FINDING PEACE IN THE PADDOCK

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therapist utilizing equine movement is often focused on one attribute of a horse: movement. But what if we widen the view and look at other inherent attributes to partnering with horses?

Psychology-informed physical and occupational therapy has been growing by leaps and bounds. Trauma-informed care is needed now more than ever before. Research has shown us how horses may be able to help here as well.

In 2009, Linda J. Keeling, Liv Jonare, and Lovisa Lanneborn's article, "Investigating horsehuman interactions: the effect of a nervous human," posited that a horse's and human's heart rate could directly impact one another. In 2010, Professor Ellen Kaye Gehrke, PhD continued to work on this hypothesis, and it is now proven that a horse's and human's heart rate can couple within a 4-foot radius.

With this knowledge, 2 occupational therapy interns and I set out to see what kind of results we could achieve through a 4-week program that was developed to help those dealing with trauma, stress, and chronic pain. The program combines trauma-informed physical therapy, stretching, and ground activities with equines. All participants who enter the program must have a mental health professional as part of their support team. This was a preliminary study, and has not been peer-reviewed.



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Метнор

Eight participants, in 2 groups of 4, signed up for the 4-week program. Participants were aged between 23 and 77 years old. Each group came to the farm once per week for 1 hour to participate in meditation, trauma-informed stretching, and horsemanship. The horsemanship portion was designed to gradually introduce techniques focusing on connection between the participants and the horses. This allowed the participants time to warm up and become comfortable in the environment. Ground activities were influenced by EAGALA and the Masterson's Method.

Each participant was given a finger pulse oximeter to be used for the 4-week course. Heart rates were recorded before, during, and after meditation at the farm; and, once per week, before and after meditation at home. The Face Pain Scale was also administered at the beginning and end of each session at the farm. The Face Pain Scale in this case study was modified by asking participants to select the face that most represented their overall anxiety level. The use of the word anxiety here was purposeful, because anxiety can be due to internal or external factors, not just pain.

All sessions were held within a small paddock. A circle was made in the middle, separated from the horses by non-obtrusive fencing. This was to allow the horses and humans to be near each other but kept safely apart during meditation and trauma-informed stretching.

FINDINGS

A large impact was seen in the modified Face Pain Scale. With a Cohen's effect size of 2.32, a large effect can be seen without use of a calculator, and the impact is significant in real-world situations. This allows us to see that partnering ground horsemanship with traumainformed stretching directly improved the participants' response to the activities.



A Cohen's effect size of 0.35, directly in-between a small to medium size impact, was noted when the participant heart rates at the farm were compared to those taken at home. It should be noted that on several occasions the pulse oximeters would become sensitive in the heat or sun, thus making it difficult to maintain correct results. User error was also observed during sessions, which may have had an impact on the at-home results.

Conclusion

These findings, while small, are a helpful beginning at demonstrating how impactful therapists can be while partnering with horses. We often speak about the inherent risks associated with partnering with horses, however, these results indicate an inherent benefit for all.

REFERENCES

- Morishita, S., Tsubaki, A., Hotta, K., et al. (2021) Face Pain Scale and Borg Scale compared to physiological parameters during cardiopulmonary exercise testing. *J Sports Med Phys Fitness*. 61(11), 1464-1468. doi: 10.23736/S0022-4707.20.11815-2. Epub 2020 Dec 3. PMID: 33269889.
- Keeling, L.J., Jonare, L., Lanneborn, L. (2009) Investigating horse-human interactions: the effect of a nervous human. *Vet J.* 181(1), 70-71. doi: 10.1016/j.tvjl.2009.03.013. Epub 2009 Apr 25. PMID: 19394879.
- Gehrke, E.K. The horse human heart connection results of studies using heart rate variability. NARHA's STRIDES. Spring 2010, 20-23.



- Lanata, A., Guidi, A., Valenza, G., Baragli, P., Scilingo, E.P. (2016) Quantitative heartbeat coupling measures in human-horse interaction. *Annu Int Conf IEEE Eng Med Biol Soc.* 2696-2699. doi: 10.1109/EMBC.2016.7591286. PMID: 28268877.
- Gehrke, E.K. (2009) Developing coherent leadership in partnership with horses a new a pproach to leadership training. *J Res Innovation Teaching*. 2(1), 222-234.

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