

Animal Assistance: Research and Practice

A Bibliography



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Scope

This bibliography covers a wide variety of issues related use of animals in treatment, court, forensic interviews, and more. Publications listed are English language articles, chapters, and books. This bibliography is not comprehensive.

Organization

This bibliography is arranged chronologically, from most recent to oldest publication date, 1994-2016. Links to full texts are provided when possible.

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Animal Assistance: Research and Practice

A Bibliography

Signal, T., Taylor, N., Prentice, K., McDade, M., & Burke, K. J. (2016). Going to the dogs: A quasi-experimental assessment of animal assisted therapy for children who have experienced abuse. *Applied Developmental Science*, 1-13.

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.

Fine, A. H. (Ed.). (2015). [Handbook on Animal-assisted Therapy: Foundations and Guidelines for Animal-assisted Interventions](#). Academic Press.

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.

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.

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

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.

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 offset 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.

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.

Phillips, A., & Walters, S. (2013). [A courtroom for all: Creating child and adolescent-fair courtrooms.](#) *Centerpiece*, 3(7-8), 1-9.

This article will outline how to create child and adolescent fair courtrooms and address issues such as: Who would be a good support person for a young child who has to testify? Are therapy animals allowed as comfort items for a child who is afraid of testifying in court? Can you physically alter the courtroom set up? How can we make the oath more meaningful for the children who testify in our courts? Can the judge order the attorneys to speak and behave in a certain way around children? And how can you help a child that is experiencing difficulty in the courtroom?

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.

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.

Chandler, C. K. (2012). *Animal assisted therapy in counseling. Second ed.* New York: Routledge.

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.

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.

Courthouse Dogs Foundation. [Using a courthouse dog in a forensic interview.](#) Edmonds, WA: Author.

Courthouse Dogs Foundation [Using dogs at a Child Advocacy Center: Best practices.](#) Edmonds, WA: Author.

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.

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. (Ed). (2010). *Handbook on Animal-Assisted Therapy, Theoretical Foundations and Guidelines for Practice, 3rd ed.* New York: Academic Press.

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.

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, through 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 clients. 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*, 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.

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.

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: A Multidisciplinary Journal of the Interactions of People & Animals*, 21(1), 17-30.

Although most human–animal bond research has focused on relationships between humans and 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, and 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, and self-efficacy. Thus, recovery from trauma represents an ideal context for exploring the therapeutic impact of equine–human relationships. The six 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 and video-tapes of horse–rider interaction were used to describe the nature of the equine–human bond and its contribution to recovery from trauma. The equine–human bonds described by participants have parallels both with important elements of therapeutic alliances between professionals and clients and with the positive impact of relationship factors on client outcome.

Ewing, C. A., MacDonald, P. M., Taylor, M., & Bowers, M. J. (2007, February). Equine-facilitated learning for youths with severe emotional disorders: A quantitative and qualitative study. In *Child and Youth Care Forum* (Vol. 36, No. 1, pp. 59-72). Kluwer Academic Publishers-Plenum Publishers.

The present study quantitatively and qualitatively evaluated the effects of an alternative therapeutic learning method on youths with severe emotional disorders (SED). The youths participated in a nine-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 and facilitate the learning process for youths with special needs.

Justice, R. M. (2007). [The use of animal assistance at Child Advocacy Centers](#). *Update*, 20(2), 1-2.

There has always been a strong bond between humans and animals. As far back as civilization, animals have been workers, protectors, and faithful companions. Over the last few decades, human-animal bonds have been scientifically studied and the effects that many have believed intuitively have been supported. Today, even the child protection and criminal justice systems are forming a deeper understanding of the effects and benefits of animals, particularly in the area of child abuse. This two-part article will first explore starting an animal assistance program at a local child advocacy center. The second part will look at the use of animals in the courtroom, as “comfort items” or “support persons.”

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.

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 adolescent anger management 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, and

motivation to attend sessions. Implications of the research and practical applications are provided, including considerations for using AAT in the counseling process.

Nimer, J., & Lundahl, B. (2007). Animal-assisted therapy: A meta-analysis. *Anthrozoos: A Multidisciplinary Journal of the Interactions of People & Animals*, 20(3), 225-238.

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.

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 and personal confidence, communication and interpersonal effectiveness, trust, boundaries and limit-setting, and group cohesion. Substantial numbers of children witness family violence. There is evidence that violence between parents has adverse effects on the children in the family. These children are at greater risk of behavioural problems and mental health disorders, including anxiety, anger, depression and 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 (June 2003–January 2005). 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 ($t = 9.06$, d.f. = 96, $P < 0.001$). 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 ($r = 0.73, P = 0.001$). 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 and 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: A Multidisciplinary Journal of the Interactions of People & Animals*, 20(2), 167-180.

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, a statistical standardization of the strength of a treatment effect. Five studies were identified for analysis. The aggregate effect size for these studies was of medium magnitude and 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 in order to better understand the factors that make AAA and AAT effective at reducing depression.

Granger, B., & Kogan, L. (2006). Characteristics of animal assisted therapy/activity in specialized settings. *Handbook on Animal Assisted Therapy: Theoretical Foundations & Guidelines for Practice* (pp. 263-285). New York: Academic Press.

Mallon, G. P., Ross, S. B., Klee, S., & Ross, L. (2006). Designing and implementing animal-assisted therapy programs in health and mental health organizations. *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice* (pp. 149-163). New York: Academic Press.

Prothmann, A., Bienert, M., & Ettrich, C. (2006). Dogs in child psychotherapy: Effects on state of mind. *Anthrozoos: A Multidisciplinary Journal of the Interactions of People & Animals*, 19(3), 265-277.

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.

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, and Murdock (1991) and Foa, Rothbaum, and 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 in the treatment. This paper posits that animal-assisted therapy (AAT) will decrease anxiety, lower physiological arousal, enhance the therapeutic alliance, and promote social lubrication. The paper also posits that AAT will enhance the value of PE by making it more

accessible to survivors, increasing social interaction, and 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.

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.

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.

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: A Multidisciplinary Journal of the Interactions of People & Animals*, 12(3), 142-148.

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.

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.

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.