual dates: March 4 to May 13</p>	<p>Task: Session 1 (10 sessions within 12 weeks)</p>
	<p>Status: Completed</p> <p>As described above, the decision was made by the study team that it would improve the quality of the program to include 5 clients per session instead of 10, allowing for increased individualized attention from the therapist and TRI. Therefore, we will now be running 6 sessions of 5 treatment participants each (instead of 3 sessions of 10 participants each as previously noted).</p> <p>Timeline of session 1 was slightly altered to fit the school’s schedule as well as inclement weather.</p>
<p>March 31 to June 23, 2014 Actual dates: March 26 to June 4</p>	<p>Task: Session 2 (10 sessions within 12 weeks)</p>
	<p>Status: Completed</p> <p>Timeline of session 2 was slightly altered to fit the school’s schedule and vacations.</p>

<p style="text-align: center;">July, 2014</p> <p style="text-align: center;">Actual dates: February 21-23 2014</p>	<p>Task: One training and collaboration session will be conducted with a partner PATH Accredited Therapeutic Horsemanship Center.</p>
	<p>Status: Completed</p> <p>As noted above, the decision was made to hold the first training/collaboration session earlier than scheduled to capitalize on a concurrent conference at Touchstone Farm involving the presence many top researchers and practitioners in the field.</p>
<p style="text-align: center;">August 18-21, 2014</p> <p style="text-align: center;">Scheduled dates: August 29-31</p>	<p>Task: Training session for program therapy assistants, therapists, and paraprofessionals (conducted by Dr. McCullough).</p>
	<p>Status: Scheduled</p> <p>Dr. McCullough is scheduled to conduct a second training session with the volunteers for the remaining sessions. She will also work with the therapist and TRI to review the treatment reports from the first session.</p>
<p style="text-align: center;">September 1 to November 24, 2014</p> <p style="text-align: center;">Projected dates:</p> <p>Session 3: September 9 to November 11 Session 4: September 10 to November 12 Session 5: January 6 to March 17 Session 6: January 7 to March 8</p>	<p>Task: Session 3 (10 sessions within 12 weeks)</p>
	<p>Status: Scheduled</p> <p>As noted above, we will now have 6 sessions instead of three. Although this extends the program into 2015 to avoid scheduling sessions over the holidays, we do not anticipate any difficulty completing the grant requirements by April 30.</p>
<p style="text-align: center;">December 1, 2014 to January 15, 2015:</p>	<p>Task: Data analysis</p>
	<p>Status: To be completed subsequent to data collection.</p>
<p style="text-align: center;">February, 2015</p> <p style="text-align: center;">Actual date: July 28, 2014</p>	<p>Task: One training and collaboration session will be conducted with a partner PATH Accredited Therapeutic Horsemanship Center</p>
	<p>Status: Completed</p> <p>We have recently conducted a collaboration session with Strongwater Farm (Tewksbury, MA), a PATH accredited facility that is associated with the Tewksbury Hospital. Strongwater Farm has participated in PATH's Wounded Warriors program, and is interested in collaborating with Touchstone Farm for a multi-site study involving</p>

	PTSD and veterans using an EFP model. The goal of this session was to develop a plan for writing a joint grant that would fund a large-scale project.
April, 2015	Task: One training and collaboration session will be conducted with a partner PATH Accredited Therapeutic Horsemanship Center
	Status: To be scheduled in fall/winter
February to April, 2015	Task: Publications will be submitted for consideration in peer-reviewed journals and trade publications.
	Status: To be completed in Spring 2015.

3. Budget: budget expenditures to date and remaining budget items listed, with any changes from the original application noted and explained.

TOTAL GRANT REQUEST (US Funds): \$ 49,845.10

*Note: grant awarded for \$50,000, therefore the extra \$155 was allocated to study materials (e.g., postage).

	Budget	Expenditures	Remaining
Personnel			
Dr. Megan Mueller: PI salary & benefits	\$8,045.10	\$3,556	\$4,489.10
Dr. Leslie McCullough: training sessions	\$3,600	\$1,800	\$1,800
Licensed Clinical Social Worker*	\$5,400	\$3,000	\$2,400
Supplies			
Food/supplies for two training sessions	\$1,200	\$600	\$600
Incentives for participants	\$600	\$256.95	\$343.05
Activity supplies for EFP sessions	\$500	\$114.90	\$385.10
Printing costs	\$200	\$0	\$200
Materials and supplies (see above note)	\$155	\$19.99 (postage)	\$135.01
Facility rental, food, supplies, and educational materials for three training/collaboration sessions*	\$4,500	\$0	\$4,500
Consultants			
Dr. Kim Guest, recruitment	\$3,000	\$500	\$2,500
Travel for Dr. McCullough to conduct two training sessions	\$3,000	\$1,358.91	\$1,641.09
Client-Related Expenses			
Cost for clients to participate in 10 EFP sessions (\$650 per participant)	\$19,500	\$6,500	\$13,000
TOTAL	\$50,000	\$17,706.75	\$32,293.25

*Because we are now running double the number of sessions, our costs for the therapist have increased. Our therapist is donating a large chunk of her time, but we submitted a request to KC Henry on (approved on 3/25/14) to reallocate \$3,600 to make up the rest of the difference in the therapist costs (now \$9,000 total). We are reallocating \$3,600 in costs from the three collaboration sessions (for which we had budgeted \$4,500 total) to the therapist's costs. We will still run the three collaboration sessions to meet the grant agreement, but Touchstone Farm has graciously offered to cover the rest of the collaboration session costs and did not bill any costs for the February collaboration session.

4. Summary of any complications or challenges that have been encountered and how they have been or are being addressed.

Group size:

The primary challenge thus far has been changing the group size from 10 to 5 clients, and the necessary schedule adjustments as a result of this change. However, we feel strongly that this change contributes positively to the quality of the EFP that we can provide, and have worked with the farm and the school to create a schedule that works for everyone.

Participant recruitment:

As with many intervention studies, reducing attrition in control group participants remains an ongoing challenge. Most students would prefer to participate in the equine-assisted intervention, and it is difficult to maintain retention in the control group for the full 10 weeks.

Overall, we have also encountered a challenge where many of the potential participants are meet the eligibility criteria for participating in the study (i.e., do not have a score of 12 or higher on the post-traumatic stress questionnaire). Although the students at Wediko Children's Services have a wide range of challenges, not all of them are experiencing significant trauma symptoms. However, we have an ongoing, communicative relationship with Wediko Children's Services and are working to ensure that we meet our sample size target.

To further address this challenge, we are also in discussions with another local residential facilities who has historically brought students to Touchstone Farm's therapeutic riding program. This facility is very similar to Wediko, and also has boys in the target age range who are experiencing post-traumatic stress symptoms. Although our primary plan is to recruit all participants from Wediko, we think that it is important to have a secondary plan to supplement our sample size, if necessary. In the event that we need to recruit from multiple facilities, the inclusion and exclusion criteria will remain the same. In addition, we will have matched pairs of treatment/control group participants from each facility to ensure that we do not have an uneven distribution of students from a particular facility in the experimental or control groups. Finally, we will assess if there are any potential facility-related differences in the results in the data analysis.

5. Invoice signed by grant manager for expenses incurred (up to 50% of grant award)

See attached.