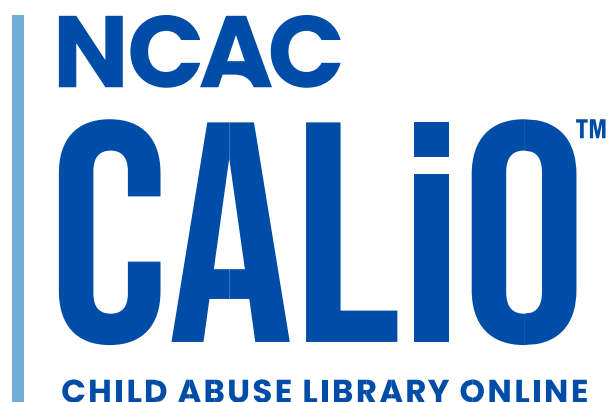




Animal Assistance: Research & Practice

A Bibliography

September 2026

**Championing and Strengthening the
Global Response to Child Abuse**

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Scope

This bibliography lists publications covering a wide variety of issues related to the use of animals in treatment, court, forensic interviews, and more.

Organization

Publications include articles, book chapters, reports, and research briefs and are listed in date descending order. Links are provided to full text publications when possible. However, this collection may not be complete. More information can be obtained in CALiO™, the Child Abuse Library Online.

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Animal Assistance: Research & Practice

A Bibliography

Muela, A., Izquierdo-Sanchez, I., Azpiroz, J., Cabezón, L., Méndez, J. M., Gilabert, N., García Ormaza, J., Baigorri, P., & Sarrionandia, A. (2026). [Leaving a mark—An animal assisted treatment for children exposed to intimate partner violence: A controlled comparison study](#). *Journal of Family Violence*, 1–16. DOI:10.1007/s10896-026-01138-6

Exposure to intimate partner violence (IPV) can seriously harm children's health and development. The primary aim of this study was to evaluate the effectiveness of the *Leaving a Mark* animal-assisted treatment program in ameliorating the clinical symptoms of children exposed to IPV. The sample comprised 95 children, all of whom were residing in Spain and had been exposed to IPV in the home. Participants were distributed across 2 groups: an experimental group ($n = 51$) that received the *Leaving a Mark* program integrated with treatment as usual, and a control group ($n = 44$) that only received treatment as usual. Both groups showed significant improvement over time, with reductions in internalizing & externalizing symptoms, as well as in traumatic stress and dysregulation profiles. Although there were no statistically significant differences between the groups at post-test, the experimental group did display a more pronounced reduction in externalizing symptoms at 6-month follow up. Also in the experimental group, ratings of the therapeutic alliance showed an early and sustained improvement during treatment, coupled with a progressive decrease in intrapersonal distress. These findings suggest that integrating animal-assisted components within trauma-focused treatments may support therapeutic engagement and emotional regulation in children exposed to IPV. The *Leaving a Mark* program represents a promising adjunctive approach for promoting behavioral and emotional well-being in this population.

Reyneke, T. B., Howell, T. J., Chapman, R. L., Ronken, C. A., & Butler, D. (2026). [Clinicians' perspectives on the use of robotic dogs in therapy for child sexual abuse](#). *Journal of Child & Adolescent Trauma*, 1–16. DOI:10.1007/s40653-026-00907-1

Dog-assisted therapy is associated with improved treatment outcomes for children who have experienced trauma, including child sexual abuse (CSA). However, there are limitations to employing live dogs in therapy (cost, welfare concerns). Research suggests that robotic dogs may be a viable alternative; however, no published accounts have explored the use of robotic dogs in therapy for CSA survivors. This research aimed to qualitatively explore clinicians' perspectives on the use of robotic dogs in therapy sessions with CSA survivors, in terms of potential effectiveness, benefits, & limitations. Four clinicians from an organisation that provides treatment to CSA survivors used a robotic dog in their treatment-as-usual sessions with CSA survivors aged between 5–12 years and were then interviewed about their experiences. Thematic qualitative analysis of clinician interviews revealed four main themes: client characteristics that influenced their interest in the robotic dog (age, shyness); clients' behavioural interactions with the dog (cuddling, kicking); robotic dog characteristics (softness, interactivity, and distractibility); and clinicians' use of the robotic dog (for psychoeducation, rapport development). The main reported benefits of the robotic dog were: it was a comfort object for clients, it was useful for psychoeducation, and it helped facilitate the development of therapeutic alliances between clinicians & CSA survivors. Shortcomings included distractibility and lack of technological advancement. Our findings provide preliminary evidence that there are advantages to using robotic dogs in therapy for CSA survivors.

Brandão, C., Sampaio, M., Sousa-Gomes, V., Fávero, M., & Moreira, D. (2025). [Effects of animal-assisted therapy for anxiety reduction in children and adolescents: A systematic review](#). *Journal of Clinical Medicine*, 14(1), 287. DOI:10.3390/jcm14010287

Animal-Assisted Therapy (AAT) is a clinical approach aimed at building valuable human–animal relationships with both preventive and therapeutic goals. It is provided

by a healthcare professional and involves animals (meeting certain criteria) as an integral part of the treatment process. This type of therapy has been shown to have multiple benefits in several areas, such as reducing anxiety in a variety of different groups of people. However, few studies have specifically investigated the benefits of AAT in reducing anxiety in children and adolescents. This systematic review aimed to comprehensively assess the evidence regarding the effectiveness of AAT in reducing anxiety among children and adolescents while also identifying research gaps in this field. Studies focusing on the relationship of these two variables were obtained from multiple databases (EBSCO, PubMed, and Web of Science). AAT has grown and the literature demonstrates several benefits of this approach. However, few studies have demonstrated the benefits of AAT for reducing anxiety in children and adolescents. Most of these few studies show that this type of intervention can help reduce anxiety levels.

da Silva Santos, I., & Sani, A. I. (2025). [Mothers' perceptions of interactions in animal assisted activities with children exposed to domestic violence in shelters: A qualitative study](#). *Social Sciences*, 14(6), 393. DOI:10.3390/socsci14060393

This qualitative study explores the perceptions of mothers who are victims of domestic violence regarding their children's interactions during animal-assisted activities conducted over three months in a residential shelter. Utilizing a semi-structured interview approach, six mothers from diverse national backgrounds, aged 24 to 48 years, participated in the research. The study identifies perceived benefits, behavioral changes, and challenges encountered during the sessions. Content analysis revealed four main categories: (A) Parents' perceptions of their children's previous contact with pets; (B) initial expectations of parents regarding their children's participation in the intervention; (C) mothers' observations during the intervention sessions with the animals; and (D) mothers' reflections after the intervention. Findings indicate benefits for children's behavior and development, perceived improvements in socio-emotional skills and communication, as well as a positive emotional experience for the mothers throughout

the process. The results underscore the significance of animal-assisted activities in promoting the well-being of children and their families. The study emphasizes the importance of integrating family perspectives in evaluating therapeutic interventions and offers insights for structuring more inclusive and effective animal-assisted intervention programs.

Hopson, L. M., McGraw, K., Traylor, A. C., Bailey, R., MacNeil, T., Hanenberg, C., Dugard, J., & Braswell, A. (2025). Equine-assisted learning for children with trauma and their caregivers. *Journal of Child & Adolescent Trauma*, 19, 887–896.
DOI:10.1007/s40653-025-00747-5

Animal-assisted therapies, including work with horses, are increasingly incorporated into interventions aiming to promote health and well-being for individuals exposed to trauma. This study evaluates an equine-assisted learning (EAL) intervention with children who have experienced trauma and their caregivers. Children and caregivers were referred for participation by social service agencies and law enforcement based on reports of children's exposure to trauma. Children participated in a seven-week psycho-educational EAL Intervention, Resilience Reins, which aims to improve children's competencies and perceptions in emotion regulation, communication, and self-efficacy. All sessions include unmounted work with horses. While children participated in the Resilience Reins program, caregivers were invited to participate in the Parent Café, a six-week psycho-educational series, developed by Be Strong Families, that aimed to provide parents/caregivers with social support and information on key protective factors for parenting children who have experienced trauma. At pretest and posttest, caregivers ($n = 151$) completed the Strengths and Difficulties Questionnaire (SDQ), which assesses children's social behavior, peer relationships, conduct, emotional health, and hyperactivity. They also completed the Be Strong Protective Factors Survey, which includes measures of family functioning/resiliency, social support, concrete support, nurturing and attachment, and knowledge of parenting/child development. Repeated

Measures MANOVA and paired samples *t*-tests were used to examine the data for changes over time on the measures. The results indicated significant improvement in family functioning and parenting knowledge. Children improved in conduct problems, hyperactivity, and emotional problems. Older boys whose caregivers participated in the Parent Café also experienced improvement in peer problems and prosocial behavior.

Sarman, A., Can, V., Tuncay, S., & Loutfy, A. (2025). [Determination of nursing students' opinions on the use of animal-assisted interventions in pediatric care and their animal love levels](#). *Nursing & Health Sciences*, 27(2), e70128. DOI:10.1111/nhs.70128

Animal-assisted intervention (AAI) integrates animals into health, education, and human services for therapeutic benefits. This study examined nursing students' perspectives and affinity for animals regarding AAI in pediatric care. A descriptive cross-sectional design was used, involving nursing students from a university's Health Sciences Faculty. Data were collected via a sociodemographic form and the Öney Animal Love Scale and analyzed using the R programming language. Results showed that 62.6% of participants were female, 30% were first-year students, and 18.7% owned pets. While 83.7% lacked prior AAI knowledge, 4.2% had used AAI. Despite limited awareness, 72.7% found AAI effective, and 52.2% considered it beneficial for children. A mediation analysis indicated that pet ownership positively influenced students' affinity for animals and belief in AAI's effectiveness. Prior AAI experience strengthened this relationship. In conclusion, nursing students had limited AAI knowledge but recognized its benefits. Pet ownership and prior exposure to AAI were key factors in fostering positive attitudes toward its role in pediatric care.

Chandler, C. K. (2024). *Animal assisted therapy in counseling* (4th ed.) Routledge.
DOI:10.4324/9781315673042

The fourth edition of *Animal-Assisted Therapy in Counseling* is the most comprehensive

book available dedicated to training mental health practitioners in the performance of animal-assisted therapy in counseling. This edition includes material on real-world animal-assisted interventions featuring counselor–client dialogues and sample therapeutic opportunities. Each chapter includes the most recent research and practice, and a wide variety of case examples present animal-assisted interventions in different settings with different types of animals. This unique resource is an indispensable guide for any counselor or psychotherapist looking to develop and implement animal-assisted therapy techniques in practice.

Chapman, R. L., Baselmans, C., Howell, T. J., Ronken, C., & Butler, D. (2024). [Exploring the benefits of dog-assisted therapy for the treatment of complex trauma in children: A systematic review](#). *Children*, 11(8), 1017. DOI:10.3390/children11081017

The manifestation of complex trauma results from exposure to severe and repetitive stressors occurring within the caregiver system. Frequently associated with child maltreatment, complex trauma can lead to impairments in multiple domains, including attachment, affect and behavioural regulation, and cognition. Treatments, including Trauma-Focused Cognitive Behavioural Therapy, have been shown to be efficacious, but high attrition rates point to the need for complementary methods that boost client retention and treatment efficacy. This systematic review examines whether dog-assisted therapy has beneficial impacts on the treatment of complex trauma and whether it can decrease treatment attrition among children presenting with complex trauma exposure. We followed PRISMA guidelines to locate relevant research reports. Seven published research reports matched the inclusion criteria. Results: Dog-assisted therapy may increase the efficacy of standard interventions for complex trauma, although only one study formally assessed treatment retention. Across most studies, there is an overall lack of detailed information on the nature of therapeutic activities involving the dog and how these activities may complement or enhance therapy as usual. Studies were of varying methodological quality, impacting the reliability of findings. Future studies should aim to

better describe and justify dog-assisted therapy techniques and evaluate these in comparison with standard evidence-based approaches to the treatment of childhood complex trauma.

Moe, A. M. (2024). ["There's a connection that is just beyond words": A qualitative study of therapy dogs in a child trauma assessment center](#). *People and Animals: The International Journal of Research and Practice*, 7(1), 5.

The utilization of animal-assisted interventions with trauma survivors is a growing field of practice and research. This study explored staff perceptions of the impact of therapy dogs in comprehensive neurodevelopmental assessments of children who have experienced significant maltreatment. Such victimization causes devastating and long-term consequences across physical, cognitive, emotional, and behavioral domains. Trauma assessments have been used as a means of understanding the impacts of maltreatment and in guiding treatment. Following a go-along qualitative approach, the study occurred over 16 months wherein experienced therapy dogs were incorporated into assessments of 323 children. Data were collected through field interviews and participant observation. Inductive analysis generated four primary themes: rapport, regulation, respite, and restoration. Rapport involved establishing camaraderie with children at the start of the assessments, helping provide a sense of safety within the clinical environment. Regulation occurred throughout the various components of the assessment, wherein the dogs provided emotional, cognitive, and physical comfort throughout testing. Respite outside of testing was provided via rest and play. Finally, the dogs helped restore emotional and physical balance for children at the end of assessments, aiding their transition back to daily activities. Overall, the therapy dogs contributed to the ease, efficiency, and quality of the trauma assessments.

Jalongo, M. R., & Guth, L. J. (2023). [Animal-assisted counseling for young children: Evidence base, best practices, and future prospects](#). *Early Childhood Education Journal*, 51(6), 1035–1045. DOI:10.1007/s10643-022-01368-5

Increasing numbers of young children are experiencing mild to moderate mental health issues that require support in addition to what is typically provided by family & teachers. The services of professional counselors can be particularly useful when children need help adjusting to and coping with various stressors & situations. Many school counselors and other mental health professionals have found that planned interactions between young children & animals represent an effective alternative/complementary therapeutic modality. Animals may provide an accepting, nonjudgmental presence that focuses young children's attention, motivates learning, & encourages participation in intervention activities. This article begins by describing the general purposes for counselling young children and the role that early educators can play in increasing families' awareness of and access to these services in their communities. Next, it defines animal-assisted counseling & reviews relevant research to build a rationale for including carefully selected animals in child mental health support services. The next section discusses caveats about involving animals in individual & small group counseling sessions, in classrooms, & in other facilities/programs that work with young children. The article summarizes best practices in animal-assisted counseling and the influence by variables within the child, animal welfare considerations, different contexts, availability of resources, and interagency collaborations. The article concludes with the future of animal-assisted counseling for young children & how it supports the goals of humane education.

Allen, B., Shenk, C. E., Dreschel, N. E., Wang, M., Bucher, A. M., Desir, M. P., Chen, M. J., & Grabowski, S. R. (2022). [Integrating animal-assisted therapy into TF-CBT for abused youth with PTSD: A randomized controlled feasibility trial](#). *Child Maltreatment*, 27(3), 466–477. DOI:10.1177/1077559520988790

This clinical trial examined animal-assisted therapy (AAT) as an adjunct to Trauma-Focused Cognitive-Behavioral Therapy (TF-CBT) for abused youth with posttraumatic

stress disorder (PTSD). Youth between the ages of 6 and 17 ($M = 11.79$, $SD = 3.08$) were randomized to receive standard TF-CBT or TF-CBT with adjunctive AAT (TF-CBT+AAT) employing retired service dogs. Feasibility metrics evaluating the addition of AAT were collected in addition to common clinical outcomes evaluated in TF-CBT trials. The inclusion of AAT increased the number of potential participants who declined participation and there were no noted benefits for treatment retention or satisfaction with services. Analyses showed that the inclusion of AAT did not enhance improvement of PTSD symptom severity ($\beta = .90$, $t = .94$, $p = .351$) or a number of other outcomes. On the contrary, there were indications from analyses and clinician feedback that AAT may have attenuated improvement in many cases. This study identified a number of important feasibility considerations in the design of studies testing AAT. However, the results examining clinical outcomes suggest that the inclusion of AAT with TF-CBT in the treatment of maltreated youth with PTSD is not warranted at this time.

Meyer, A. R., McDermott, C. M., Miller, M. K., & Marsh, S. (2022). Judges' perceptions of facility dogs in the courtroom. *Juvenile and Family Court Journal*, 73(1), 41-55.
DOI:10.1111/jfcj.12214

We examined judges' perceptions of facility dogs used to comfort witnesses during testimony in courtrooms. Content analysis of an open-ended survey question revealed that most judges support facility dog use to some degree, especially for children and in family, dependency, or juvenile courts. Perceived benefits included providing emotional support for witnesses who then could be calmer and provide better testimony (e.g., more accurate, more truthful, clearer). Perceived drawbacks included potential disruption, access issues for those allergic to or afraid of dogs, and bias. We discuss future research and implications for judges, advocates, and researchers.

Mignot, A., de Luca, K., Servais, V., & Leboucher, G. (2022). [Handlers' representations on therapy dogs' welfare](#). *Animals*, 12(5), 580. DOI:10.3390/ani12050580

While research on the benefits of animal-assisted interventions is beginning to build a significant body of work, studies on the well-being of therapy dogs are still in their infancy. Since handlers are the people responsible for their therapy dog's welfare, we interviewed 111 French handlers through an online questionnaire. Our results underlined that (i) therapy dogs' welfare is multidimensional when physical and psychological welfare, a balance between work & dog life and the settings and interactions of sessions are all taken into consideration. (ii) The response of our handlers emphasized that considering therapy dog welfare is important for the quality and safety of AAI. (iii) Three categories of risks factors were highlighted: the spatio-temporal framework (planning & environment), the interactions with beneficiaries and the handler themselves. It is particularly important that handlers talk about the negative impact of interactions with beneficiaries since they are at the heart of AAI, however there are few studies focusing on interactions as a stressor for dogs in this practice. Moreover, since there is a potential for positive bias in the handlers' representations, it is important that they be trained to identify and manage the stress in their dogs. Future research is particularly needed on the impact of interactions during sessions on therapy dog welfare.

Schroeder, K., & Prasath, P. R. (2022). Positive psychology and therapy animals: A conceptual integration for counseling practice. *Journal of Mental Health Counseling*, 44(4), 312-326. DOI:10.17744/mehc.44.4.03

Animal-assisted therapy in counseling (AAT-C) provides several key enhancements to counseling practice, including the promotion of emotional regulation and social skills. Various approaches exist for integrating counseling theories with AAT-C; however, the inclusion of therapy animals in positive psychology practice has yet to be explored in the counseling literature. In this article, we propose an integrated counseling treatment approach that blends AAT-C with the PERMA (positive emotions, engagement,

relationships, meaning, & accomplishment) theory of well-being. We review key concepts of PERMA and AAT-C, as well as delineate the beneficial mental health effects of human-animal interactions through the theoretical underpinnings of positive psychology. We then link animal involvement in AAT-C to specific intervention strategies and the understood mechanisms of change described in the PERMA model, followed by the description of a brief hypothetical counseling case example. We conclude with ethical considerations and implications for clinical mental health practice & research.

Compitus, K. (2021). The process of integrating animal-assisted therapy into clinical social work practice. *Clinical Social Work Journal*, 49, 1–9. DOI:10.1007/s10615-019-00721-3

Animal-assisted therapy (AAT) is considered an effective treatment model to use with a variety of populations and conditions, due to its flexible nature. As an integrative model, it often incorporates core modalities such as psychodynamic psychotherapy, cognitive behavioral therapy, psychodynamic psychotherapy & Gestalt therapy. Although there is a growing body of research addressing the efficacy of AAT, there is limited information on the actual process of utilizing AAT in clinical social work practice. Research shows that many clinicians support the use of AAT with clients but fail to integrate it into their own practice due to a lack of knowledge on the process of utilization. This paper explores the process of integrating AAT into direct clinical practice and the theoretical basis for utilizing it as an adjunctive treatment model.

Parish-Plass, N. (2021). Animal-assisted psychotherapy for developmental trauma through the lens of interpersonal neurobiology of trauma: Creating connection with self and others. *Journal of Psychotherapy Integration*, 31(3), 302–325. DOI:10.1037/int0000253

Chronic maltreatment in childhood has been found to have serious deleterious effects on the child's present and future medical and psychological health, self-regulation, and

ability to function in interpersonal relationships, resulting in developmental trauma (DT). In recent years, researchers in the field of neurobiology have discovered pervasive neurological implications of maltreatment, negatively affecting the functioning of the neurological system, bringing further understanding of the emotional and behavioral issues in those suffering from DT. Integration of knowledge of the psychological effects of chronic maltreatment with knowledge of the interpersonal neurobiology of trauma has proved useful for psychotherapists in their treatment of survivors of maltreatment. However, the symptoms of DT form barriers to some of the very principles of psychotherapy that are meant to treat sufferers of DT. This article presents the background for trauma- and neurobiology-informed psychotherapy, focusing on some symptoms of DT that might form barriers to psychotherapy, specifically distrust in others (leading to difficulty in establishing the therapeutic alliance), emotional numbness and loss of touch with self (leading to lack emotional expression, implicit memories without the context of explicit memories, lack of recognition of the trauma and its implications), and shame and the subsequent presentation of false self to others (preventing the ability to work through the trauma with the therapist). Experts in the field of DT state that therapy must take place in the context of relationships. Animal-assisted psychotherapy, conducted in a highly relational environment, is discussed as an approach which might lower these barriers.

Santaniello, A., Garzillo, S., Cristiano, S., Fioretti, A., & Menna, L. F. (2021). [The research of standardized protocols for dog involvement in animal-assisted therapy: A systematic review](#). *Animals*, 11(9), 2576. DOI:10.3390/children11081017

The manifestation of complex trauma results from exposure to severe and repetitive stressors occurring within the caregiver system. Frequently associated with child maltreatment, complex trauma can lead to impairments in multiple domains, including attachment, affect and behavioural regulation, and cognition. Treatments, including Trauma-Focused Cognitive Behavioural Therapy, have been shown to be efficacious, but

high attrition rates point to the need for complementary methods that boost client retention and treatment efficacy. This systematic review examines whether dog-assisted therapy has beneficial impacts on the treatment of complex trauma and whether it can decrease treatment attrition among children presenting with complex trauma exposure. We followed PRISMA guidelines to locate relevant research reports. Seven published research reports matched the inclusion criteria. Dog-assisted therapy may increase the efficacy of standard interventions for complex trauma, although only one study formally assessed treatment retention. Across most studies, there is an overall lack of detailed information on the nature of therapeutic activities involving the dog and how these activities may complement or enhance therapy as usual. Studies were of varying methodological quality, impacting the reliability of findings. Future studies should aim to better describe and justify dog-assisted therapy techniques and evaluate these in comparison with standard evidence-based approaches to the treatment of childhood complex trauma.

Arkow, P. (2020). [Human–animal relationships and social work: Opportunities beyond the veterinary environment](#). *Child and Adolescent Social Work Journal*, 37(6), 573–588. DOI:10.1007/s10560-020-00697-x

A species-spanning approach that incorporates clients' relationships with their companion animals into family genograms, schools of social work curricula, continuing education, interviews, assessments, and interventions offers increased career opportunities, professional and personal growth and development, and a more comprehensive resolution of clients' issues, social justice concerns, and the prevention of family violence. This article identifies six reasons why social workers should be cognizant of human–animal relationships and introduces nine ways, with action steps, in which social workers can include these relationships into training and practice outside the more developed field of veterinary social work. These venues include: agencies working in child protection and child sexual abuse; children's advocacy centers and courthouse facility

dogs; animal shelters; domestic violence shelters; public policy advocacy; clinical practice; agencies working with older and disabled populations; veterinary sentinels for intimate partner violence; and pet support services for homeless populations. Such attention to the human–animal bond can utilize social workers’ problem-solving skills to improve delivery of services, identify clients’ risk and resiliency factors, enhance social and environmental justice, expand academic inquiry, and increase attention to all of the vulnerable members of families and communities.

Dvoskina, M., & Cole, G. (2020). Introduction of facility therapy dogs to 911 communication centers: A proposal. *Traumatology*, 26(1), 147–151.
DOI:10.1037/trm0000215

[Correction Notice: An Erratum for this article was reported in Vol 26(1) of *Traumatology* (see record 2020-13877-001). The author order should be Mariya Dvoskina and Garry Cole.] Emergency dispatch operators, like many first responders, are frequently exposed to vicarious trauma; however, due to unique job demands that impact effective movement related to trauma resolution, dispatch operators may require a different approach to these stressors. We contend that introducing facility therapy dogs to 911 dispatch centers may be a diverse form of psychological service provision uniquely suited to address the needs of dispatch operators.

Burd, K. A., & McQuiston, D. E. (2019). Facility dogs in the courtroom: Comfort without prejudice?. *Criminal Justice Review*, 44(4), 515–536.
DOI:10.1177/0734016819844298

Courthouse facility dogs are expertly trained canines that assist individuals with psychological, emotional, or physical difficulties in a myriad of courtroom situations. While these animals are increasingly used to assist young witnesses in court, it is not yet known whether they are prejudicial to defendants or the witnesses they accompany

during trial. Across two studies utilizing mock trial paradigms involving child witnesses, we explored the impact of courtroom accommodations (facility dog vs. teddy bear vs. no accommodation) on mock jurors' judgments about the defendant and child witness. In Experiment 1, teddy bears, but not facility dogs, were prejudicial to defendants, while in Experiment 2, neither facility dogs nor teddy bears were prejudicial. Further, mock jurors' perceptions of the child witness were not influenced by courtroom accommodations. Evidence from both studies suggests that, contrary to various legal arguments concerning due process, facility dogs may not influence verdict, verdict confidence, or sentencing.

Flynn, E., Roguski, J., Wolf, J., Trujillo, K., Tedeschi, P., & Morris, K. N. (2019). A randomized controlled trial of animal-assisted therapy as an adjunct to intensive family preservation services. *Child Maltreatment*, 24(2), 161-168.
DOI:10.1177/1077559518817678

This study examined the effects of animal-assisted therapy delivered as an adjunct to standard-of-care intensive family preservation services, compared with usual care alone. Families referred by Child Protective Services (M child age = 6 years $\pm$ 4; M parent age = 32 years $\pm$ 8.26) were individually randomized to experimental (n = 14) or control (n = 14) intervention. Family functioning outcomes were measured using the North Carolina Family Assessment Scale for Reunification. All four targeted family functioning outcomes were significantly increased for participants who received animal-assisted therapy as an adjunct to intensive family preservation services (n = 14) with medium to large effect sizes. These improvements were sustained in two of the subscales through discharge. No significant differences were measured for the distal clinical outcome of disposition of children at discharge. Findings suggest that adding animal-assisted therapy as an adjunct can improve evidence-based clinical interventions aimed at enhancing the caregiving contexts of children.

Jones, M. G. , Rice, S. M., & Cotton, S. M. (2019). [Incorporating animal-assisted therapy in mental health treatments for adolescents: A systematic review of canine assisted psychotherapy](https://doi.org/10.1371/journal.pone.0210761). *PLoS One*, 14(1), e0210761. DOI:10.1371/journal.pone.0210761

As interest in Animal-Assisted Interventions (AAI) grows, there is increasing need to differentiate informal activities from formal & professionally directed therapies, including mental health focused Canine-Assisted Psychotherapy (CAP). There have been no reviews focusing exclusively on CAP and the distinct developmental period of adolescence. The aims of this study were to identify the characteristics of CAP interventions, their impacts & their acceptability, tolerability and feasibility for adolescents with mental health disorders. A systematic review identified studies incorporating canines into mental health treatments for adolescents aged 10–19 years. Studies reporting qualitative or quantitative psychological or psychosocial outcomes were included. Seven studies were scrutinised. Intervention characteristics varied, including a range of formats, settings, locations, doses, and facilitators. Information on the role of the canines in sessions was sparse. CAP had a positive impact on primary diagnoses and symptomatology, conferring additional benefits to standard treatments for internalising disorders, post-traumatic stress disorder, and equivalent effects for anxiety, anger & externalising disorders. CAP was associated with positive impacts on secondary factors including increased engagement & socialisation behaviours, and reductions in disruptive behaviours within treatment sessions. Global functioning also improved. There was insufficient evidence that CAP improved factors associated with self-esteem, subjective wellbeing, or coping. Good attendance and retention rates indicated high levels of acceptability. Moderate to high tolerability was also indicated. Feasibility may be limited by additional training and logistical requirements.

Krause-Parello, C. A., Thames, M., Ray, C. M., & Kolassa, J. (2018). [Examining the effects of a service-trained facility dog on stress in children undergoing forensic interview for allegations of child sexual abuse](#). *Journal of Child Sexual Abuse*, 27(3), 305–320. DOI:10.1080/10538712.2018.1443303

Disclosure of child sexual abuse can be a stressful experience for the child. Gaining a better understanding of how best to serve the child, while preserving the quality of their disclosure, is an ever-evolving process. The data to answer this question come from 51 children aged 4–16 ($M = 9.1$, $SD = 3.5$), who were referred to a child advocacy center in Virginia for a forensic interview (FI) following allegations of sexual abuse. A repeated measures design was conducted to examine how the presence of a service-trained facility dog (e.g. animal-assisted intervention (AAI)) may serve as a mode of lowering stress levels in children during their FIs. Children were randomized to one of the two FI conditions: experimental condition (service-trained facility dog present-AAI) or control condition (service-trained facility dog not present- standard forensic interview). Stress biomarkers salivary cortisol, alpha-amylase, immunoglobulin A (IgA), heart rate, and blood pressure, and Immunoglobulin A were collected before and after the FI. Self-report data were also collected. Results supported a significant decrease in heart rate for those in the experimental condition ($p = .0086$) vs the control condition ($p = .4986$). Regression models revealed a significant decrease in systolic and diastolic blood pressure in the experimental condition ($p = .03285$) and ($p = .04381$), respectively. Statistically significant changes in alpha-amylase and IgA were also found in relation to disclosure and type of offense. The results of this study support the stress reducing effects of a service-trained facility dog for children undergoing FI for allegations of child sexual abuse.

Naste, T. M., Price, M., Karol, J., Martin, L., Murphy, K., Miguel, J., & Spinazzola, J. (2018). [Equine facilitated therapy for complex trauma \(EFT-CT\)](#). *Journal of Child & Adolescent Trauma*, 11(3), 289–303. DOI:10.1007/s40653-017-0187-3

Emerging research suggests that Equine Facilitated Psychotherapy (EFP) may be beneficial for traumatized youth. In addition, complex trauma (i.e., multiple and/or

prolonged developmentally adverse traumatic events which are typically interpersonal in nature) treatment research is still growing and there is a need for the development and examination of novel treatments for youth with complex trauma histories. The current article describes a promising EFP model for this population called Equine Facilitated Therapy for Complex Trauma (EFT-CT). EFT-CT embeds EFP practices within Attachment, Regulation and Competency (ARC), an extant evidence-based complex trauma treatment framework for children and adolescents. The authors provide three case studies using both observational data provided by clinicians, as well as longitudinal measures of psychosocial functioning, to illustrate the potential promise of EFT-CT. The article concludes with a discussion about implications for EFP treatment and research.

Walsh, D., Yamamoto, M., Willits, N. H., & Hart, L. A. (2018). [Job-related stress in forensic interviewers of children with use of therapy dogs compared with facility dogs or no dogs](#). *Frontiers in Veterinary Science*, 5, 46. DOI:10.3389/fvets.2018.00046

Sexually abused children providing essential testimony regarding crimes in forensic interviews now sometimes are provided facility dogs or therapy dogs for comfort. Facility dogs are extensively trained to work with forensic interviewers; when using therapy dogs in interviews, volunteers are the dog handlers. Interviews can impact child welfare workers' mental health causing secondary traumatic stress (STS). To investigate this stress, first data were gathered on stress retrospectively for when interviewers initially started the job prior to working with a dog, and then currently, from forensic interviewers using a facility dog, a therapy or pet dog, or no dog. These retrospective and secondary traumatic stress scale (STSS) data compared job stress among interviewers of children using: a certified, workplace facility dog (n = 16), a volunteer's trained therapy dog or the interviewer's pet dog (n = 13/3), or no dog (n = 198). Retrospective scores of therapy dog and no dog interviewers' stress were highest for the first interviewing year 1 and then declined. Extremely or very stressful retrospective scores differed among the three groups in year 1, and were significantly elevated for the therapy dog group as compared with the

facility dog group. All interviewing groups had elevated STSS scores; when compared with other healthcare groups that have been studied, sub-scores were especially high for Avoidance: a psychological coping mechanism to avoid dealing with a stressor. STSS scores differed among groups, primarily due to Avoidance sub-scores, reflecting higher Avoidance scores for therapy dog users than no dog users. Facility dog users more consistently used dogs during interviews and conducted more interviews than therapy/pet dog users; both groups favored using dogs. Interviewers currently working with therapy dogs accompanied by their volunteers reported they had experienced heightened stress when they began their jobs; their high stress levels still persisted, indicating lower inherent coping skills and perhaps greater empathy among interviewers who later self-selected to work with therapy dogs. Results reveal extreme avoidant stress for interviewers witnessing children who are suffering & their differing coping approaches.

Bachi, K., & Parish-Plass, N. (2017). [Animal-assisted psychotherapy: A unique relational therapy for children and adolescents](#). *Clinical Child Psychology and Psychiatry*, 22(1), 3–8. DOI: 10.1177/1359104516672549

Hoagwood, K. E., Acri, M., Morrissey, M., & Peth-Pierce, R. (2017). [Animal-assisted therapies for youth with or at risk for mental health problems: A systematic review](#). *Applied Developmental Science*, 21(1), 1–13. DOI:10.1080/10888691.2015.1134267

To systematically review experimental evidence about animal-assisted therapies (AAT) for children or adolescents with or at risk for mental health conditions, we reviewed all experimental AAT studies published between 2000–2015, and compared studies by animal type, intervention, and outcomes. Methods: Studies were included if used therapeutically for children and adolescents (≤ 21 years) with or at risk for a mental health problem; used random assignment or a waitlist comparison/control group; and included child-specific outcome data. Of 1,535 studies, 24 met inclusion criteria. Results: Of 24

studies identified, almost half were randomized controlled trials, with 9 of 11 published in the past two years. The largest group addresses equine therapies for autism. Conclusion: Findings are generally promising for positive effects associated with equine therapies for autism and canine therapies for childhood trauma. The AAT research base is slim; a more focused research agenda is outlined.

Signal, T., Taylor, N., Prentice, K., McDade, M., & Burke, K. J. (2017). Going to the dogs: A quasi-experimental assessment of animal assisted therapy for children who have experienced abuse. *Applied Developmental Science, 21*(2), 81–93.
DOI:10.1080/10888691.2016.1165098

Experience of childhood sexual abuse (CSA) is a risk factor for the development of maladaptive outcomes across the lifespan. CSA victims have been found to have a significantly higher risk of developing Post Traumatic Stress Disorder (PTSD) than children who experience non-CSA trauma. While cognitive behavioral therapy approaches have been found to effectively treat PTSD, reviews suggest that children who have experienced CSA commonly disengage from this type of therapy. Engaging children who have been sexually abused may therefore require both innovation and creativity. One approach that is gaining recognition as effectively addressing barriers associated with engagement and retention is animal assisted therapy (AAT). The current article presents a quasi-experimental assessment of an AAT program working with children who present with clinical symptoms of PTSD following CSA. The efficacy of the program is discussed along with implications of the rising interest in AAT initiatives.

Mims, D., & Waddell, R. (2016). Animal assisted therapy and trauma survivors. *Journal of Evidence-informed Social Work, 13*(5), 452–457.
DOI:10.1080/23761407.2016.1166841

Animal therapy is making strides in the treatment of posttraumatic stress disorder (PTSD). For years, animals have been used with great benefit in the treatment of the aged and

the terminally ill. Now animal assisted therapy is benefitting sufferers of PTSD. The results of animal assisted therapy in the treatment of PTSD patients have seen significant results. In one study of the effect of dogs with patients, psychologists noted an 82% reduction in symptoms. One particular case noted that interacting with the dog for as little as one week, enabled a patient to decrease the amount of anxiety and sleep medications by half.

Courthouse Dog Foundation. (2015). [Facility dogs at Children's Advocacy Centers and in legal proceedings: Best practices.](#)

Krause-Parello, C. A., & Gulick, E. E. (2015). Forensic interviews for child sexual abuse allegations: An investigation into the effects of animal-assisted intervention on stress biomarkers. *Journal of Child Sexual Abuse*, 24(8), 873-886.
DOI:10.1080/10538712.2015.1088916

The use of therapy animals during forensic interviews for child sexual abuse allegations is a recommendation by the Therapy Animals Supporting Kids Program to help ease children's discomfort during the forensic interview process. Based on this recommendation, this study incorporated a certified therapy canine into the forensic interview process for child sexual abuse allegations. This study investigated changes in salivary cortisol, immunoglobulin A, blood pressure, and heart rate as a result of forensic interview phenomenon (e.g., outcry) incorporating animal-assisted intervention versus a control condition in children (N = 42) interviewed for alleged child sexual abuse. The results supported significantly greater heart rate values for the control group (n = 23) who experienced sexual contact and/or indecency than the experience of aggravated sexual assault compared to no difference in HR for the intervention group (n = 19). The results suggest that the presence of the canine in the forensic interview may have acted as a buffer or safeguard for the children when disclosing details of sexual abuse. In the intervention group, children's HR was lower at the start of the forensic interview compared

to the control group. Finding an effect of having a certified handler–canine team available during the forensic interview on physiological measures of stress has real-world value for children, child welfare personnel, and clinical therapists. It is suggested that animal-assisted intervention be expanded to children facing other types of trauma and to treatment programs for child survivors of sexual abuse.

O’Haire, M. E., Guérin, N. A., & Kirkham, A. C. (2015). [Animal-assisted intervention for trauma: A systematic literature review](#). *Frontiers in Psychology*, 6, 1121.
DOI:10.3389/fpsyg.2015.01121

Animals have a long history of inclusion in psychiatric treatment. There has been a recent growth in the empirical study of this practice, known as Animal-Assisted Intervention (AAI). We conducted a systematic review of the empirical literature on AAI for trauma, including posttraumatic stress disorder (PTSD). Ten studies qualified for inclusion, including six peer-reviewed journal articles and four unpublished theses. Participants were predominantly survivors of child abuse, in addition to military veterans. The presentation of AAI was highly variable across the studies. The most common animal species were dogs and horses. The most prevalent outcomes were reduced depression, PTSD symptoms, and anxiety. There was a low level of methodological rigor in most studies, indicating the preliminary nature of this area of investigation. We conclude that AAI may provide promise as a complementary treatment option for trauma, but that further research is essential to establish feasibility, efficacy, and manualizable protocols.

Balluerka, N., Muela, A., Amiano, N., & Caldentey, M. A. (2014). Influence of animal assisted therapy (AAT) on the attachment representations of youth in residential care. *Children and Youth Services Review*, 42, 103–109.
DOI:10.1016/j.chidyouth.2014.04.007

This study evaluates the influence of animal-assisted therapy (AAT) on the attachment representations of a group of adolescents in residential care who suffered traumatic

childhood experiences and exhibited mental health problems. The participants of this study were 46 teenagers (mean age = 15.41, $SD = 1.65$) divided into two groups: the intervention group of 21 youths (8 females and 13 males) (mean age = 15.19, $SD = 1.69$) and the control group of 25 (6 females and 19 males) (mean age = 15.60, $SD = 1.63$). The results of this research showed that the teenagers displayed a more secure attachment after undergoing AAT. Furthermore, in comparison with the control group, the intervention group showed higher scores in the secure attachment dimension and lower scores in the parental interference dimension, which is associated with preoccupied attachment. There were no differences in the other dimensions of attachment assessed. These results help to empirically validate AAT as an effective therapy for teenagers who have suffered childhood trauma and have mental health problems.

Kemp, K., Signal, T., Botros, H., Taylor, N., & Prentice, K. (2014). Equine facilitated therapy with children and adolescents who have been sexually abused: A program evaluation study. *Journal of Child and Family Studies*, 23(3), 558-566.
DOI:10.1007/s108260139718-1

Child sexual abuse (CSA) is a social problem that often inflicts long lasting psychological trauma and leads to psychopathology, behavioural problems and revictimization. Treating young people who are presenting with the detrimental effects of CSA is often difficult because these effects off-set efforts at establishing a therapeutic bond. Animals have been found to facilitate the development of the therapeutic alliance between client and practitioner and therapies utilizing horses have the added bonus of empowering clients. This study aimed to evaluate an Equine Facilitated Program (EFT) run by Phoenix House, a sexual assault referral centre in Queensland, Australia. Participants were six boys and nine girls (aged 8–11 years) and 15 adolescent girls (aged 12–17 years). All participants provided several measures of data designed to establish levels of psychological distress at three points in time. That is, Time 1—intake into the service; Time 2— following approximately 6 weeks of in-clinic counselling and pre-EFT; and Time 3 post-EFT (9–10

week duration). Significant improvements in functioning were found between Time 2 and Time 3 assessment across all psychometric measures and for both age groups. No, or nonsignificant, improvements were found between Time 1 and Time 2 assessments. Overall, the results show that EFT proved an effective therapeutic approach for the children and adolescents referred to the service. Of particular note was the finding that efficacy was similar across gender, age and Indigenous/non-Indigenous status. Implications of this and suggestions for further research are discussed.

Krause-Parello, C. A., & Friedmann, E. (2014). The effects of an animal-assisted intervention on salivary alpha-amylase, salivary immunoglobulin A, and heart rate during forensic interviews in child sexual abuse cases. *Anthrozoös*, 27(4), 581-590. DOI:10.2752/089279314X14072268688005

Animal-assisted invention (AAI) in gaining attention as a therapeutic modality; however, the effect of it has not been well studied in the child welfare system. The purpose of this study was to examine the effects of AAI on stress indicators (as measured by salivary alpha-amylase (sAA), immunoglobulin A (IgA), and heart rate) in children undergoing forensic interviews for alleged sexual abuse. A repeated measures design was used in this study. Upon receiving signed, informed consents and assents, children were enrolled in the study. Children ($n = 42$), whose ages ranged from 5 to 14 years ($M = 8.91$, $SD = 2.33$), were assigned to either the intervention condition ($n = 19$; AAI during forensic interview) or the control condition ($n = 23$; standard practice forensic interview). Each child's parent/guardian completed a demographic form, and saliva samples and heart rate measures were obtained from each child before and after the forensic interview. Mixed linear models were tested, with the level of significance set at $p \leq 0.05$. There was an interactive effect regarding the duration of the interview and the presence of the dog on sAA after the forensic interview ($p = 0.047$). There also was a significant interaction between age and length of interview ($p = 0.01$). Salivary immunoglobulin A tended to be lower ($p = 0.055$) when the therapy dog was present during the forensic interview. Results

further indicated that the drop in heart rate was greater in longer interviews and with older children ($p = 0.02$) when the dog was present. Individuals working in child welfare systems can use the results of this study to advocate for the use of therapy dogs as a therapeutic intervention. More research is needed to further examine the relationships among AAI, salivary biomarkers, and stress responses in children to improve child welfare.

Bachi, K., Terkel, J., & Teichman, M. (2012). Equine-facilitated psychotherapy for at-risk adolescents: The influence on self-image, self-control and trust. *Clinical Child Psychology and Psychiatry*, 17(2), 298–312. DOI:10.1177/1359104511404177

This article describes the theoretical-conceptual frame of equine-facilitated psychotherapy (EFP) for adolescents at-risk, the unique components of this intervention, and its implementation in an evaluation study. The study was conducted at a residential treatment facility for adolescents at-risk. We examined the outcomes of EFP on self-image, self-control, trust and general life satisfaction. Fourteen resident adolescents comprised the treatment group, and were compared with a matched group of 15 residents who did not receive EFP (control). The treatment comprised a weekly individual EFP session over a period of seven months. The study found a trend of positive change in all four research parameters within the treatment group. Additional indications of the intervention's positive influence were also found and are discussed.

Dietz, T. J., Davis, D., & Pennings, J. (2012). Evaluating animal-assisted therapy in group treatment for child sexual abuse. *Journal of Child Sexual Abuse*, 21(6), 665–683. DOI:10.1080/10538712.2012.726700

This study evaluates and compares the effectiveness of three group interventions on trauma symptoms for children who have been sexually abused. All of the groups followed the same treatment protocol, with two of them incorporating variations of animal-assisted therapy. A total of 153 children ages 7 to 17 who were in group therapy at

a Child Advocacy Center participated in the study. Results indicate that children in the groups that included therapy dogs showed significant decreases in trauma symptoms including anxiety, depression, anger, post-traumatic stress disorder, dissociation, and sexual concerns. In addition, results show that children who participated in the group with therapeutic stories showed significantly more change than the other groups. Implications and suggestions for further research are discussed.

Zilcha-Mano, S., Mikulincer, M., & Shaver, P. R. (2011). Pet in the therapy room: An attachment perspective on animal-assisted therapy. *Attachment & Human Development, 13*(6), 541-561. DOI:10.1080/14616734.2011.608987

John Bowlby's (1973, 1980, 1982) attachment theory is one of the most influential theories in personality and developmental psychology and provides insights into adjustment and psychopathology across the lifespan. The theory is also helpful in defining the target of change in psychotherapy, understanding the processes by which change occurs, and conceptualizing cases and planning treatment (Daniel, 2006; Obegi & Berant, 2008; Sable, 2004; Wallin, 2007). Here, we propose a model of Animal-Assisted Therapy (AAT) based on attachment theory and on the unique characteristics of human-pet relationships. The model includes clients' unmet attachment needs, individual differences in attachment insecurity, coping, and responsiveness to therapy. It also suggests ways to foster the development of more adaptive patterns of attachment and healthier modes of relating to others.

Fine, A. H. (Ed). (2010). *Handbook on animal-assisted therapy: Theoretical foundations and guidelines for practice* (3rd ed.). Academic Press. DOI:10.1016/C2009-0-01976-X

In the 10 years since the first edition of Handbook on Animal-Assisted Therapy published, the field has changed considerably. The third edition of the Handbook highlights

advances in the field, with 10 new chapters and over 50% new material. In reading this book, therapists will discover the benefits of incorporating animal assisted therapy into their practice, how to design and implement animal assisted interventions, and the efficacy of animal assisted therapy with different disorders and patient populations. Coverage includes the use of AAT with children, families, and the elderly, in counseling and psychotherapy settings, and for treating a variety of specific disorders.

VanFleet, R., & Faa-Thompson, T. (2010). [The case for using animal-assisted play therapy](#). *British Journal of Play Therapy*, 6, 4-18.

Child development research has clearly established the importance of animals in children's lives. Neurobiology has shown that the production of oxytocin in humans is stimulated by interactions with animals, creating the potential for greater relaxation and increased empathy and engagement. The biological and psychosocial benefits of family companion animals have been well documented. Driven by current multidisciplinary theory and research, this article explores the similarities, compatibility, and integration of the fields of Play Therapy and Animal Assisted Therapy for children, adolescents and families. The rationale, basic principles, goal areas, and methods of Animal Assisted Play Therapy are presented, with information about existing research and resources.

Yorke, J. (2010). The significance of human-animal relationships as modulators of trauma effects in children: A developmental neurobiological perspective. *Early Child Development and Care*, 180(5), 559-570. DOI:10.1080/03004430802181189

The purpose of this research was to explore the nature of equine-human bonding and its therapeutic value in recovery from trauma. The study sample consisted of six participants who identified that their pre-existing relationships with horses were therapeutic in recovering from various types of trauma (i.e. car accidents, horse-related accidents, work accidents and health trauma). Using a phenomenological perspective and an

emotionalist lens, though the use of semi-structured interviews and video-tapes of horse-rider interaction, the study sought to describe the nature of the equine human bond and how it is useful in trauma recovery. The research results show that equine-human bonds, like other kinds of human-animal relationships, appear to mirror some of the fundamental elements significant to therapeutic alliances between professionals and client. Four themes that constitute aspects of the equine-human relationship emerged from the data analysis: the intimacy or nurturing bond, the identity bond, the partnership bond and the utility bond. Themes pertinent to the therapeutic value of the equine-human bond included feelings, behaviours and touch/physical closeness relevant to healing. Themes related to understanding the trauma experience and other factors related to recovery also emerged. The results underline the significance of riders' bonds with their horses to trauma recovery. A discussion of the implications for both social work and veterinary medicine is presented along with recommendations for future research.

Dellinger, M. (2009). [Using dogs for emotional support of testifying victims of crime.](#) *Animal Law Review*, 15(2), 171-192.

Courts and prosecutorial offices around the nation have started using service dogs to support emotionally frail child witnesses who are unwilling to testify but for the calming presence of a dog. Proponents claim that this new type of therapeutic jurisprudence helps bring criminal defendants to justice in cases where the testimony of the complaining witness is crucial to the prosecution's case. Opponents fear the infringement of the defendants' rights to a fair trial because of the dogs' potential to prejudice a jury to come out in favor of the witnesses. This article analyzes the legal foundations supporting the use of service dogs for emotional support of complaining witnesses in open court. Currently, the Federal Rules of Evidence give trial judges wide discretion to allow evidence presentation methods deemed effective for the ascertainment of the truth. Other federal law allows child witnesses to give testimony with the emotional support of an adult attendant or through alternative methods such as closed-circuit television or recorded

statements. However, a defendant's Sixth Amendment confrontation rights may be held violated by such alternative methods, especially after the recent landmark case *Crawford v. Washington*. In contrast, this is less likely to be the case if a witness gives live testimony, even with the potentially prejudicial presence of a service dog. Case precedent demonstrates that defendants' right to a fair trial and the protection of the confrontation right have been upheld in similar cases where minor witnesses used comfort objects for support. This article concludes that legally sound reasons exist for allowing the use of service dogs in court, but only in cases where the witness can demonstrate a truly compelling need for the emotional support and only where the proper balancing with defendants' rights is performed.

Lentini, J. A., & Knox, M. S. (2008). [A qualitative and quantitative review of Equine Facilitated Psychotherapy \(EFP\) with children and adolescents](#). *International Journal of Psychosocial Rehabilitation*, 13(1), 51-57.
DOI:10.2174/1876391X00901010051

This paper presents a comprehensive review of the literature on Equine Facilitated Psychotherapy (EFP) with children and adolescents. Methods used in EFP, including traditional mounted, vaulting, husbandry, and unmounted activities are described. The theory and background of EFP is summarized with references to various psychotherapeutic perspectives, such as Freudian, Jungian, cognitive, behaviorist, and psychodynamic models. The status of the research is discussed, and available empirical studies and reports on this topic are summarized. Possible applications to patients with eating disorders, anxiety, trauma history, attention-deficit hyperactivity disorder, oppositional defiant disorder, and delinquency are described. Recommendations are made regarding the direction of future research on EFP.

Parish-Plass, N. (2008). Animal-assisted therapy with children suffering from insecure attachment due to abuse and neglect: A method to lower the risk of intergenerational transmission of abuse?. *Clinical Child Psychology and Psychiatry*, 13(1), 7-30. DOI:10.1177/1359104507086338

Children suffering from insecure attachment due to severe abuse and/or neglect are often characterized by internal working models which, although perhaps adaptive within the original family situation, are inappropriate and maladaptive in other relationships and situations. Such children have a higher probability than the general population of becoming abusing or neglecting parents. Besides the usual goals of psychotherapy, an overall goal is to stop the cycle of abuse in which abused children may grow up to be abusing parents. Therapy with these children is complicated by their distrust in adults as well as difficulties in symbolization due to trauma during the preverbal stage. Animal-Assisted Therapy (AAT) provides avenues for circumventing these difficulties, as well as providing additional tools for reaching the inner world of the client. This article gives a brief background of the connection between insecure attachment and intergenerational transmission of abuse and neglect as well as a brief overview of the principles of AAT in a play therapy setting. A rationale for the use of AAT as a unique therapy technique for children having suffered from abuse and neglect is followed by a number of clinical examples illustrating AAT.

Yorke, J., Adams, C., & Coady, N. (2008). Therapeutic value of equine human bonding in recovery from trauma. *Anthrozoos*, 21(1), 17-30. DOI:10.2752/089279308X274038

Although most human-animal bond research has focused on relationships between humans & pets, animals have been used for therapeutic purposes in a variety of settings. Therapeutic riding programs have demonstrated a positive impact on quality of life for people with disabilities. Equine-facilitated psychotherapy is a promising approach to address self-esteem, depression, & other emotional or psychological problems. Restoration of the trauma victim's capacity for recovery hinges on provision of safety and

development of trust, self-esteem, & self-efficacy. Thus, recovery from trauma represents an ideal context for exploring the therapeutic impact of equine–human relationships. The 6 participants in this study recognized that their pre-existing relationships with horses were therapeutic during recovering from trauma, defined as sufficient to have caused significant change in the participant's life. Semi-structured interviews & video-tapes of horse–rider interaction were used to describe the nature of the equine–human bond and its contribution to trauma recovery. The equine–human bonds described by participants parallels both the important elements of therapeutic alliances between professionals and clients and the positive impact of relationship factors on client outcome.

Ewing, C. A., MacDonald, P. M., Taylor, M., & Bowers, M. J. (2007). Equine-facilitated learning for youths with severe emotional disorders: A quantitative and qualitative study. *Child Youth Care Forum*, 36(1), 59–72. DOI:10.1007/s10566-006-9031-x

The present study quantitatively & qualitatively evaluated the effects of an alternative therapeutic learning method on youths with severe emotional disorders (SED). The youths participated in a 9 week equine-facilitated learning program. Very little research exists investigating the effectiveness of utilizing horses in the therapeutic learning process. The present study encompasses three years of research on a unique program hypothesized to enhance traditional therapy & facilitate the learning process for special need youths.

Lange, A. M., Cox, J. A., Bernert, D. J., & Jenkins, C. D. (2007). Is counseling going to the dogs? An exploratory study related to the inclusion of an animal in group counseling with adolescents. *Journal of Creativity in Mental Health*, 2(2), 17–31. DOI:10.1300/J456v02n02_03

Research has demonstrated that the use of animals in counseling provides beneficial effects to clients. This article presents literature on Animal-Assisted Therapy (AAT), and details an exploratory study that applied AAT in an anger-management adolescent

group. Consistent with other research, beneficial effects noted in this study included a calming effect on the adolescents, humor relief during sessions, increased feelings of safety in the group, experiencing empathy, & motivation to attend sessions. Implications of the research & practical applications are provided.

Nimer, J., & Lundahl, B. (2007). [Animal-assisted therapy: A meta-analysis](#). *Anthrozoos*, 20(3), 225–238. DOI:10.2752/089279307X224773

Animal-assisted therapy (AAT) has been practiced for many years and there is now increasing interest in demonstrating its efficacy through research. To date, no known quantitative review of AAT studies has been published; our study sought to fill this gap. We conducted a comprehensive search of articles reporting on AAT in which we reviewed 250 studies, 49 of which met our inclusion criteria and were submitted to meta-analytic procedures. Overall, AAT was associated with moderate effect sizes in improving outcomes in four areas: Autism-spectrum symptoms, medical difficulties, behavioral problems, and emotional well-being. Contrary to expectations, characteristics of participants and studies did not produce differential outcomes. AAT shows promise as an additive to established interventions and future research should investigate the conditions under which AAT can be most helpful.

Schultz, P. N., Remick-Barlow, G., & Robbins, L. (2007). Equine-assisted psychotherapy: A mental health promotion/intervention modality for children who have experienced intra-family violence. *Health & Social Care in the Community*, 15(3), 265–271. DOI:10.1111/j.1365-2524.2006.00684.x

Equine-assisted psychotherapy (EAP) is a specialized form of psychotherapy using the horse as a therapeutic tool. This modality is designed to address self-esteem & personal confidence, communication & interpersonal effectiveness, trust, boundaries & limit-setting, and group cohesion. Substantial numbers of children witness family violence and

there is evidence that violence between parents has adverse effects on the children. These children are at greater risk of behavioural problems and mental health disorders, including anxiety, anger, depression & suicidal ideations, withdrawal, low self-esteem, and attention deficit hyperactivity disorder. The purpose of the present pilot study was to test the efficacy of EAP in a cross-sectional group of children referred to a psychotherapist for various childhood behavioural and mental health issues over an 18-month period. Sixty-three children received a mean number of 19 EAP sessions. Scores on the Children's Global Assessment of Functioning (GAF) Scale were determined pre- and posttreatment. The mean ($\pm$ standard deviation, SD) pretreatment score was 54.1(SD 3.2) and post treatment mean score was 61.7 $\pm$ 5.0. All children showed improvement in GAF scores, and there was a statistically significant correlation between the percentage improvement in the GAF scores and the number of sessions given. Univariate analysis showed that the greatest improvement in the GAF scores occurred in the youngest of the subjects. Children in the group who had a history of physical abuse & neglect had a statistically significant greater percentage improvement in GAF scores after treatment than those who did not have a history of abuse and neglect. This study has demonstrated a quick response to EAP, especially in younger children, but it remains to be determined what kind of long-term effects this type of intervention may provide.

Souter, M. A., & Miller, M. D. (2007). [Do animal-assisted activities effectively treat depression? A meta-analysis](#). *Anthrozoos*, 20(2), 167-180.
DOI:10.2752/175303707X207954

We conducted a meta-analysis to determine the effectiveness of animal-assisted activities (AAA) and animal-assisted therapy (AAT) for reducing depressive symptoms in humans. To be included in the meta-analysis, studies had to demonstrate random assignment, include a comparison/control group, use AAA or AAT, use a self-report measure of depression, and report sufficient information to calculate effect sizes. Five studies were identified for analysis. The aggregate effect size for these studies was of

medium magnitude & statistically significant, indicating that AAA/AAT are associated with fewer depressive symptoms. This analysis revealed gaps in the research on AAA/AAT, which we attempted to identify to better understand the factors that make them effective.

Prothmann, A., Bienert, M., & Ettrich, C. (2006). Dogs in child psychotherapy: Effects on state of mind. *Anthrozoos, 19*(3), 265–277. DOI:10.2752/089279306785415583

Using a pretest-posttest design, this study investigates possible influences of animal-assisted therapy (AAT), using a dog, on the state of mind of children and adolescents who have undergone inpatient psychiatric treatment. To measure this, the Basler Befindlichkeits-Skala (BBS) was used, which measures general “state of mind” and provides four sub-scale scores: vitality, intra-emotional balance, social extroversion, and alertness. For Group 1 patients ($n = 61$, with AAT), the results show highly significant increases in all dimensions of the BBS. These changes were not found in a second group (Group 2, $n = 39$), in which there was no AAT. There was a significant negative correlation between pretest BBS scores and the change in scores that occurred after therapy incorporating AAT. Among seven patients in Group 1, a deterioration in state of mind was recorded. Under our controlled clinical conditions, an effect size of 0.38 was calculated for the therapy using a dog. Incorporating a dog could catalyze psychotherapeutic work with children and adolescents.

Lefkowitz, C., Paharia, I., Prout, M., Debiak, D., & Bleiberg, J. (2005). [Animal-assisted prolonged exposure: A treatment for survivors of sexual assault suffering posttraumatic stress disorder](#). *Society and Animals, 13*(4), 275–295. DOI:10.1163/156853005774653654

This paper proposes the development of a new model of treatment for survivors of sexual abuse suffering from Posttraumatic Stress Disorder (PTSD). Foa, Rothbaum, Riggs, & Murdock (1991) and Foa, Rothbaum, & Furr (2003) support Prolonged Exposure (PE) as a

highly effective treatment for PTSD. However, PE can be intimidating to survivors, contributing to hesitancy to participate. This paper posits that animal-assisted therapy (AAT) will decrease anxiety, lower physiological arousal, enhance the therapeutic alliance, & promote social lubrication. The paper also posits that it will enhance the value of PE by making it more accessible to survivors, increasing social interaction, & perhaps decreasing the number of sessions required for habituation to the traumatic memories.

Odendaal, J. S. J., & Meintjes, R. A. (2003). Neurophysiological correlates of affiliative behaviour between humans and dogs. *The Veterinary Journal*, 165(3), 296–301. DOI:10.1016/s1090-0233(02)00237-x

Few physiological parameters for positive human–companion animal contact have been identified and those that are established have all been in humans. The implication is that if the physiological reactions are mutual, dogs would experience the same psychological benefits from these neurophysiological changes as humans. Therefore, we have determined the role of certain neurochemicals during affiliation behaviour on an interspecies basis. Our results indicate that concentrations of β -endorphin, oxytocin, prolactin, β -phenylethylamine, and dopamine increased in both species after positive interspecies interaction, while that of cortisol decreased in the humans only. Indicators of mutual physiological changes during positive interaction between dog lovers and dogs may contribute to a better understanding of the human–animal bond in veterinary practice.

Parshall, D. P. (2003). Research and reflection: Animal-assisted therapy in mental health settings. *Counseling and Values*, 48(1), 47–56. DOI:10.1002/j.2161-007X.2003.tb00274.x

Although animals have been historically associated with promoting physical and mental health benefits for humans, only recently has there been support for such claims in the

literature. This article is a preliminary attempt to bring together scientific studies and anecdotal reports that provide evidence of the benefits of using animals in particular counseling situations.

Brodie, S. J., & Biley, F. C. (1999). An exploration of the potential benefits of pet facilitated therapy. *Journal of Clinical Nursing*, 8(4), 329–337.
DOI:10.1046/j.13652702.1999.00255.x

There is mounting evidence to suggest that those who keep pets are likely to benefit from various improvements in health. Despite founders of nursing such as Florence Nightingale advocating the importance of animals within the care environment, their integration into hospitals and other health care settings has been slow. The literature on animal-induced health benefits is reviewed and the conclusion is drawn that the potential benefits of pet therapy are considerable. It is suggested that nurses can assume an active role in advocating ward pet or pet-visiting schemes.

Hansen, K. M., Messinger, C. J., Baun, M. M., & Megel, M. (1999). Companion animals alleviating distress in children. *Anthrozoos*, 12(3), 142–148.
DOI:10.2752/089279399787000264

Physiological arousal and behavioral distress in children aged from two to six years undergoing a physical examination were examined with and without the presence of a companion dog. An experimental/control group, repeated measures design was utilized to study children at a pediatric clinic. Thirty-four (14 males, 20 females) children were assigned randomly either to a treatment group ($n=15$) in which a therapy dog was present during their examinations or to a control group ($n=19$) which had the usual pediatric exam without a dog present. Physiological variables (systolic, diastolic, and mean arterial pressures, heart rate, and fingertip temperatures) were measured at baseline and at two-minute intervals during each examination. Subjects were

videotaped during the examination for analysis of behavioral distress using the Observation Scale of Behavioral Distress (OSBD). Physiological measurements were not statistically significantly different between the dog and no-dog groups but were found not to be good measures of physiologic arousal in this age group. There was statistically significantly less behavioral distress when the dog was present ($M=0.06$ in the dog group versus 0.27 in the no-dog group: $F_{(1,32)}=4.90, p=0.034$). These findings replicate those of Nagengast et al. (1997) who found that the presence of a companion dog could lower the behavioral distress of children during a laboratory simulated physical examination and suggest that companion animals may be useful in a variety of health care settings to decrease procedure-induced distress in children.

Reichert, E. (1998). Individual counseling for sexually abused children: A role for animals and storytelling. *Child and Adolescent Social Work Journal*, 15(3), 177-185.
DOI:10.1023/A:1022284418096

This article addresses the use of animal assisted therapy in individual counseling for sexually abused children. It focuses on how the animal can help the sexually abused child disclose abuse and express feelings. Storytelling forms a part of the treatment process. The author's clinical experience at Project Against Sexual Abuse of Appalachian Children in Knoxville, Tennessee, forms the basis for the article.

Nagengast, S. L., Baun, M. M., Megel, M., & Leibowitz, J. M. (1997). The effects of the presence of a companion animal on physiological arousal and behavioral distress in children during a physical examination. *Journal of Pediatric Nursing*, 12(6), 323-330. DOI:10.1016/S0882-5963(97)80058-9

The purpose of this study was to examine the effects of the presence of a companion animal on physiological arousal and behavioral distress exhibited by preschool children during a routine physical examination. A within-subject, time-series design was used to study 23 healthy children ages 3 years to 6 years during two physical examinations, with

and without a dog. Statistically significant differences were found with greater reductions in subjects' systolic and mean arterial pressure, heart rate, and behavioral distress when the dog was present. Findings support the use of a companion animal in reducing stress experienced by children during a physical examination.

Reichert, E. (1994). Play and animal-assisted therapy: A group-treatment model for sexually abused girls ages 9–13. *Family Therapy: The Journal of the California Graduate School of Family Psychology*, 21(1), 55–62.

Based on trauma work, a group treatment model for sexually abused girls is presented. Treatment modalities consist of play and animal-assisted therapy. Education and prevention are also discussed.