

Animal-Assisted Interventions in Paediatric Oncology: The Story of Francesco and His Friend Megan

Abstract

Children affected by neoplasia face extended periods of hospitalisation and lengthy, invasive courses of treatment. Complementary non-pharmacological therapies, as Animal-Assisted Interventions (AAI), are more frequently being used and integrated alongside traditional forms of treatment with the objective of easing adaptation to the hospital environment.

AAI is an umbrella term that includes animal-assisted activities (AAA), animal-assisted therapy (AAT), and animal-assisted education (AAE) and AAI Resident animals (RA)

Animal-Assisted Interventions (AAI) allow for the creation of meaningful relationships between people and animals: AAI's aims are therapeutic, educational, and social, and are designed to increase a person's sense of wellbeing.

This case-report presents the story of Francesco, a boy of 9 with leukaemia, and his sessions with Megan, a 10-year-old Labrador Retriever. The ways in which AAI has allowed Francesco to counter boredom, fear, pain, and anxiety related to hospitalization are illustrated.

Introduction

Children affected by neoplasia face extended periods of hospitalisation and lengthy, invasive courses of treatment. This also brings difficulties in adjusting to the hospital environment, and psychophysical stress [1]. The literature reports that children with oncological conditions show an increased dependence on parental figures, regression to earlier phases of development, aggression, and increased levels of fear, sleep disorders, and eating disorders [2]. Complementary non-pharmacological therapies are more frequently being used and integrated alongside traditional forms of treatment [3,2] with the objective of easing adaptation to the hospital environment [4] reducing anxiety levels about medical procedures [5,6] and establishing relationships that can positively impact the psychophysical wellbeing of young patients.

Animal-Assisted Interventions (AAI) allow for the creation of meaningful relationships between people and animals: AAI's aims are therapeutic, educational, and social. Designed to increase a person's sense of wellbeing, this type of intervention is increasingly used in paediatric oncology [7,8]. The literature describes how the presence of animals in a hospital setting can be a distraction, source of pleasure, and therapy for children [9] improving their mood and counteracting the boredom, fear, pain and anxiety connected to hospitalisation [10].

Although there is some literature regarding the efficacy of AAI.

This article presents the story of Francesco, a boy of 9 with leukaemia, and his sessions with Megan, a 10-year-old Labrador



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Submission: 29 June, 2023

Accepted: 31 July, 2023

Published: 03 August, 2023

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Retriever. The theoretical framework for this intervention was based on the "Linee Guida Nazionali per gli interventi assistiti con gli animali (IAA)" [National Guidelines for Animal-Assisted Interventions (AAI)], approved at the Italian State-Regional Conference in March 2015 [11] with an approach centred around the empathetic relationship between human and animal.

Pet Care

The project "PET CARE – Animal-Assisted Interventions (AAI)" has been running since 2018 in the Paediatric Oncohaematology unit of the Policlinico Hospital in Bari, for inpatients and outpatients aged between 18 months and 19 years of age who are undergoing chemotherapy. The staff consists of the project coordinator (the Medical Director of Paediatric Oncology), a veterinary behaviourist, two assistant dog handlers with experience in behaviourism, and an intervention coordinator (the unit's psychotherapist) trained and certified in AAI, as well as four dogs: two Labrador Retrievers of around four years of age, another Labrador Retriever aged ten, and a French Bulldog aged four and a half. The dogs are all certified that their behavioural responses are appropriate to the stimuli present in the setting: in addition, they have been trained to perform specific activities in AAI sessions, so that they can take on the role of stimulator within the therapeutic relationship. In accordance with a protocol formulated jointly by oncologists and veterinarians, the project requires a specific prophylaxis for the dogs, to prevent infection and potential health risks for immunocompromised patients. To date, no suspected cases of zoonosis have been recorded.

The following two parameters are used to identify patients who could participate in AAI:

A: medical criteria, assessing the clinical condition of the child.

B: psychological criteria, evaluating the relevance of the activity and the possibility of carrying out individual, personalised sessions; the child's particular needs; their own unique personal history; their current state of health; how well they are adapting to, and coping with, treatment; and the consequent psycho-emotional ramifications that every patient has to deal with.

PET CARE is integrated within a multidisciplinary, interdisciplinary team that is responsible for the treatment of all patients in the Paediatric Oncohaematology unit.

The patients' parents are an integral part of the process and are often directly involved in the sessions.

There are 12 hours of PET CARE sessions each week. The sessions take place either in a designated area which has been set aside for the project, in accordance with the hospital's safety and privacy standards, or in patients' rooms, but only after receiving clearance from medical staff.

Francesco

Francesco is nine years old, the third child in a family with two older sisters and has been diagnosed with T-cell acute lymphoblastic leukaemia. His treatment follows the AIEOP - BFM ALL 2017 protocol: it is a lengthy and complex process, and Francesco is regularly subject to invasive medical procedures (lumbar punctures, bone marrow aspiration). In addition, his treatment also entails different medication at different times, with a resultant accumulation of side effects.

High doses of cortisone can lead to changes in mood and mood swings, aggression and depression, as well as increased appetite and obsessive thoughts about food, causing weight gain and fluid retention [12]

Vincristine can cause peripheral neuropathy and lower limb asthenia, making walking difficult. [13]

For these reasons, it has been difficult for Francesco to adapt to the hospital environment, and he has a lot of questions for his doctors. During his first admissions to hospital, he displayed both anger and frustration. In general, he seems to express his emotions, but often, due to the emotional burden of his situation, struggles when talking about them in greater depth. He has found it hard to leave his room and interact with the other children.

Weight gain and the progressive thinning of his hair have made noticeable changes to Francesco's appearance, making him "different" to other children.

One consequence of Francesco's course of chemotherapy is a weakened immune system, and a greater susceptibility to infection. In turn, this means that when he goes home, he has to limit social contact, further isolating him from his friends and his wider family.

During a session with the psychologist, Francesco mentioned that he is an animal lover. However, he had never had a pet, as his parents were against the idea of having animals in the house. After a consultation with the team, AAI was proposed for Francesco.

Francesco and Megan

Francesco's first AAI session with Megan (a ten-year-old

Labrador) and the specialist AAI practitioners took place in January 2021. During this initial session, Francesco was agitated and irascible, approaching Megan with sudden, abrupt movements. As a result, the practitioners decided to focus the activities on relationship-building and caring for the dog, in order to induce Francesco to adjust and calm his behaviour. He quickly adapted to Megan's needs, paying attention to how his approach was perceived by the animal, her responses, and the emotional state that resulted from the activities which he implemented. This was immediately reinforced by the positive emotions displayed by Megan during the session.

After two observation sessions, an individual program of 24 AAI sessions was proposed for Francesco, with the following objectives:

1. Working to counteract the side effects of the cortisone, such as excessive aggression or depression;
2. Combatting the demotivation deriving from the effects of muscular fatigue, a side effect of vincristine;
3. Contributing to a reduction in anxiety and worry;
4. Improving Francesco's experience in hospital, and coping strategies.

The activities planned for the sessions related to three large macro areas (Figure 1):

1. Care and relationship-building;
2. Narrative and storytelling activities;
3. Play.

The activities in these three areas were connected and could also take place at the same time during a session. They were planned and delivered in accordance with the psychophysical state of the child. The team prepared a general plan for each session, which could then be adapted to suit the moment or, as the weeks went by, to include Francesco's own suggestions.

Care and relationship-building

Taking care of Megan through activities like stroking her, brushing

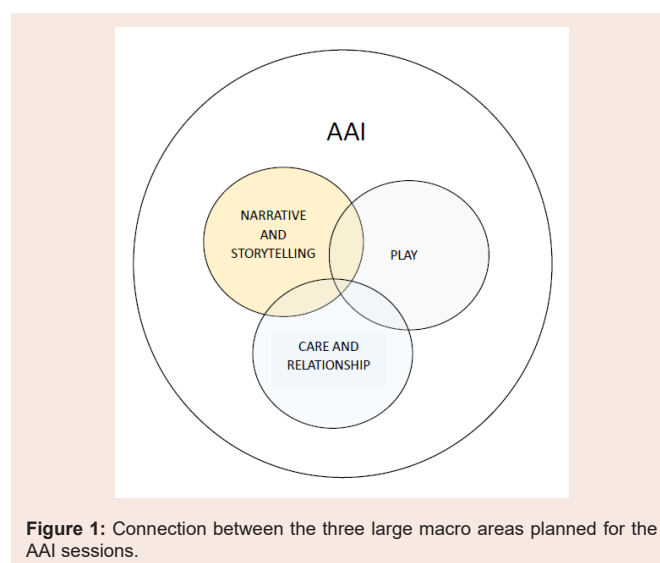


Figure 1: Connection between the three large macro areas planned for the AAI sessions.

her coat, feeding her, and listening to her heart with a stethoscope (an instrument used every day by the doctors during their rounds), allowed Francesco to create an affective dimension of exchange and trust between himself and Megan. Thanks to these activities, Francesco was able to experience a sense of gratification, becoming less closed off and less worried about his current circumstances. This reinforced his self-confidence, allowing him to build his coping mechanisms when dealing with medical staff and with his treatment, dispelling some of his fears about doctors' visits and, in particular, invasive procedures. Francesco's mother noted that using the stethoscope to listen to Megan's heart calmed him down and made him less aggressive.

Narrative and storytelling activities

From the start, Francesco showed a keen interest in dogs, especially in their behavioural characteristics and how to look after them. This was the first topic that Francesco wanted to explore, so it seemed useful to focus the first part of the work on this area. Talking about their traits, potential difficulties with socialisation, and the particular needs of different breeds allowed Francesco to draw parallels with the difficulties that he was experiencing at that time and identify his own needs. Furthermore, Francesco was able to pick out a number of topics that he was interested in learning more about he would bring these up at the end of a session, with the aim of discussing them in more depth the following week. This ensured a sense of continuity and structure over the course of the sessions.

These activities allowed Francesco to slowly open up and talk about himself.

Play

The sessions included a moment of interactive physical activity between Francesco and Megan. The objective was to create moments of pure play and fun, through activities such as "find work", throwing a ball and simple obstacle courses. These activities were beneficial in counteracting the side effects of Francesco's treatment. For example, his difficulties with walking that resulted from chemotherapeutic such as vincristine were compensated by interactions with the dog in games such as "fetch". Furthermore, in these games Francesco was motivated by the interaction and by having fun, which made him more inclined to overcome, or take more care to manage, his physical limitations. In the time between one session and the next, Francesco planned games to play with Megan, which were then used in the following session, thanks to the assistance of the AAI practitioners.

Discussion

AAI helped Francesco to radically alter his approach to hospitalisation. He waited for the dog's arrival, was brought to the hospital specially to see Megan, and asked the doctors to schedule his appointments to coincide with days when AAI sessions were taking place (Figure 2).

He was able to build trusting relationships within the hospital setting and with the medical staff, especially with the doctors and the practitioners who worked with him during AAI. Megan became a point of contact and of engagement with the hospital, providing an opening towards a greater sense of serenity, from which to observe and undergo his ongoing course of treatment.

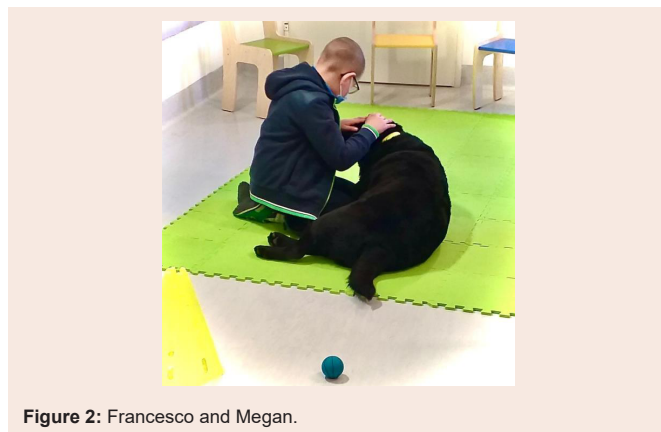


Figure 2: Francesco and Megan.

Over time, Francesco created meaningful relationships with the team responsible for his care. He actively worked with them during routine procedures, steadily increasing in his adherence to protocols and treatment, thus reinforcing trust and affection. At the same way, as reported by one member of the team, AAI positively affected their work: "AAI has a positive impact on our work as doctors, because it prepares children to accept therapies more easily, making the hospital environment more serene, improves the perception that patients have of the periods of hospitalization.

Furthermore, AAI is also a moment of well-being for us operators. We are often directly involved in the activity, and this allows us to create a different feeling with the child, a greater compliance beyond the strictly medical role. Living in a more serene environment also predisposes us to work in a more positive way. Observing the child during AAI provides us with further tools for understanding that patient, helping to improve his management".

His trust towards the medical and paramedical staff was often transmitted to other children in the unit, with whom Francesco interacted.

Through his relationship with Megan, Francesco lowered his emotional defences and restored his sense of tranquillity. He was able to express his own emotions, creating a safe space within the stressful environment of the hospital, and find strategies to tackle them and process his experiences.

The continuity afforded by the AAI sessions guaranteed a constant, secure emotional space for Francesco during his treatment, as well as moments of fun and diversion: it created a bridge, to look beyond his leukaemia. During his treatment, Francesco even started to think about having a dog of his own in the future and made an effort to find out more about dogs, how to train them, and how they experience the world.

Furthermore, AAI also became important within the context of Francesco's family, who were very receptive and always present during the sessions. In the words of his parents: "With regard to everything that was happening to him, Francesco had an excellent approach to the activity, despite the fact that he had never had the chance to have a dog at home. The activities with the dog were a stimulus to react to the consequences of our son's treatment: notwithstanding his health problems like weakness, problems with his joints, boredom, and

ISSN: 2380-0534

despondency, he managed to overcome these when he knew he had the sessions with Megan: he was even excited to go to the hospital, when he could do the activities with her. This also had a positive effect on our family, because we then decided to get a dog, as a way to help us through this tough time. We believe that AAI is, without a doubt, a positive activity: we would go as far as to say that it is indispensable for all people who find themselves facing such devastating situations, because the world of animals changes your approach to disease and helps you to see the world in a different way. The dog and the child need each other... and this is the secret”.

Acknowledgements

The authors wish to thank APLETI ETS for passion, love, and care in supporting since 41 years old children with cancer and their family hospitalized at Unit of Pediatric Hematology-Oncology in AUOC Policlinic of Bari (Italy).

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