



Animal Assisted Therapy in Hospitals



To what extent is animal assisted therapy (AAT) beneficial for
the psychological wellbeing of hospitalised children? – Amy
Spurgeon | Hannah Ellis | 2022



Animal Assisted Therapy in Hospitals

To what extent is animal assisted therapy (AAT) beneficial for the psychological wellbeing of hospitalised children? – Amy Spurgeon | Hannah Ellis | 2022

Abstract

Animal Assisted Therapy (AAT) is a relatively new approach to health intervention that has been used increasingly over the past few decades . AAT is defined as ‘the use of trained animals by trained health professionals to facilitate specific, measurable goals for individual patients for whom there is documented progress’. The most used animal therapists are dogs or cats but may also include birds, guinea pigs, fish, and horses. This paper will analyse the existing literature and discuss how AAT, specifically the use of dogs, can help hospitalised children (under the age of 18) cope with the psychological stress of hospitalisation by relieving stress/anxiety, reducing isolation, and facilitating the adaptation to an unknown environment. We will also review the risks associated with AAT and analyse their influence on the treatment’s level of success.

What is the Future Researchers’ Programme?



Nebula Research is an organisation built through curiosity, discovery, and the desire to add to the sum of human knowledge.

Education and research hold the key to building a better world.

The Future Researchers’ Programme was established to provide College/Sixth Form students with an opportunity to work on a piece of research that fosters their curiosity and desire to learn more, add to the sum of human knowledge and provide benefit to citizens.

Working under a lead Professor – but given the autonomy to follow their own research path – students conduct high level research and become fully published authors with Nebula.

Not only does this special opportunity develop the attributes necessary to become academics, but the students also hone the skills necessary to achieve the highest of grades at University.

The top universities require a high standard of academic writing skill, yet this is something that students and professors alike do not feel receives enough attention in the academic curriculum. The Future Researchers’ Programme by Nebula helps to bridge this gap.

Completion of the Programme and the recognition of such through the publication of a paper with Nebula, adds tremendous value to university applications, personal statements and CVs.



Contents

Introduction..... 3

Reducing stress/anxiety 3

Isolation..... 4

Assisting adaptation to a new hospital environment..... 5

Risks associated with AAT..... 6

Conclusion 8

Bibliography 9



Introduction

Since humans began domesticating animals, the human-animal bond has become a well-documented phenomenon (Fine & Beck, 2010). Interest in this unique connection has led to debate around the therapeutic use of animals and consequent exploration of its uses in a variety of settings and populations (Fabrizio, et al., 2016). Animal Assisted Therapy (AAT) is a branch of Animal Assisted Interaction (AAI), which refers to 'goal-oriented and structured interventions that incorporate domesticated animals in health, education, and recreational activities and are designed to promote improvement in human physical, social, emotional, and/or cognitive functioning' (Correale, et al., 2022). AAI frequently involves an animal, usually a trained dog, being brought into a hospital room or treatment setting to engage with a patient for a certain period (Waite, et al., 2018). The term AAI also encompasses Animal-Assisted Education (AAE), and Animal-Assisted Activities (AAA), with these terms being used interchangeably in associated literature (Correale, et al., 2022).

AAT differs significantly from everyday interactions between humans and companion animals. The main difference is that AAT has a specific structure and purpose so has been defined as a 'therapeutic intervention that is guided, structured, and planned with a defined purpose and monitored by healthcare professionals' (Ichitani & Cunha, 2016). For example, in a physical therapy session, the therapy dog may be incorporated into activities such as the patient throwing a ball to the dog to work on motor skills or walking the dog to work on ambulation (McCullough, et al., 2016).

AAIs are becoming increasingly common in paediatric care settings with the primary aim to promote the physical, mental, and emotional well-being of hospitalised children and adolescents (Correale, et al., 2022). Therefore, literature surrounding the effects of AAI in medical settings is rapidly expanding, seeing varying levels of success (Waite, et al., 2018).

Reducing stress/anxiety

Hospitalization can often be a major cause of stress for children if not managed appropriately and effectively by paediatric healthcare professionals (Howe, et al., 2021). In fact, anxiety and distress are some of the most frequently reported and severe symptoms associated with medical treatment and procedures (Waite, et al., 2018). Stress is defined by the NHS as, 'the body's reaction to feeling threatened or under pressure'. Stress and anxiety are interlinked, and the definitions overlap as anxiety is defined as, 'a universal adaptive response to a threat' (Arroll & Kendrick, 2018). However, where these two differ is that anxiety can become maladaptive meaning it is out of proportion to the level of threat and can include symptoms such as recurrent panic attacks and severe physical symptoms (Arroll & Kendrick, 2018). This is known as 'abnormal anxiety' (Arroll & Kendrick, 2018). Sources of hospital stress may include the strange environment, being away from friends and family, and painful procedures (Tsai, 2007). In addition, the lack of control over the environment can be traumatic, resulting in increased levels of anxiety (Correale, et al., 2022).



High levels of persistent stress are a major issue in children as it often leads to negative psychological and physiological related issues (Tsai, 2007). For example, 35% of all children in America experience stress-related health problems (Tsai, 2007). In terms of hospitalisation, this stress is exacerbated further. Astin (1977) found that hospitalised school-aged children reported more intense fears and demonstrated higher levels of anxiety than non-hospitalized children (Tsai, 2007). However, levels of stress in hospitalised children differ with each individual child, influenced by factors such as temperament and intelligence, contributing to their coping mechanisms and therefore the short term and long-term effects of hospitalisation (Bonn, 1994). Since stress and anxiety have proven to be major issues in the context of children's hospitalisation, it is essential that they are managed effectively. Therefore, the role of a paediatric health care professional includes finding and developing strategies to mitigate the levels of stress experienced by children during hospitalisation (Tsai, 2007). Traditionally, anxiety was managed largely through pharmacological treatments (Howe, et al., 2021). However, this often resulted in negative consequences in terms of side effects, as well as high costs and taxing demands on the health care service (Howe, et al., 2021). Consequently, new non-pharmacological alternatives are being explored and introduced into the healthcare sector.

Animal assisted therapy has been introduced with hopes to benefit the patient's psychological wellbeing without the need for medical treatment. Although this is a relatively new field, research has found that AAT can offer many benefits to hospitalised patients, one of which is the reduction of stress/anxiety (Tsai, 2007). A study was carried out by Tsai (2007), analysing the effect of AAT on children's stress during hospitalisation. This involved the use of the Child Medical Fear Scale (CMFS) and State Anxiety Scale (SAS) to indicate psychological wellbeing. The data shows that older children tended to have lower SAS post-AAT, concluding that AAT plays a part decreasing the stress levels of hospitalized children (Tsai, 2007). The study also involved 'person visits', with children having a lower CMFS post-visits (Tsai, 2007). This exemplifies the idea that family members are also important emotional supports, helping children to relax and maintain a sense of familiarity when navigating a new and stressful hospital environment (Howe, et al., 2021). In addition, post AAT CMFS tended to be higher than post PV. This may suggest that human interaction has a larger influence on levels of anxiety in comparison to animal interaction. However, as there is limited evidence surrounding this topic, clinical trials with stronger methodological controls are needed to properly establish the effectiveness of AAT in comparison to other interventions (Waite, et al., 2018).

Isolation

Hospital stays can be extremely isolating experiences for children due to the significant decrease in social contact and disruption of their normal routine. When coming in for treatment, children may already feel isolated if they have any physical disability or debilitating illness. This isolation is exacerbated by the hospital environment. (Committee on Bioethics and Committee on Hospital Care, 2000). This is particularly relevant for children in long term hospital stays, defined by the NHS as 'an inpatient hospitalisation lasting more than 21 days' (NHS England, 2019). This is since patients often experience chaos and extreme loneliness throughout long episodes of hospitalisation with their lives being severely disrupted (Calcaterra, et al., 2015). Children reported on feeling alone and expressed



the desire for companions when staying in hospitals (Wilson, et al., 2010). Doctors and nurses in hospitals are often overworked and busy so aren't always available for company and emotional support to the patients, this may play a factor in increased feelings of isolation. In addition, reduced interaction with family and friends and the sudden change to an unfamiliar setting without these trusted individuals can increase fear of being alone in the hospital, fear of unknown experiences, and feeling threatened by uncertain possibilities (Wilson, et al., 2010).

Combating feelings of isolation in adolescent patients is crucial to the betterment of patient mental health, especially since 80% of under 18-year-olds have reported having suffered from these feelings at some point throughout their life (Berguno, et al., 2004). Adolescents often lack definite coping skills, and the adolescent period is the time of life when feeling safe and supported is of major importance to the formation of one's identity. Therefore, the introduction of AAT has important benefits, helping diminish prolonged feelings of loneliness by providing a different kind of social contact (Kurdek, 2008). Children readily develop trusting relationships with companion animals, and often communicate personal matters to pets rather than to other humans (Kurdek, 2008). Therapy dogs can also encourage the patient to reach out more to trusted adults for support and become more involved with the social interactions within the hospital (Caprili & Messeri, 2006). A study carried out by Caprili & Messeri (2006) showed that hospitalized children who were engaged in AAT had increased contact with their family members and medical team as well as stating that they felt motivated to communicate and strengthen their relationships (Caprili & Messeri, 2006). This suggests that the presence of the dog facilitated emotional expression that would not normally be reached with just human interaction.

AAT has proven to diminish feelings of loneliness, provides therapeutic benefits to the patient's psychological health by allowing for moments of relaxation for both the patient and their family (Ichitani & Cunha, 2016). During AAT, it was noted that the patients had an improved mood, sociability, and motivation (Ichitani & Cunha, 2016). Subsequently, the patient would be less despondent and more likely to engage in social activities, relieving feelings of isolation. In addition, having another being to relate to can be an immense relief and offer an understanding of oneself (Levinson & Mallon, 1997).

Another way to combat isolation in hospitals is to increase visiting hours for family and friends, providing a more comforting and familiar setting without any additional health risks. However, AAT can provide a more diverse level of social interaction to increase the patients' social skills and reduce isolation, whilst also encouraging a more energetic and interactive environment.

Assisting adaptation to a new hospital environment

When patients are admitted to hospital for the first time it can be a new and very daunting experience, full of unknown experiences and people. Lack of control and knowledge about the environment can increase levels of anxiety, aggression, anger, and other emotional expressions in hospitalized children (Coyne, 2006). This initial transition can majorly affect the patient's feelings about their whole experience, consequently a smooth transition will increase the likelihood of the



patient being in a positive psychological state. This is pertinent for child patients with ongoing medical issues who are coming into hospital multiple times for treatment. Having positive or neutral feelings about staying in hospital is crucial, as it decreases their levels anxiety and stress. Recent advances in medical treatment have meant that an increasing number of children are treated on an outpatient or day surgery basis. Therefore, there is a reduction in long stay patients admitted to hospital. Consequently, there is a high proportion of child patients remaining in hospital who have complicated or chronic conditions. Nonetheless, there remains a high emotional cost for children and their parents as many of these patients undergo repeated hospitalizations and prolonged, demanding treatment (Cambridge University Press, 2007). Adolescent patients reported that 'the hospital was a unique environment that could be fun as well as threatening' (Wilson, et al., 2010). Responses to fears about hospitalisation included: requesting to have parents nearby, having familiar objects with them in the hospital, or asking to go home (Wilson, et al., 2010). A level of calm and comfort is needed to reduce stress during their inpatient stay. Therefore, assisting adaptation to a new hospital environment is paramount, and one way of doing this is introducing AAT into a child inpatients' stay.

In a study carried out to investigate the effectiveness of a pet visitation program in helping children and their families adjust to hospitalization on a paediatric cardiology ward, AAT sessions were shown to normalize the hospital environment and improve patient morale (Wu, et al., 2002). This is due to the dog's ability to increase familiarity within the hospital and provide a sense of comfort. This makes the transition less intimidating to paediatric patients, helping children to cope with separation from their families and providing distractions from the normal hospital routine. It has also been proven that children are stimulated in terms of their awareness and relationships with others while participating in AAT (Caprili & Messeri, 2006). This means that patients can develop better relationships with the people within the hospital who are doing the AAT with them, to try and replace the loss of contact with more familiar individuals. In another study which evaluated children's experiences of and responses to animal-assisted therapy, it was concluded that children's responses before the interaction, of both positive and negative feedback, show a focus shift after the interaction with a therapy dog to mainly positive nature regarding self-reported feeling of well-being and experiences of the hospital stay (Lindstrom Nilsson, et al., 2019). Similarly, in a recent study examining the reactions of paediatric patients, their families, and medical staff to the introduction and incorporation of AAAs into a Child's Hospital in Italy, it was found that children reported their mood to be pleasurable due to the therapy dog's presence (Caprili & Messeri, 2006). Overall, this suggests that admission to hospital can be a bizarre and unfamiliar time for people, especially children, and AAT seems to be an effective and calming way of assisting the transition.

Risks associated with AAT

Despite the proven benefits associated with Animal Assisted Therapy, incorporating animals into a healthcare setting also provides several potential disadvantages. These include potential risks of zoonoses, allergies and bites (Brodie, et al., 2002). 'Zoonoses' are defined by the World Health Organisation (1959, p. 2) as 'those diseases and infections naturally transmitted between vertebrate animals and man' (Brodie, et al., 2002). These diseases may pose a high risk in hospital settings,



especially for immunocompromised individuals. Estimates of the number of zoonotic diseases ranges between 150 and 200, but it is believed that only 35 zoonotic disease agents may affect animals and subsequently humans via use in Animal Assisted Therapy (Brodie, et al., 2002). Despite dogs being the most used animal in pet therapy, they appear to transmit the highest number of zoonotic diseases, therefore providing the highest risk (Brodie, et al., 2002).

Dogs are a major source for zoonotic infections and can transmit several viral and bacterial diseases to humans (Ghasemzadeh & Namazi, 2015). Zoonotic diseases can be transmitted to humans via infected saliva, aerosols, contaminated urine or faeces and direct contact with a dog (Ghasemzadeh & Namazi, 2015). Viral infections such as rabies and norovirus and bacterial infections including *Pasteurella*, *Salmonella*, *Brucella*, *Yersinia enterocolitica*, *Campylobacter*, *Capnocytophaga*, *Bordetella bronchiseptica*, *Coxiella burnetii*, *Leptospira*, *Staphylococcus intermedius* and Methicillin resistance *Staphylococcus aureus* are the most common viral and bacterial zoonotic infections transmitted to humans by dogs (Ghasemzadeh & Namazi, 2015).

However, a justification of animal use in hospital environments involves the idea that chain of transmission from animals to humans is very weak and risk of infection is therefore easily eliminated by following simple protocols (Brodie, et al., 2002). For example, carrying out precautionary measures such as veterinary screening of therapy dogs and handwashing after contact with a therapy dog will significantly reduce the transmission rate of zoonoses (McCullough, et al., 2016). In addition, research around the transmission of zoonoses has found that “immunocompromised people are not at any additional risk by interacting with pets than they would be by interacting with other people and the environment.” (McCullough, et al., 2016). Therefore, this eliminates the risk factor for immunocompromised people.

The severity of risk of infection has been researched and discussed by various literature as the field has progressed. For example, a pilot study conducted by Caprili & Messeri (2006) found no increase in hospital infection rates with the commencement of a therapy dog program. Similarly, Snipelisky & Burton completed a comprehensive literature review on canines in inpatient hospital settings and found that overall, the risks of these types of interactions, including infection, were very minimal and that they should not prohibit their implementation (Burton & Snipelisky, 2014).

For AAT to be a successful activity, the patient would have to meet certain criteria to ensure there is no risk for harm to their physical or mental health. For example, the patient would need to be free from any allergies pertaining to dogs, as that could negatively impact their recovery and physical health (Renck Jalongo, et al., 2004). AAT sessions would also have to be in an environment that could be easily cleaned and disinfected, as there may be other patients in the area who are allergic to dogs as well (Renck Jalongo, et al., 2004). To combat this, the healthcare professionals would need to look at each patient individually to assess the nature of a child's allergy to dogs and plan accordingly. (Renck Jalongo, et al., 2004)

(Winkle, et al., 2020) reviews the current state of animal-assisted interventions, highlighting the lack of sufficient evaluation processes for dogs working with AAT professionals, as well as the risks associated with not protecting the dogs' welfare. Additionally, there is the potential for dislike of animals, phobias, and cultural inhibitions which may influence the treatment's potential for success (Brodie, et al., 2002). In this case, professionals would have to make sure that the patients have no adverse feelings or experience with dogs that could affect the AAT.



Additionally, there is the potential for dislike of animals, phobias, and cultural inhibitions which may influence the treatment's potential for success (Brodie, et al., 2002). In this case, professionals would have to make sure that the patients have no adverse feelings or past experience with dogs that could affect the AAT.

Conclusion

To answer the question, 'to what extent is animal assisted therapy beneficial for the psychological wellbeing of hospitalised children?', the authors of this paper have highlighted the key aspects of hospitalisation that negatively impact the psychological wellbeing of children. These include stress, anxiety, isolation, and having to adapt to a new environment. AAT has shown to reduce the intensity of stress/anxiety and isolation as well as assisting the adaptation to a new hospital environment, giving them a better quality of life when hospitalised. AAT could never completely remove stress or anxiety, but for many patients, it has distracted them from these feelings for varying amounts of time. This makes their stay a more manageable experience and one that forms less fear in the future. Therapy dogs also provide a sense of comfort and give hospitals a more homely and inviting atmosphere, helping with the tough transition from daily life into hospitals.

The human relationship with animals can be useful and relatively safe for inpatients with various problems. Moreover, the implementation of strict guidelines put in place in these hospitals and the careful selection of patients should minimize the risks, particularly those infection related. Additionally, putting in a set of requirements and restrictions on the individual dogs taking part in AAT, ensures that they are of the right temperament and skill to carry out AAT without causing any other harm to the patient. Being a relatively new field, although there has been evidence showing the benefits of AAT, there is limited studies into the exact implications – something that warrants further research. Nevertheless, research shows that, when managed effectively, AAT can make hospitalisation a calmer, happier, and stress-free environment, significantly aiding the psychological wellbeing of hospitalised children.



Bibliography

- Arroll, B. & Kendrick, T., 2018. Anxiety. In: T. K. Linda Gask, P. Robert & C. Carolyn A., eds. *Primary Care Mental Health*. s.l.:Royal College of Psychiatrists, pp. 125-135.
- Berguno, G., Leroux, P., McAinsh, K. & Shaikh, S., 2004. Children's experience of loneliness at school and its relation to bullying and the quality of teacher interventions.. *Qualitative Report.*, pp. 83-99.
- Bonn, M., 1994. The effects of hospitalisation on children: A review. *Curationis* , 17(2).
- Braun, C., Stangler, T., Narveson, J. & Pettingell, S., 2009. Animal-assisted therapy as a pain relief intervention for children. *Complementary Therapies in Clinical Practice*, pp. 105-109.
- Braun, C., Stangles, T., Narveson, J. & Pettingell, S., 2009. Animal-assisted therapy as a pain relief intervention for children. *Complementary Therapies in Clinical Practice*, pp. 105-109.
- Brodie, S. J., Biley, F. C. & Shewring, M., 2002. An exploration of the potential risks associated with using pet therapy in healthcare settings. *Journal of Clinical Nursing*, Volume 11, pp. 444-456.
- Burton, C. & Snipelisky, D., 2014. Canine-assisted therapy in the inpatient setting. *South Med J.* , 107(4), pp. 265-73.
- Calcaterra, V. et al., 2015. Post-operative benefits of animal-assisted therapy in pediatric surgery: a randomised study.. *PLoS One*.
- Cambridge University Press, 2007. Hospitalization in children. In: *Cambridge Handbook of Psychology, Health and Medicine*. Cambridge: Cambridge University Press, pp. 113 - 119.
- Caprili, S. & Messeri, A., 2006. Animal-Assisted Activity at A. Meyer Children's Hospital: A Pilot Study. *Evidence-Based Complementary and Alternative Medicine*, p. 5.
- Committee on Bioethics and Committee on Hospital Care, 2000. Palliative Care for Children. *American Academy of Pediatrics*, 1 August, pp. 351-357.
- Correale, C. et al., 2022. Improving the Emotional Distress and the Experience of Hospitalization in Children and Adolescent Patients Through Animal Assisted Interventions: A Systematic Review. *Frontiers in Psychology*, Volume 13.
- Coyne, I., 2006. Children's experiences of hospitalization. *Journal of child health care*, pp. 326-336.
- Fabrizio, B. et al., 2016. Animal assisted intervention: A systematic review of benefits and risks. *European Journal of Integrative Medicine*, pp. 695-706.
- Fine, A. H. & Beck, A., 2010. Understanding our kinship with animals: input for health care professionals interested in the human/animal bond. In: A. H. Fine, ed. *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice*. Amsterdam: Elsevier Inc., pp. 4-12.
- Ghasemzadeh, I. & Namazi, S., 2015. Review of bacterial and viral zoonotic infections transmitted by dogs. *Journal of Medicine and life*, pp. 1-5.
- Howe, R. et al., 2021. *Animal assisted interventions in the children's hospital: protocol for a scoping review*, Dublin: HRB Open Research.
- Howe, R. et al., 2021. *Animal assisted interventions in the children's hospital: protocol for a scoping review.*, Brighton, Massachusetts: HRB Open Research.
- Ichitani, T. & Cunha, M. C., 2016. Effects of animal-assisted activity on self-reported feelings of pain in hospitalized children and adolescents. *Psicologia: Reflexão e Crítica*, 29(43).
- Kurdek, L., 2008. Pet dogs as attachment figures.. *Journal of social and personal relationships*, pp. 247-266.
- Kurdek, L. A., 2008. Pet dogs as attachment figures. *Journal of Social and Personal Relationships*, p. 247-266.
- Levinson, B. & Mallon, G., 1997. *Pet-oriented child psychotherapy.* , s.l.: Charles C Thomas Pub Limited.



- Lindstrom Nilsson, M., Funkquist, E.-L., Edner, A. & Engvall, G., 2019. Children report positive experiences of animal-assisted therapy in paediatric hospital care. *Acta Paediatrica*, 9 October, pp. 1049-1056.
- McCullough, A., Ruehrdanz, A. & Jenkins, M., 2016. *The Use of Dogs in Hospital Settings*, s.l.: HABRI Central.
- Mushtaq, R., Shoib, S., Shah, T. & Mushtaq, S., 2014. Relationship between loneliness, psychiatric disorders and physical health ? A review on the psychological aspects of loneliness.. *J Clin Diagn Res*.
- NHS England, 2019. *Reducing length of stay*. [Online]
Available at: <https://www.england.nhs.uk/urgent-emergency-care/reducing-length-of-stay/>
- Renck Jalongo, M., Astorino, T. & Bomboy, N., 2004. Canine Visitors: The Influence of Therapy Dogs on Young Children's Learning and Well-Being in Classrooms and Hospitals. *Early Childhood Education Journal*, pp. 9-16.
- Tsai, C.-C., 2007. *The effect of animal -assisted therapy on children's stress during hospitalization* , Baltimore: ProQuest Dissertations Publishing.
- Waite, T. C., Hamilton, L. & O'Brien, W., 2018. A meta-analysis of Animal Assisted Interventions targeting pain, anxiety and distress in medical settings. *Complementary Therapies in Clinical Practice*, Volume 33, pp. 49-55.
- Wilson, M. E., Megel, M. E., Enenbach, L. & Carlson, K. L., 2010. The Voices of Children: Stories About Hospitalization. *Journal of Pediatric Health Care*, pp. 95-102.
- Winkle, M., Johnson, A. & Mills, D., 2020. Dog Welfare, Well-Being and Behavior: Considerations for Selection, Evaluation and Suitability for Animal-Assisted Therapy.. *Animals (Basel)*.
- Wu, A. S., Niedra, R., Pendergast, L. & McCrindle, B. W., 2002. Acceptability and impact of pet visitation on a pediatric cardiology inpatient unit.. *Journal of Pediatric Nursing*, p. 354-362.