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Literature Review

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Literature Review – Integrating Animals in Therapy to Promote Client Regulation

A long and rich history exists between animals and humans. This relationship has existed in various forms. Humans have depended on animals as a food source, as a tool to make their work easier, but also as companion animals. In many ways, humans have benefited from their interaction with animals, and in many ways they have also been threatened by them. The reciprocal relationship also exists. Animals are often threatened by humans, but also benefit from them. This paper will focus on the use of animals, not just as companion animals, but as therapeutic tools, particularly in the ways that animals are used to promote emotional, somatic, and relational flexibility. A key theme that will be explored is the role of regulation in the use of Animal Assisted Therapy (AAT) with clients trauma histories.

Current state of AAT Research

Animals have been used by humans in a variety of capacities throughout history, not only as beasts of burden or a food source, but also as companion animals and for therapeutic benefit. In 1860, Florence Nightingale suggested that an animal is an excellent companion for the sick. As counselling and psychotherapy has become more structured, animals have been recognized for how they can be integrated into therapeutic work. We are starting to recognize that animals can help people heal from a variety of physical and mental conditions. Various names have been associated with this type of work, and various frameworks have been developed to provide some structure and/or a certification process for therapists to use. AAT has generally been accepted as the term that encompasses the integration of animals into the therapy process. It is defined by the Delta society as “a goal directed intervention in which an animal that meets specific criteria is an integral part of the treatment process” (Fine, 2006, p.264).

A variety of domestic animals are commonly used in the AAT process: dogs, cats, birds, etc. It is the horse, however, that has been identified as an ideal animal to use in therapy work (Lentini & Knox, 2009). Horses are prey animals, and also very social. Their behaviours are governed by fight or flight instincts. Horses pay close attention to detail and respond to things that may go unnoticed by humans. The ability that horses have to form healing connections with people has been unofficially recognized for centuries, and plenty of anecdotal evidence exists about the efficacy of AAT. However, relatively little scientific research has been done to provide empirical evidence to support this.

Several theories exist about how and why AAT works. Bates (2002) suggests that it reduces impulsivity, improves self-concept, and creates a greater sense of responsibility and ability to engage in emotional relationships. Vidrine, Owen-Smith, and Faulkner (2002) posit that it teaches clients to send congruent messages with spoken and body language. Horses are relational animals that have the natural ability to mirror our body language. Horse and client interactions encourage authentic communication and awareness of our intentions. Vidrine, et al. also suggest that horses are not judgemental, allowing for a greater sense of connectedness and self-acceptance. Another theory proposed by McCormick and McCormick (1997) is that holding and touch is an instrument in development, and that horses provide the natural gait and motion that promote rhythm and relaxation. Their claim is that horses help people to coordinate their emotions with their feelings, connecting sensations, perceptions, movement, and behaviour.

Lentini and Knox (2009) summarize the results of studies that involved a total of at least 300 participants with presenting issues ranging from abuse, behavioural disorders, PTSD, bereavement, and a variety of other mental health issues. The interventions were also varied, including hippotherapy, therapeutic riding, equine facilitated psychotherapy, equine facilitated

therapy, and equine facilitated experiential therapy. The result of the studies was equally varied. Some concluded positive results like decreased anger, aggression, depression, and dissociation, as well as increased self-esteem, locus of control, higher functioning, attention span, and verbal communication. One study, however, noted some negative outcomes as well.

Klontz, Bivens, Leinart, & Klontz, (2007) conducted research where equine activities were integrated with techniques of experiential therapy to determine its effectiveness. It was discovered that there were significant reductions in psychological distress and improvements in psychological well-being immediately following treatment, and that these improvements were stable 6 months later as well. Clients reported that they were “more (a) more oriented in the present; (b) better able to live more fully in the here-and-now; (c) less burdened by regrets, guilt, and resentments; (d) less focused on fears related to the future; (e) more independent; and (f) more self-supportive” (Klontz, et al., 2007, p.263).

In another study, Trotter, Chandler, Goodwin-Bond, & Casey (2008), identified 164 students that were at high risk for academic and/or social failure. They compared two groups, one where the students received classroom based counselling, and the other where students received Equine Assisted Counselling (EAC). They discovered that the EAC group made significant improvements in 17 behaviour areas, while the classroom group showed significant improvement in 5 areas, demonstrating the effectiveness of EAC.

Cantin, and Marshall-Lucette (2011) examined the literature on the efficacy of equine assisted therapy for people with mental health and behavioural disorders. They found that the current literature revealed promising results from the use of Equine Assisted Therapy (EAT), and concluded that EAT seems to increase positive behaviours, and reduce negative ones. They also concluded that it is beneficial for those suffering from general mental health problems.

While the authors of all of the studies acknowledge certain limitations in the research, their findings do indicate that integrating animals into the therapy process does enhance the benefits of therapy. Clearly, more research needs to be done into the emerging field of AAT. Meanwhile, there are compelling reasons and research in other area of therapy that can be used to help therapists develop interventions that can be comfortably implement into the therapy process in an ethical way. Some ideas will be presented here, particularly addressing integrating AAT into trauma therapy.

Background on psychological distress and the nervous system

Recent technological innovations have led to an explosion in research about ways in which the brain develops, responds to stimuli, and processes new information. As the prefrontal cortex develops, the brain develops the autonomy it requires to organize and store information, feelings, and emotions. It is not, however, very capable of abolishing emotions, thoughts, and impulses (Vander Kolk, 2006). Damasio, et al. (2000) used neuroimaging studies to discover that people in highly emotional states experience increased activation in subcortical brain regions, and reduced blood flow in the frontal lobes. As a result, it is usually difficult for people to organized a “modulated behavioural response” (Vander Kolk, 2006, p. 280) when they experience intense emotions.

Roger Sperry, a Nobel Prize winner in Physiology and Medicine for his work with splitbrain research in 1981 said: “the brain is an organ of and for movement: The brain is an organ that moves the muscles. It does many other things, but all of them are secondary to making our bodies move” (Vander Kolk, 2006, p. 280). People experience sensations combined with the urge for physical activations as a physical feeling or an emotion. During trauma, people are often confronted with overwhelming emotions and lose the ability to use emotions as a guide for

effective action. This is what contributes to the common “freeze” response in the face of danger or traumatic experiences. Vander Kolk (2006) states “Trauma can be conceptualized as stemming from a failure of the natural physiological activation and hormonal secretions to organize an effective response to threat” (p. 282). This explains why trauma survivors often struggle so much to cope with their emotions and have a hard time understanding the confusion that they feel themselves trapped in.

It is this dysregulation that prevents people from processing trauma. When people get stuck in this dysregulation, it is usually manifest in increased levels of anxiety and depression, as they do not have the flexibility to regulate their emotions, or to process somatic sensations. This same dysregulation will also often impact their ability to relate with others.

Regulation and mindfulness

It is generally accepted that the process of healing from trauma/PTSD needs to include the processing of the emotions that were frozen during the trauma (Greenberg, 2010). Various therapies have been developed in order to accommodate this, each with its own way of allowing the client to process the emotions in a safe and empathetic environment. Emotional regulation is often taught to trauma survivors as a way to reduce intense and distressing emotions (e.g., anger, depression, and anxiety). They are provided with a set of skills that enable them to effectively manage these emotions, as well as to identify vulnerability factors, triggering events, and obstacles that may alter their emotional experience (Frye & Spates, 2012). The goal of reducing or eliminating the symptoms and enhancing resilience is often achieved in this manner.

Mindfulness techniques have been practiced around the world by various cultures for centuries as a way to reduce the emotional and physiological effects of stress. Trauma survivors

often have memories that are too painful for them to face. As a result, many of them suppress the intrusive thoughts, and remove themselves from situations that create any related negative experiences. Such avoidant behaviours have been shown to be counterproductive to the healing process (Folletet, Palm, & Pearson, 2006). The integration of mindfulness skills has been shown to increase trauma survivors' ability to "contact painful memories, thoughts, and feelings without engaging in avoidance strategies" (Folletet, Palm, & Pearson, 2006, p. 52). Jaycox, Foa, and Morral (1998) found that clients who were able to remain emotionally engaged early in treatment and were able to remain this way received greater levels of benefit from their treatments.

The power of mindfulness comes from its emphasis on bottom-up processing (Siegel, Germer, & Olendzki, 2009). Mindfulness brings attention to the stream of sensory data that enter the system through each of the senses: vision, hearing, scent, taste, and other bodily sensation; as well as to the thoughts and images that arise in the mind. The focus is on these, rather than on the upper level schemas of narratives and beliefs that are usually used to guide us through our experiences. Mindfulness also provides survivors the opportunity to experience their feelings and sensations safely, without being overwhelmed with these upper level negative perceptions (Vander Kolk, 2014). Mindfulness has been practiced around the world for centuries. New brain imaging techniques have provided a wealth of support for and explanation of it as it relates to psychotherapy. Many therapy models are beginning to integrate mindfulness into their practices (Roemer & Orsillo, 2002; Academic Mindfulness Interest Group, 2006).

Integrating animals into the therapy process.

The phase oriented treatment approach to PTSD has been recognized as a standard approach in trauma therapy (Hobfoll & De Vries, 1995). Phase one involves the re-establishing of safety and stabilization. Phase two provides desensitization and processing of the traumatic

memories. Lastly, phase three allows the client to reconnect and integrate with family, friends, and others.

Safety and stabilization. Those who have been victims of trauma have experienced a deep and profound loss of control in their lives. They are often unable to feel any sense of security, and thus, the first priority is to re-establish this. When a child has fallen, the natural instinct of a caregiver is to remove the child from the danger, hold the child close and comfort the child to restore a sense of safety. Similarly, PTSD survivors need to be brought to a sense of safety and control before they will be able to talk about what happened. In this phase, the foundation is laid that enables the patient to deal with the challenge of confronting the trauma (Vander Hart, Brown, & Vander Kolk, 1989).

Initial sessions of AAT will often focus in this concept of safety and stabilization. Clients are introduced to the animal, and led through various exploratory exercises in order to increase their level of comfort with the animal. As this occurs, they often become more grounded in the present moment. Somatic awareness naturally increases, and clients feel more comfortable and at ease. A 2008 study by Berget, Ekeberg, and Braastad found a significant increase in self-efficacy and coping with a treatment group that worked with farm animals during a twelve week treatment program for people with psychiatric disorders. They found that the AAT served as a catalyst for positive development. Although there is little research providing direct evidence that animals reduce arousal, it seems evident that they do provide calming effects for some people (Fine, 2010). New connections may be formed in the limbic areas of the brain, allowing clients to widen their window of tolerance (Siegel, 1999). When clients feel safe, they naturally become more attuned to their own somatic experiences, and emotional awareness increases. They are

now able to further develop strategies to regulate their nervous systems for later stages of therapy.

As mentioned above, mindfulness and mindful breathing are integral parts of many trauma therapies. Exploration of client's breathing patterns, and intentionally bringing awareness to the breath to calm the client and the animal, are integrated into AAT from the beginning. Studies have demonstrated a positive influence of AAT on symptoms of anxiety and distress, such as heart rate variability, respiration rates, state anxiety, and fears related to future (Chandler, 2012). Particularly when horses are integrated into therapy, clients can learn to regulate their breathing by matching it the horses breathing, reducing instances of hyper or hypo arousal.

In addition to all of the above benefits, it has also been shown that integrating animals into the process makes therapy appear less threatening, and enhances the therapeutic relationship between therapist and client (Fine, 2002). A strong therapeutic alliance has been repeatedly shown to be an integral part of the therapy process. Animals facilitate the establishing of this early on in the process, creating an environment that will make the client more open and willing to express his or her inner experiences later on in therapy. Wesley (2006) conducted a study to evaluate the effect of AAT on the therapeutic alliance with an adult residential substance abuse population in group therapy. He found that the therapeutic alliance was enhanced with the addition of a therapy dog. He also discovered that adding a therapy dog to the process lowered heart and diastolic blood pressure rates.

In another study, Barker, and Dawson (1998) examined whether a session of AAT would reduce the anxiety levels of hospitalized psychiatric patients. They found significant reductions in anxiety scores, providing more evidence that AAT is a very useful tool that therapists can use to provide clients with the ability to manage their anxieties, and increase emotional regulation.

Desensitization and processing of traumatic memories.

Stage two in trauma therapy often involves the trauma survivor beginning to reflect on what happened and process the emotions and the memories of the event(s). Recent research suggests that basic talk therapy may be less effective than other treatments such as Eye Movement Desensitization and Restoration (EMDR) or Somatic Experience (SE) (Vander Kolk, 2002). These treatments allow the memories to be processed while clients are in a more relaxed state. As a result, the memories become regular memories that are part of the survivors' historical narrative, and no longer traumatic memories. Trauma survivors are able to see the memories objectively without dissociation or hyper-arousal symptoms. Gelinas (2003) uses the word "integration." Integration happens in two ways during this phase. Firstly, there is integration of the elements of the dissociated and fragmented traumatic material. Secondly, there is integration of the material into the conscious memory and personality of the individual. (p. 97).

Virues-Ortega and Buéla-Casal (2006) conducted a literature review on the psychophysiological effects of long-term human animal interaction. Two conclusions were drawn: (1) that there is some evidence to show that pet ownership can result in lowered cardiovascular levels, and (2) that pets may serve as a buffer to autonomic responses to acute stress. Although there is not a lot of research available on this, it would seem that integrating animals into trauma therapy will accomplish similar results. If the animal can serve as a buffer to clients' typical hyper-aroused response when reminded of trauma, there is greater likelihood that integration will happen. As indicated above, clients will feel more empowered to process the memories when in a regulated state in the presence of a regulated animal.

Reconnection and Integration

The third phase of trauma treatment involves reconnecting the client with family, friends, and acquaintances. This is where they establish the capacity to enjoy life and have fun again. The emotions are no longer triggered, and the trauma is now a part of their lives, and not consuming their life. In this phase, the counsellor “actively supports the patient while challenging any avoidance and facilitating a more realistic and adaptive engagement in the world” (Gelinas, 2003, p. 97).

Hart (in Fine, 2006), describes how animals can enhance a person’s quality of life. They provide warm and accepting companionship and reduce the amount of conflict in a person’s life. Berkman and Breslow (1983) found that increased mortality rates were associated with each decrease in social connection. When this is considered in the context of healing from trauma, it can be deduced that animals can play a key role in helping client’s to reintegrate back into a life that is not consumed by emotional reactions to trauma triggers.

References

- Barker, S. B., & Dawson, K. S. (1998). The effects of animal-assisted therapy on anxiety ratings of hospitalized psychiatric patients. *Psychiatric services, 49*(6), 797-801.
- Bates, A. (2002). Of patients & horses: Equine-facilitated psychotherapy. *Journal of psychosocial nursing and mental health services, 40*(5), 16-19.
- Berget, B., Ekeberg, Ø., & Braastad, B. O. (2008). Animal-assisted therapy with farm animals for persons with psychiatric disorders: effects on self-efficacy, coping ability and quality of life, a randomized controlled trial. *Clinical practice and epidemiology in mental health, 4*(1), 9.
- Berkman, L., and Breslow, L. (1983). "Health and Ways of Living: Findings from the Alameda County Study." Oxford University Press, New York.
- Cantin, A., & Marshall-Lucette, S. (2011). Examining the literature on the efficacy of equine assisted therapy for people with mental health and behavioural disorders. *Mental health and learning disabilities research and practice, 8*(1), 51-61.
- Chandler, C. K. (2012). *Animal assisted therapy in counseling*. Routledge.
- Damasio, A. R., Grabowski, T. J., Bechara, A., Damasio, H., Ponto, L. L., Parvizi, J., & Hichwa, R. D. (2000). Subcortical and cortical brain activity during the feeling of self-generated emotions. *Nature Neuroscience, 3*(10), 1049-1056.
- Fine, A. H. (2002). Animal-assisted therapy. *Encyclopedia of psychotherapy, 49-55*.

- Fine, A. H. (Ed.). (2010). *Handbook on animal-assisted therapy: Theoretical foundations and guidelines for practice*. Academic Press.
- Follette, V., Palm, K. M., & Pearson, A. N. (2006). Mindfulness and trauma: Implications for treatment. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 24(1), 45-61.
doi:10.1007/s10942-006-0025-2
- Frye, L. A., & Spates, C. R. (2012). Prolonged exposure, mindfulness, and emotion regulation for the treatment of PTSD. *Clinical Case Studies*, 11(3), 184-200.
doi:10.1177/1534650112446850
- Gelinas, D. J. (2003). Integrating EMDR into phase-oriented treatment for trauma. *Journal of Trauma & Dissociation*, 4(3), 91-135.
- Greenberg, S. L. (2010). Emotion-Focused Therapy: An Overview. *P D R : Türk Psikolojik Danışma Ve Rehberlik Dergisi*, 4(33), 1-12.
- Hart, L. A. (2006). Community context and psychosocial benefits of animal companionship.
- Henry, C. L., & Crowley, S. L. (2015). The Psychological and Physiological Effects of Using a Therapy Dog in Mindfulness Training. *Anthrozoös*, 28(3), 385-402.
- Hobfoll, S. E., & De Vries, M. W. (Eds.). (1995). Extreme Stress and Communities: Impact and Intervention (Vol. 80). *Springer Science & Business Media*.
- Jaycox, L. H., Foa, E. B., & Morral, A. R. (1998). Influence of emotional engagement and habituation on exposure therapy for PTSD. *Journal of Consulting and Clinical Psychology*, 66(1), 185.

- Klontz, B. T., Bivens, A., Leinart, D., & Klontz, T. (2007). The effectiveness of equine-assisted experiential therapy: Results of an open clinical trial. *Society & Animals, 15*(3), 257-267.
- Lentini, J. A., & Knox, M. (2009). A qualitative and quantitative review of equine facilitated psychotherapy (EFP) with children and adolescents. *The Open Complementary Medicine Journal, 1*(1), 51-57.
- McCormick, A., & McCormick, M. (1997). *Horse sense and the human heart: What horses can teach us about trust, bonding, creativity and spirituality*. Deerfield beach, Florida: Health Communications.
- Roemer, L., & Orsillo, S. M. (2002). Expanding our conceptualization of and treatment for generalized anxiety disorder: Integrating mindfulness/acceptance-based approaches with existing cognitive-behavioral models. *Clinical Psychology: Science and Practice, 9*(1), 54-68.
- Siegel, D. J. (1999). *The developing mind* (Vol. 296). New York: Guilford Press.
- Siegel, R. D., Germer, C. K., & Olendzki, A. (2009). Mindfulness: What is it? Where did it come from? In *Clinical handbook of mindfulness* (pp. 17-35). Springer New York.
- Trotter, K. S., Chandler, C. K., Goodwin-Bond, D., & Casey, J. (2008). A comparative study of the efficacy of group equine assisted counseling with at-risk children and adolescents. *Journal of Creativity in Mental Health, 3*(3), 254-284.
- Van der Hart, O., Brown, P., & van der Kolk, B.A. (1989). Pierre Janet's treatment of posttraumatic stress. *Journal of Traumatic Stress, 2*(4).

Van der Kolk, B. (2014). *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma*. New York: Penguin Group.

Van der Kolk, B. A. (2002). Beyond the talking cure: Somatic experience and subcortical imprints in the treatment of trauma. EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism, 57-84

Vidrine, M., Owen-Smith, P., & Faulkner, P. (2002). Equine-facilitated group psychotherapy: Applications for therapeutic vaulting. *Issues in Mental Health Nursing*, 23(6), 587-603.

Virués-Ortega, J., & Buéla-Casal, G. (2006). Psychophysiological effects of human-animal interaction: Theoretical issues and long-term interaction effects. *The Journal of Nervous and Mental Disease*, 194(1), 52-57.

Wesley, M. C. (2006). *Animal-assisted Therapy and the Therapeutic Alliance in the Treatment of Substance Dependence*. ProQuest.