

Proposition 2: Trust Opens the Door to Connection: Companion Animals as Attachment Figures and Sources of Social Support.

This evidence review examines the theoretical and empirical literature supporting the proposition that companion animals can fulfil important attachment and social support functions, particularly for adolescents, thereby creating pathways toward broader social connection and healthy development.

Attachment theory, originating with Bowlby and extended by Ainsworth, defines attachment by function—proximity seeking, safe haven, secure base, and separation distress—rather than by the species of the figure. Empirical and theoretical work demonstrates that companion animals can fulfil these functions for many people. Complementary social support theory explains how animals also supply emotional support, companionship, belonging, stress buffering, and purpose. Research by Levinson, Barker and colleagues, Gee, Mueller, Johnson, and others maps psychological and physiological pathways (including oxytocin release and cortisol reduction) through which these bonds operate, with particular relevance to adolescents. The proposition that trust in a companion animal opens pathways to broader human connection has direct implications for programmes that thoughtfully pair young people with rescue animals.

What is Attachment? John Bowlby (1969/1982, 1973, 1980) proposed that humans are biologically predisposed to form enduring emotional bonds with figures who provide safety, comfort, and a secure base from which to explore. Attachment is defined by its adaptive functions: maintaining proximity to a protective figure, using that figure as a safe haven in times of threat or distress, employing it as a secure base that enables confident exploration, and experiencing separation distress when the figure is unavailable. These functions evolved to promote survival; the identity of the attachment figure is secondary to the fulfilment of the functions themselves (Bowlby, 1969/1982; Keefer et al., 2014).

Mary Ainsworth and colleagues operationalised these ideas through the Strange Situation procedure and clarified the concepts of secure base and safe haven (Ainsworth et al., 1978; Ainsworth, 1989). Securely attached individuals confidently explore while knowing a responsive figure remains available, and they seek comfort from that figure when distressed. Individual differences in attachment security arise from the consistency and sensitivity of caregiving and shape later relational expectations.

Because attachment is defined functionally rather than by species, the theoretical framework readily accommodates the question of whether non-human animals can

serve as attachment figures (Beck & Madresh, 2008; Zilcha-Mano et al., 2011; Sable, 2013).

Can Attachment Extend Beyond Humans? A growing body of research answers this question affirmatively. People report relationships with pets that meet the behavioural criteria of attachment: proximity maintenance, safe-haven use under stress, secure-base effects that support exploration or goal pursuit, and distress at separation (Kurdek, 2008, 2009; Zilcha-Mano et al., 2011, 2012; Rockett & Carr, 2014). Experimental work shows that the physical or even cognitive presence of a pet can lower blood pressure during a stressor and increase the number of life goals generated and confidence in attaining them—classic safe-haven and secure-base effects (Zilcha-Mano et al., 2012). Attachment measures adapted for pets yield reliable dimensions of anxiety and avoidance that predict expectations, emotions, and behaviour toward the animal, often independently of human attachment styles (Beck & Madresh, 2008; Zilcha-Mano et al., 2011).

Pets frequently score higher on security measures than romantic partners in the same individuals, suggesting they can provide a consistent source of felt security even when human relationships are strained (Beck & Madresh, 2008). This does not imply that animal attachments are identical to human ones in every respect, but it does establish that the core regulatory functions of attachment can be fulfilled across species.

Companion Animals as Attachment Figures Boris Levinson's pioneering observations in the 1950s and 1960s provided early clinical evidence. When a withdrawn child spontaneously engaged with Levinson's dog Jingles, the animal acted as a social catalyst that lowered defensive barriers and facilitated the therapeutic relationship (Levinson, 1962, 1969). Levinson argued that animals could accelerate treatment by offering non-judgemental acceptance and a bridge to human connection—precisely the sequence of trust opening the door to broader relational capacity.

Contemporary research confirms that companion animals can occupy the attachment-figure role across the lifespan. For children and adolescents, pets often rank among the most important relationships and are sought for comfort during emotional distress (Melson, 2003; Mueller, 2014). The bond is reciprocal in important ways: dogs display attachment-like behaviours toward their human caregivers in adaptations of the Strange Situation, using the owner as both secure base and safe haven (Topál et al., 1998; Gácsi et al., 2013; Solomon et al., 2019).

Companion Animals as Sources of Social Support Social support theory complements attachment theory. Companion animals furnish several recognised forms of support: emotional support (comfort, unconditional positive regard), companionship and a sense of belonging, stress buffering, and the provision of routine and purpose through caregiving responsibilities (McConnell et al., 2011; Wood et al., 2015). These functions

reduce loneliness and enhance perceived social resources even when human networks are limited.

Empirical studies link pet ownership and stronger pet attachment to lower loneliness, higher self-esteem, and better coping, particularly among adolescents facing developmental stressors or family adversity (Black, 2012; Mueller et al., 2014; Charmaraman et al., 2020). Longitudinal data indicate that relationship satisfaction with a pet predicts more favourable trajectories of loneliness, social anxiety, and depression in early adolescence, although the effects are nuanced and depend on the quality rather than mere presence of the relationship (Mueller et al., 2024).

Psychological and Biological Mechanisms Several interlocking mechanisms explain these effects. At the psychological level, animals offer predictable, non-judgemental responsiveness that can repair or bypass insecure working models formed in human relationships. Interaction with animals enhances attention, engagement, emotional regulation, and motivation for social and academic tasks (Gee et al., 2017; Pendry et al., 2021). Nancy Gee's research programme demonstrates that human–animal interaction in educational and therapeutic settings improves self-regulation, reduces anxiety, and facilitates peer interaction, thereby creating conditions for learning and connection.

Physiologically, tactile and visual contact with companion animals—especially dogs—reliably elevates oxytocin and reduces cortisol, blood pressure, and heart rate (Odendaal & Meintjes, 2003; Barker et al., 2005; Beetz et al., 2012; Nagasawa et al., 2015). Rebecca Johnson and colleagues have documented these oxytocin-mediated pathways and their links to cardiovascular and stress regulation (Johnson et al., 2002; related work summarised in Beetz et al., 2012). Sandra and Randolph Barker's programme of research has repeatedly shown short-term stress buffering: brief interactions with therapy dogs lower salivary and serum cortisol and self-reported anxiety in both clinical and non-clinical samples, including healthcare professionals and students facing examinations (Barker et al., 2005, 2010, 2016). These neuroendocrine changes provide a biological substrate for the subjective experience of safety and calm that characterises secure attachment and effective social support.

Implications for Adolescents Adolescence is a period of heightened identity exploration, peer orientation, and vulnerability to loneliness and internalising symptoms. Secure attachments and reliable social support buffer these risks and support positive youth development (competence, confidence, connection, character, caring). Megan Mueller's research has been particularly illuminating. Greater attachment to companion animals is associated with higher positive youth development scores among military-connected children, and the protective effect is strongest under conditions of parental deployment stress (Mueller & Callaghan, 2014; Mueller, 2014). Pet relationships can serve as a contextual asset that promotes intentional self-regulation, social skills, and resilience, especially when the bond is characterised by

satisfaction and mutual engagement rather than mere proximity (Mueller et al., 2024; Charmaraman et al., 2020).

Because animals do not demand sophisticated verbal or reciprocal social skills, they can provide a “safe” relational practice ground for adolescents who struggle with human peers or family conflict. Successful, trustworthy interactions with an animal may gradually generalise, increasing willingness to risk connection with humans—the core dynamic captured by the title proposition.

Why the Proposition Matters for Programmes Pairing Adolescents with Rescue Animals Organisations that carefully match adolescents with rescue animals operationalise the theoretical and empirical insights reviewed above. Rescue animals themselves often arrive with histories of disrupted relationships; the mutual process of building trust can be reparative for both parties. For the adolescent, the animal offers a non-judgemental attachment figure and source of social support that can reduce loneliness, regulate stress physiology, and scaffold emotional and social skills. For the animal, consistent, sensitive care from a young person provides security and purpose. The resulting reciprocal bond embodies Levinson’s insight that animals act as social catalysts: trust established with the animal can open the door to greater openness, empathy, and connection in human relationships.

Programme design should therefore prioritise relationship quality—matching temperament, ensuring welfare of both partners, providing scaffolding for caregiving skills, and monitoring the evolving bond—rather than simply placing an animal in an adolescent’s environment. When these conditions are met, the theoretical functions of attachment and social support become lived experiences that support developmental thriving.

Conclusion Attachment theory’s functional definition, Ainsworth’s secure-base and safe-haven constructs, Levinson’s early clinical vision, and the cumulative empirical work of Barker, Gee, Mueller, Johnson and others converge on a clear proposition: companion animals can serve as attachment figures and sources of social support. The psychological benefits of felt security and belonging, together with measurable physiological regulation via oxytocin and the HPA axis, help explain why these relationships matter. For adolescents navigating identity, autonomy, and connection, thoughtfully facilitated bonds with rescue animals offer a theoretically grounded pathway from trust to broader human relatedness. Continued rigorous research—especially longitudinal and experimental designs that examine mechanisms and individual differences—will further refine how programmes can harness this potential while safeguarding the welfare of both young people and the animals who share their lives.

Theoretical Summaries

Theory	Principal theorist(s)	Key contribution
Attachment Theory	Bowlby & Ainsworth	Explains how attachment functions can be fulfilled by companion animals.
Social Support Theory	Cobb, Cohen & Wills (or broader social support literature)	Explains emotional support, companionship, belonging and stress buffering.
Human–Animal Interaction (HAI)	Levinson; Gee; Barker; Mueller; Johnson	Explains the psychological and physiological mechanisms through which human–animal relationships promote wellbeing.

References

- Ainsworth, M. D. S. (1989). Attachments beyond infancy. *American Psychologist*, 44(4), 709–716. <https://doi.org/10.1037/0003-066X.44.4.709>
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Erlbaum.
- Barker, S. B., Knisely, J. S., McCain, N. L., & Best, A. M. (2005). Measuring stress and immune response in healthcare professionals following interaction with a therapy dog: A pilot study. *Psychological Reports*, 96(3), 713–729. <https://doi.org/10.2466/pr0.96.3.713-729>
- Barker, S. B., Knisely, J. S., McCain, N. L., Schubert, C. M., & Pandurangi, A. K. (2010). Exploratory study of stress-buffering response patterns from interaction with a therapy dog. *Anthrozoös*, 23(1), 79–91. <https://doi.org/10.2752/175303710X12627079939341>
- Barker, S. B., Barker, R. T., McCain, N. L., & Schubert, C. M. (2016). A randomized cross-over exploratory study of the effect of visiting therapy dogs on college student stress before final exams. *Anthrozoös*, 29(1), 35–46.
- Beck, L., & Madresh, E. A. (2008). Romantic partners and four-legged friends: An extension of attachment theory to relationships with pets. *Anthrozoös*, 21(1), 43–56. <https://doi.org/10.2752/089279308X274056>
- Beetz, A., Uvnäs-Moberg, K., Julius, H., & Kotrschal, K. (2012). Psychosocial and psychophysiological effects of human-animal interactions: The possible role of oxytocin. *Frontiers in Psychology*, 3, 234. <https://doi.org/10.3389/fpsyg.2012.00234>
- Black, K. (2012). The relationship between companion animals and loneliness among high school students. *Anthrozoös*.
- Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). Basic Books.

- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss: Sadness and depression*. Basic Books.
- Charmaraman, L., Mueller, M. K., & Richer, A. M. (2020). The role of pet companionship in online and offline social interactions in adolescence. *Child and Adolescent Social Work Journal*, 37, 589–599.
- Gácsi, M., Maros, K., Hernádi, S., Topál, J., & Miklósi, Á. (2013). Human analogue safe haven effect of the owner: Behavioural and heart rate response to stressful social stimuli in dogs. *PLoS ONE*, 8(3), e58475.
- Gee, N. R., Griffin, J. A., & McCardle, P. (2017). Human–animal interaction research in school settings: Current knowledge and future directions. *AERA Open*, 3(3). <https://doi.org/10.1177/2332858417714457>
- Johnson, R. A., Meadows, R. L., Haubner, J. S., & Sevedge, K. (2002). Animal-assisted activity among patients with cancer: Effects on mood, fatigue, self-perceived health, and sense of coherence. *Oncology Nursing Forum*.
- Keefer, L. A., Landau, M. J., & Sullivan, D. (2014). Non-human support: Broadening the scope of attachment theory. *Social and Personality Psychology Compass*, 8(9), 524–535. <https://doi.org/10.1111/spc3.12129>
- Kurdek, L. A. (2008). Pet dogs as attachment figures. *Journal of Social and Personal Relationships*, 25(2), 247–266.
- Kurdek, L. A. (2009). Pet dogs as attachment figures for adult owners. *Journal of Family Psychology*, 23(4), 439–446.
- Levinson, B. M. (1962). The dog as a “co-therapist.” *Mental Hygiene*, 46, 59–65.
- Levinson, B. M. (1969). *Pet-oriented child psychotherapy*. Charles C Thomas.
- McConnell, A. R., Brown, C. M., Shoda, T. M., Stayton, L. E., & Martin, C. E. (2011). Friends with benefits: On the positive consequences of pet ownership. *Journal of Personality and Social Psychology*, 101(6), 1239–1252.
- Melson, G. F. (2003). Child development and the human-companion animal bond. *American Behavioral Scientist*, 47(1), 31–39.
- Mueller, M. K. (2014). Human-animal interaction as a context for positive youth development: A relational developmental systems approach. *Human Development*, 57(1), 5–25. <https://doi.org/10.1159/000356914>

Mueller, M. K., & Callaghan, T. (or related military-connected work, 2014). Strong bonds with pets may help foster resiliency in military-connected children.

Mueller, M. K., et al. (2024). Longitudinal associations between pet relationship quality and socio-emotional functioning in early adolescence. *Social Development*.
<https://doi.org/10.1111/sode.12718>

Nagasawa, M., Mitsui, S., En, S., Ohtani, N., Ohta, M., Sakuma, Y., ... & Kikusui, T. (2015). Oxytocin-gaze positive loop and the coevolution of human-dog bonds. *Science*, 348(6232), 333–336.

Odendaal, J. S. J., & Meintjes, R. A. (2003). Neurophysiological correlates of affiliative behaviour between humans and dogs. *The Veterinary Journal*, 165(3), 296–301.

Pendry, P., Carr, A. M., Vandagriff, J. L., & Gee, N. R. (2021). Incorporating human–animal interaction into academic stress management programs.

Sable, P. (2013). The pet connection: An attachment perspective. *Clinical Social Work Journal*, 41, 93–99. <https://doi.org/10.1007/s10615-012-0405-2>

Solomon, J., Beetz, A., Schöberl, I., Gee, N., & Kotrschal, K. (2019). Attachment security in companion dogs: Adaptation of Ainsworth’s Strange Situation and classification procedures to dogs and their human caregivers. *Attachment & Human Development*.

Topál, J., Miklósi, Á., Csányi, V., & Dóka, A. (1998). Attachment behavior in dogs (*Canis familiaris*): A new application of Ainsworth’s (1969) Strange Situation Test. *Journal of Comparative Psychology*, 112(3), 219–229.

Wood, L., Martin, K., Christian, H., Nathan, A., Lauritsen, C., Houghton, S., ... & McCune, S. (2015). The pet factor—Companion animals as a conduit for getting to know people, friendship formation and social support. *PLoS ONE*, 10(4), e0122085.

Zilcha-Mano, S., Mikulincer, M., & Shaver, P. R. (2011). An attachment perspective on human–pet relationships: Conceptualization and assessment of pet attachment orientations. *Journal of Research in Personality*, 45(4), 345–357.

Zilcha-Mano, S., Mikulincer, M., & Shaver, P. R. (2012). Pets as safe havens and secure bases: The moderating role of pet attachment orientations. *Journal of Research in Personality*, 46(5), 571–580.