Temporary Relief or Transformation?
Examination of Human-Horse Interaction in EAGALA-Model EAP

Angela Fournier, Elizabeth Letson, Emma Leigh Pasiuk, & Thomas Berry
Outline

Brief Review of Literature

Study on EAGALA-Model EAP

Theoretical Discussion

Case Example.
Case

- 14 year-old Caucasian female presenting for individual and family therapy
- Presenting Problem: Truancy
- Diagnosis: PTSD, Social Anxiety
- Domestic violence – multigenerational
- Placed in child protection
- Mom has PTSD in treatment for methamphetamine
- High anxiety, Cutting behavior, Suicidal ideation, alcohol use.
Research on EAP
Anestis, Anestis, Zawilinski, Hopkins, and Lilienfeld (2014)

- Systematic review on equine-related treatments
- 14 studies on equine-related counseling or therapeutic riding
- Significant problems in the field:
  - Variability in application
  - Absence of theory explaining the process
  - Threats to internal validity
- Conclude EAP should not be used without an evidence base.
Research on EAP
Lee, Dakin, and McLure (2016)

- Narrative synthesis
- 24 EAP studies from 2005 to 2013
- Nonexperimental research design
- Incomplete analysis of qualitative findings
- Mixing of mounted and non-mounted therapies
- Call for theory development, particularly in understanding the horse’s role in EAP.
Research Limitations to Date

- Applied, nonexperimental, threats to internal validity
- Limited to Outcome Studies
- Need for theory, explanation.
Outcomes to Date

- Increased self-disclosure
- Decreased cutting behavior
- Decreased anxiety
- Improved mood
- Increase in self-awareness
- Improved communication with Mom
- Improvements in school
Human-Animal Interaction Scale (Fournier, Berry, Letson, & Chanen, 2016)

### Human-Animal Interaction Scale (HAIS) – Participant Form

<table>
<thead>
<tr>
<th>Name: __________________________</th>
<th>Date: ____________</th>
</tr>
</thead>
</table>

Which animal(s) did you interact with?

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**Instructions:** For each type of interaction on the left, rate the amount of interaction you experienced on the right.

<table>
<thead>
<tr>
<th>During the session, how much did YOU...</th>
<th>Not At All</th>
<th>Moderate</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Watch the animal(s)</td>
<td></td>
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<tr>
<td>2. Spend time near the animal(s)</td>
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<tr>
<td>3. Pet the animal(s)</td>
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<tr>
<td>4. Talk to the animal(s)</td>
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<tr>
<td>5. Hug the animal(s)</td>
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<tr>
<td>6. Play with the animal(s)</td>
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<tr>
<td>7. Kiss the animal(s)</td>
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<tr>
<td>8. Groom the animal(s)</td>
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<tr>
<td>9. Offer food to the animal(s)</td>
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<tr>
<td>10. Attempt Tricks or Training with the animal(s)</td>
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<tr>
<td>11. Hold the animal(s)</td>
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<tr>
<td>12. Take Pictures of or with the animal(s)</td>
<td></td>
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</tr>
<tr>
<td>13. Decline or avoid interaction with the animal(s)</td>
<td></td>
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</tr>
<tr>
<td>14. Behave aggressively toward the animal(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Human Total</th>
<th>Not At All</th>
<th>Moderate</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>During the session, how much did THE ANIMAL(S)...</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>15. Initiate friendly interaction with you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Make friendly sounds</td>
<td></td>
<td></td>
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<tr>
<td>17. Accept food from you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Accept tricks or training</td>
<td></td>
<td></td>
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<tr>
<td>19. Accept or smell you</td>
<td></td>
<td></td>
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<tr>
<td>20. Attack you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Make unfriendly sounds</td>
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<td></td>
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<tr>
<td>22. Behave aggressively toward you</td>
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<tr>
<td>23. Cause a mess or inconvenience for you</td>
<td></td>
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<tr>
<td>24. Decline or avoid interaction with you</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Animal Total</th>
<th>Not At All</th>
<th>Moderate</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
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</tbody>
</table>
Jane’s HAI

Watching, limited petting, grooming
Metaphor

- Described as the “foundation” of the EAGALA model (EAGALA, 2015, p. 63)

- Experiential Education & Adventure Therapy
  - Creating a space for life metaphors to emerge, facilitating appreciation for the power of life metaphors, and aiding in the change of restrictive metaphors (Hovelynck, 1998).

- Descriptions of metaphor in EAP (Symington, 2012), but no empirical investigations.
Metaphor in EAGALA-Model EAP

- EAGALA training materials suggest
  1) Clients engage with horses,
  2) Life metaphors emerge, and
  3) Clients gain insight to psychological issues
     (EAGALA, 2015).
Mediation Model

Cause → Mediating Variable → Effect

metaphor

IMPROVE
Jane’s Metaphors

Mom’s addiction, ex-boyfriend, power & control, coping skills, before & after
The Present Study
The Present Study

- Process Variables
  - Human-Horse Interactions
  - Metaphor
- Outcome Variables
  - Subjective Distress
  - Psychosocial Learning.
- Tested for Direct Effects of HAI
  - Associations with Distress
- Tested for Indirect Effects of HAI
  - Mediation Model.
Method

Participants & Setting
- 112 men and women
- EAP/L clients
- EAGALA-Model.
Materials

- Subjective Units of Distress Scale (Wolpe, 1990)
  - Anxiety and Mood rated 0-10 Before and After Session

- Human-Animal Interaction Scale (Fournier, Berry, Letson & Chanen, 2016)
  - Human behaviors, Animal behaviors, Total

- Metaphor Record (Letson & Fournier, 2017)
  - Metaphor – quantitative and qualitative
  - Psychosocial Learning – quantitative and qualitative
Procedure

- At intake, clients consented to research at aggregate level
- Self-Report as regular assessment plan
  - Before session – SUDS
  - After session – SUDS, HAIS, Metaphor Record
- Created de-identified database
- Analyzed self-report data.
Findings
Human-Horse Interactions

Mean HAIS Score

Human Behavior toward Horse(s)

Watch, Near, Pet, Talk, Play, Hold, Hug, Kiss, Groom, Feed, Train, Pic, Decline, Aggress
Human-Horse Interactions

Horse Behavior toward Human

Mean HAIS Score

- Initiate
- Friendly Sound
- Accept Food
- Play
- Obey
- Sniff
- Lick
- Decline
- Unfriendly Sound
- Mess
- Aggress
Human-Horse Interactions

Horse Behavior toward Human

Mean HAIS Score

- Initiate
- Friendly Sound
- Accept Food
- Play
- Obey
- Sniff
- Lick
- Decline
- Unfriendly Sound
- Mess
- Aggress

[Graph showing the mean HAIS scores for various horse behaviors toward humans.]
Human-Horse Interactions

Horse Behavior toward Human

Percentage of Sessions 1+

- Initiate
- Friendly Sound
- Accept Food
- Play
- Obey
- Sniff
- Lick
- Decline
- Unfriendly Sound
- Mess
- Aggress
Metaphor
Feeling or State
28.1%

“my anxiety”
Family or Friends
19.3%

“my ex-boyfriend”
Relationship Constructs
14%

“communication”
Lesson 12.3%

“pushing leads to resistance”
Self
10.5%

“me in my vulnerable stage”
Challenge
8.8%

“struggles in my life”
Psychosocial Learning
## Psychosocial Learning

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths/Weaknesses</strong></td>
<td>(34.0%)</td>
<td>“I am strong and can be ok”</td>
</tr>
<tr>
<td><strong>Relationship Awareness</strong></td>
<td>(28.3%)</td>
<td>“I struggle meeting new people”</td>
</tr>
<tr>
<td><strong>Emotional Awareness</strong></td>
<td>(17.0%)</td>
<td>“I’m terrified”</td>
</tr>
<tr>
<td><strong>Acknowledgement/Acceptance</strong></td>
<td>(9.4%)</td>
<td>“I can overcome anything”</td>
</tr>
<tr>
<td><strong>Goals/Interests</strong></td>
<td>(7.5%)</td>
<td>“I need to learn to let go”</td>
</tr>
</tbody>
</table>
## Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
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</thead>
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<tr>
<td>1. HAI</td>
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<td>2. Human HAI</td>
<td>.96**</td>
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<td>3. Animal HAI</td>
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<td>.69**</td>
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<td>4. Anxiety (Pre)</td>
<td>.04</td>
<td>.03</td>
<td>-.01</td>
<td>-</td>
<td></td>
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<tr>
<td>5. Anxiety (Post)</td>
<td>-.33**</td>
<td>-.39**</td>
<td>-.15</td>
<td>.38**</td>
<td>-</td>
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<tr>
<td>6. Mood (Pre)</td>
<td>-.14</td>
<td>-.10</td>
<td>-.12</td>
<td>.40**</td>
<td>.09</td>
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<tr>
<td>7. Mood (Post)</td>
<td>-.33**</td>
<td>-.33**</td>
<td>-.31**</td>
<td>.28**</td>
<td>.66**</td>
<td>.38**</td>
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<tr>
<td>8. Metaphor</td>
<td>.34**</td>
<td>.36**</td>
<td>.22*</td>
<td>.03</td>
<td>-.33**</td>
<td>-.05</td>
<td>-.36**</td>
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<tr>
<td>9. Psychosocial Learning</td>
<td>.41**</td>
<td>.39**</td>
<td>.29**</td>
<td>-.03</td>
<td>-.38**</td>
<td>-.16</td>
<td>-.43**</td>
<td>.80**</td>
<td>-</td>
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</tbody>
</table>

*p < .01, **p < .001
Mediation Model
1. Regression of HAI onto Learning, $b = .120$, $t (77) = 3.91$, $p < .001$
2. Regress of HAI onto Horse Metaphor, $b = .108$, $t (77) = 3.66$, $p < .001$
3. Horse Metaphor, controlling for HAI, $b = .805$, $t (77) = 9.66$, $p < .001$
4. Controlling for Horse Metaphor, HAI was not a significant predictor of Learning, $b = .037$, $t (77) = 1.62$, $p = .109$
5. Sobel test found full mediation, $z = 3.41$, $p < .001$
Anodyne Effect
(Temporary Relief?)

metaphor

(Transformation?)

HAI

Metaphor

Psychosocial Learning

.108*

.805*

.037
Limitations

- Self-Report
- Correlational
- Relatively small sample
- Directive Metaphor
- No “Soak Time”
Future Research
- Reliable assessment data
- Experimental Design
- Control for confounds
  - novelty, setting
- Study Process Variables
- Basic, “laboratory” research.
References


