



Appendix B

Evidence for Animal Assisted Psychotherapy (AAP)

The conceptualization of modern Animal Assisted Psychotherapy can be attributed to Dr Boris Levinson in the 1960s ([Levinson, 1962](#), [1984](#); [Levinson & Mallon, 1997](#)). Yet it has been informally practiced since psychotherapy was in its infancy. Accompanied in therapy sessions by his dog Jofi, Sigmund Freud often commented on Jofi's behavior and moods to his clients, referring to them as a reflection of processes happening in the client ([Grinker, 2013](#)).

As the psychological and physiological gains from human–animal interactions became more apparent, academic exploration of the human–animal bond expanded ([Beck & Katcher, 1996](#); [Katcher & Beck, 1983](#); [Melson, 2001](#); [Myers, 2007](#)). Numerous types of interventions took advantage of the human–animal bond to promote healthy development and to ameliorate unhealthy conditions in humans ([Fine, 2015](#)).

AAP is a developing clinical field based on accepted principles and goals of psychotherapy and the belief that the integration of animals into the therapy setting, by a therapist who understands the opportunities provided by the human–animal bond, may expand these principles to further advance the therapy process.

AAP can be utilized to benefit various populations including at-risk children and youth ([Bachi et al., 2012](#); [Balluerka, Muela, Amiano, & Caldenteu, 2015](#); [Parish-Plass, 2008](#); [Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015](#)), those with developmental disorders ([O'Haire, 2012](#)), and psychiatric needs ([Nathans-Barel, Feldman, Berger, Modai, & Silver, 2005](#)). It may be applied in the context of various theoretical frameworks and clinical approaches, such as attachment theory ([Bachi, 2013a](#); [Balluerka, Muela, Amiano, & Caldenteu, 2014](#), [Zilcha-Mano, Mikulincer, & Shaver, 2011](#)), intersubjectivity ([Parish-Plass & Oren, 2013](#)), psychodynamic therapy ([Parish-Plass, 2013a](#)), gestalt ([Kirby, 2010](#); [Lac, 2016](#)), and cognitive therapy ([González-Ramírez, Ortiz, & Landero-Hernández, 2013](#)).

There are particular AAP interventions that are designed for children and adolescents. Animals are often integrated into the play therapy setting ([VanFleet & Faa-Thompson, 2014](#)), based on the view that children tend to identify with animals ([Bellak, 1975](#)) and that the animals' presence expands the potential space ([Parish-Plass, 2013b](#)) needed for self-expression of the child's inner world, critical for play therapy and facilitating healing processes.

Psychotherapy is based on the exploration of the client's emotional and relational needs through the utilization of the relationship in the therapy setting. In AAP, a number of potential relationships exist simultaneously; thus, the inclusion of animals in the therapeutic setting expands this principle by providing opportunities in the here-and-now for processing past relational issues, identifying and working on underlying relational patterns and internal models, and offering adaptive alternatives

([Parish-Plass & Oren, 2013](#)). These opportunities are especially salient for work with maltreated children, whose source of trauma was an injurious relationship. [Herman \(1997\)](#) states that disconnection from others is a core experience of psychological trauma, and therefore, “Recovery can take place only within the context of relationships” (p. 133). [Perry \(2009\)](#) stresses the healing power of relationships in children suffering from trauma. For this reason, we will now highlight aspects of AAP which are especially relevant for at-risk children and youth who have experienced early trauma.

It has been shown that an animal’s involvement in therapy can facilitate the establishment of the therapeutic alliance ([Wesley, Minatrea, & Watson, 2009](#)). The therapeutic alliance is now accepted as one of the most important factors, if not the most critical, in the process of psychotherapy ([Safran & Muran, 2000](#)). However, there is much evidence that maltreated children are characterized by distrust ([Putnam, 2003](#); [Van der Kolk, 2005](#)) and that post-traumatic stress disorder (PTSD)-related anger symptoms cause ruptures in the therapeutic relationship ([Chemtob, Novaco, Hamada, & Gross, 1997](#)). The formation of a therapeutic relationship may be more challenging, yet more critical to outcome among such clients. [Cloitre, Chase Stovall-McClough, Miranda, and Chemtob \(2004\)](#) concluded from the results of their research that “the therapeutic relationship may be an especially ‘active’ ingredient in the remediation of childhood abuse-related PTSD” (p. 414.) That is, it can be seen from the literature that if, despite the barriers, a positive alliance *is* successfully established, then it is associated with a positive outcome in therapy ([Cloitre et al., 2004](#); [Green, 2006](#); [Kazdin, Whitley, & Marciano, 2005](#)).

There is evidence that children maltreated in the preverbal stage may have difficulty expressing themselves through symbolism ([Thompson, 1999](#)) and therefore find it difficult to play out their trauma in therapy using dolls or role-play. Animals represent reality, yet at a safe psychological distance allowing children to work through their trauma issues within interactions with beings that live—actually eat, move around, show emotions, etc.

An important mechanism in AAP is related to the interaction between the psychological effects and the physiological effects of the involvement of animals in the therapy setting. For example, in the presence of dogs, a person’s level of cortisol drops ([Odendaal, 2000](#)), resulting in the reduction of anxiety. This finding has important implications for therapy with at-risk children, who experience a high level of anxiety when in touch with the intimidating content connected with their trauma experiences. Such anxiety is likely to impede the accessing and processing of trauma-related issues. Although AAP is not aimed at having a “feel-good” experience, the lowering of the cortisol may enable the child to calm down enough to enter into the psychotherapy process.

Leaders in the field of therapy with maltreated children are showing interest in the potential of AAP for the healing process (Eliana Gil in [Sori & Schnur, 2013](#); Perry in [Child Trauma Academy, 2016](#)). For instance, the Neuro-sequential Model of Therapeutics (NMT) takes into account key systems and areas in the brain affected by adverse developmental experiences. [Perry \(2014\)](#) identifies therapeutic goals in four functional domains that are meant to reach these areas of the brain and have a reparative effect on them. Perry suggests that AAP may help reach three of these domains: sensory integration; self-regulation; and relationship ([Child Trauma Academy, 2016](#)). In addition, AAP may also support neural integration - essential in the healing of a child suffering from trauma ([Siegel, 2003](#)).

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