Effects of Horses on Recognizing Body Language and Facial Expression

Nicole Giroux Megan Kuhl Abigail Shetterly Janet B. Dean, Ph.D.

INTRODUCTION

Stress and Mood
• Owning a horse increases positive mood and decreases stress (Koch, 2008).
• Participation in 4 days of Equine-Assisted Experiential Therapy leads to a decrease in psychological distress and an increase in psychological well-being (Klontz, 2007).

Facial Recognition
• Ability to distinguish human emotions increases after exposure to dog’s facial expressions (Stetina et al., 2011).

RESULTS

Finding 1 – Reading Body Language
There was no significant change in the ability to read and understand human and equine body language across all groups.

<table>
<thead>
<tr>
<th>Diff. scores</th>
<th>Control</th>
<th>Weekly</th>
<th>Daily</th>
<th>F (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human M (SD)</td>
<td>-0.05 (1.61)</td>
<td>-0.50 (1.17)</td>
<td>-0.21 (1.55)</td>
<td>0.34 (2,57)</td>
</tr>
<tr>
<td>Equine M (SD)</td>
<td>-0.00 (2.00)</td>
<td>0.75 (1.91)</td>
<td>-0.04 (1.79)</td>
<td>0.45 (2,57)</td>
</tr>
</tbody>
</table>

Finding 2 – Anxiety
There was no significant change in anxiety for any of the groups over the four week period of time.

<table>
<thead>
<tr>
<th>Diff. scores</th>
<th>Control</th>
<th>Weekly</th>
<th>Daily</th>
<th>F (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current M (SD)</td>
<td>1.45 (7.74)</td>
<td>-1.92 (12.99)</td>
<td>2.36 (11.41)</td>
<td>0.69 (2,57)</td>
</tr>
<tr>
<td>General M (SD)</td>
<td>1.35 (5.67)</td>
<td>-0.17 (4.88)</td>
<td>0.29 (5.91)</td>
<td>0.33 (2,57)</td>
</tr>
</tbody>
</table>

Finding 3 – Mood
For the weekly horse group, there was a significant increase in positive mood over the four week period of time, but no significant decrease in negative mood.

<table>
<thead>
<tr>
<th>Diff. scores</th>
<th>Control</th>
<th>Weekly</th>
<th>Daily</th>
<th>F (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pos. Mood M (SD)</td>
<td>-0.40 (4.43)</td>
<td>3.75 (5.38)</td>
<td>-1.86 (7.08)</td>
<td>3.69 (2,57) *</td>
</tr>
<tr>
<td>Neg. Mood M (SD)</td>
<td>5.00 (3.80)</td>
<td>-3.17 (6.97)</td>
<td>0.61 (5.57)</td>
<td>2.31 (2,57)</td>
</tr>
</tbody>
</table>

DISCUSSION

Conclusions
• Spending time with horses did not seem to increase the ability to understand human facial expressions or equine body language.
• Levels of anxiety did not seem to be impacted by spending time with horses.
• Those who spent time with horses once a week displayed an increase in positive mood.
• Having prior experience with horses did not seem to influence the results of spending time with horses.

Limitations
• Limited sample size, possible gender bias
• Validity of the Equine Body Language assessment

Future Implications
• Reevaluate Equine Body Language assessment
• Determine how quickly mood changes when exposed to horses
• Explore other benefits to long-term equine activities
• Compare equine activity benefits with other animal activity benefits