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## HOW CAN EQUINE ASSISTED THERAPY RE-PATTERN THE LIMBIC SYSTEM?

~ By Dr. Brenda E. Abbey

“All emotional learning is held in our bodies, recorded on our vast, interrelated neural networks. The brain and the body are exquisitely intertwined systems that are constantly interacting with the environment. All five senses are connected to this system and field information that determines our unique response to anything. In fact, the more senses involved in an experience, the more the brain remembers it, the deeper the imprint onto our emotional systems”. [Tian Dayton]

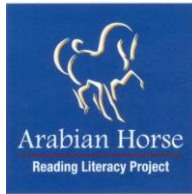
“When experiential memories are wonderful, our neural system carries with it our emotional sense memories.” Dr. Thomas Lewis MD explains “Changing the matrix of early emotional experiences which have knit long lasting patterns into the very fabric of the brain’s neural networks calls for a DIFFERENT kind of medicine altogether”. \* I suggest that the child’s interactions with the horse would be creating new emotional memories.

Dr. Lewis is quoted by Dayton again “The limbic system is associated with our emotions and the neocortex is associated with critical thinking. Both are operative in processing emotions. While the neocortex can collect facts quickly, the limbic system does not. Physical mechanisms are what produce our experience of the world and we need NEW sets of physical impressions to change or alter those impressions. Our neural systems respond to reparative relationships. Healing requires time and new relationships in which the child can experience themselves in different ways – new neural patterning is inscribed and helps reregulate neural systems”.

\* When the child is observing the horses’ reactions e.g. Breath awareness and Body awareness-the facilitator can question if there is a time when they noticed that happening to their body.

\* In the farm setting, grooming and brushing the horse, sweeping the barn floor, brisk walking will release dopamine and serotonin {nature’s tranquilizers} into the child’s system, restoring CALM and an overall sense of well-being. The brain changes in response to experience, the brain shapes itself after these patterned repetitive experiences in connection with the farm setting and the horses. We would be reweaving a social fabric with attachment to the horse, attachment is associated with Vasopressin and Oxytocin.

“We know that all parts of the brain throughout almost all ages of life can change – given the right opportunities and the right experiences”. [ Dr. Bruce Perry] I propose that Equine-Assisted



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learning sessions would provide one part of various therapeutic, educational and enrichment activities for the children in the pre-adolescent treatment program.

### **Neurosequential Model of Therapeutics (NMT)**

The NMT data would provide the framework to organize the child's history and current functioning prior to the beginning of the Equine – Assisted Learning sessions { number of sessions to be determined by Hull professionals} the NMT would be used after the end of sessions to gather data for the children participating. Given the NMT baseline, techniques are now available to track the impact of positive events to see how therapeutic nurturing events actually result in changes that improve self-regulation and behavioural functioning.

According to Dr. Bruce Perry, world renowned psychiatrist and neurologist, relationships and a relationally rich environment are a necessary part of healing for traumatized children.

\* I would also suggest that the relationship with the therapy horse and case worker & equine facilitator would improve the child's self-regulation and emotional functioning.

Perry in a conference address in 2003 "From Neurons to Neighbourhoods" suggests that we are neuro-biologically designed to be in relationships. The interactional experiences the child would have with the therapy horse also would help to develop the child's capacity for healthy relationships.

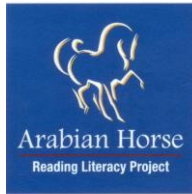
### **Developmental Attachment**

"Attachment serves as a womb for the maturation process". [Dr. Gordon Neufeld]

Neufeld believes attachment serves 4 functions: as a shield against external stress, as a womb for the emergent self, establishes a home base from which to venture forth, designates the cue-giver and the comforter.

E-motion it is the Engine of Maturation. Dr. Neufeld reminds us that in an intervention we must "collect before we direct. When dealing with the developmentally emotionally immature, we need to win their hearts to open their minds." Part of "collecting" a child/client is inviting them to depend on us.

Experiential Equine – Assisted Learning sessions cultivate a context, a culture of connection and allow the facilitator to "Collect " the child. While working within a developmental and attachment based framework, I believe new approaches to working with children and with horses will be explored. There are many ways in which working with horses helps us create, nurture and maintain the CONTEXT of the RELATIONSHIP {client-horse, facilitator – horse,



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client–facilitator}. Initially this context may be between the client and the horse and the client may come to the experiential learning sessions solely because of their connection with the horse. Over time the goal is to transfer this to a relationship with a counsellor to give a context within which to work with the child/client. Ultimately the aim is to transfer this to the KEY caregiving adults in the client’s life-to give them a context to care-take within.

By understanding the different levels at which we “attach” we can collect a client through the horses-at the level of attachment appropriate to them. This work aims to explore the developmental processes of EMERGENCE, ADAPTATION, and INTEGRATION. Neufeld’s work helps us understand that when attachments have not been secure or deep enough, when sensitivity is very high, and / or when losses and vulnerable feelings have become overwhelming, these developmental processes can become stuck and rigid.

Equine – Assisted sessions can help work on addressing the “stuckness” one step removed, experientially with the horses and through the child’s narrative and photographic horse stories.

True Independence cannot be taught. It grows naturally from the inside, out of safe dependence and attachment. We nurture and respect dependence to allow true independence to take root. Horses address these issues in their herds and they help us see things differently. The horses remind us how being in charge means to take care of and not to exploit. Seeing how the client relates to the horse, for example their understanding and use of power, can help us better understand what is happening in their lives.

## Horse Power

Incorporating horses to assist in healing is an approach that has been used by Native North American people, as well as in agricultural societies. Recently Obama allocated significant funds to use Equine – assisted Therapy for war veterans’ rehabilitation. Research continues to validate the efficacy of horses in therapy. In the mid 1990’s a program involving prison inmates and rescued retired thoroughbred racehorse demonstrated the power of the relationship and connection between the inmate and the horse he was in charge of caring for.

Just like humans, horses experience a large variety of emotions, are intuitive and social animals with distinct personalities, attitudes and moods. They have different roles within the herds comparable to human dynamics. Horses have the ability to mirror exactly what human body language is telling them , therefore I believe they would be able to help the child develop self – awareness and SELF REGULATION.

- Could relate this to mirror neurons cells discovered by Giacomo Rizzolatti.



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- In his book Born For Love, Perry says this has revolutionized our understanding of how we understand one another.
  - Equine assisted learning sessions will give the child observing opportunities of the horse's reactions and body language and will help the child interpret the world from the horse's point of view – promoting perspective – talking.

Neuroscience research affirms that the brain learns better when it perceives an experience as new and novel. \* As an Applied Researcher, I would suggest that Equine – Assisted Learning would be a NOVEL experience for the child.

Dr. Bruce Perry believes comforting, supportive and encouraging interactions with children end up being much more therapeutic and healing than traditional therapy methods. \* I call my program HEALING with HORSES. Perry also values the wisdom and experience of the Native American people in relation to community. Having Equine – Assisted Therapy as part of Pre-Adolescent Treatment intervention strategies will reinforce Dr. Bruce Perry's key components of Self-Regulation and the Capacity for Healthy Relationships.

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