

Study of the Effect of the Presence of a Pet on the Positive Social Behavior of a Child with Pervasive Developmental Disorders - Autism Spectrum

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Submission: April 15, 2024; Published: April 25, 2024

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Abstract

This study approaches the issue of autism in a case study. Specifically, it investigates how three key points in the daily life of a child on the autism spectrum change in the presence of a pet: social behavior, empathy and irritability. The aim is to study how the pet affects the child's daily life in the above points. The questions that are asked concern the close environment of the child, in order to be able to compare the situation before and after the presence of the pet. Teachers from the child's school and family environment participate in the survey. Questionnaires and personal interviews are used to collect information. The interviews are based on Goodman's S.D.Q (2005). The bibliography will refer to the method of Animal Assisted therapy- pet therapy, which concerns the treatment of syndromes, diseases, anxiety, disorders, through animals. The research questions that arise refer to improving the socialization of people with autism, increasing their social interaction and creating relationships and expressing their emotions. Then the data collected is analyzed and the conclusions of the research are drawn.

Keywords: Social behavior; Intervention; ASD; Inclusion

Abbreviation: PDD: Pervasive developmental disorder; EQ: Emotional Intelligence

Introduction

Autism is a pervasive developmental disorder (PDD), whose causes and treatment are still being investigated. Siewertsen et al. [1] define autism as a mental condition, with difficulty communicating, forming relationships with others, difficulty understanding abstract concepts. This pervasive developmental disorder is currently defined according to the behavior exhibited by these individuals. The characteristics of their behavior are reported in the DSM IV International Diagnosis and Classification System and the World Health Organization ICD 10. Autism can be detected when the child is in his second to third year of age, with symptoms that vary and with varying degrees of severity. The first symptoms manifest after the age of 18 months, such as lack of eye contact, expression of emotions and ignorance of danger Gena [2]. The difficulties of children with autism focus on communication, reduced capacity for social relationships, lack of creative imagination, behavior and learning Gena [2]. The U.S. has seen an increase in cases of people with pervasive developmental

disorders (PDD) over the past two decades. To this day, one possible explanation is the mutation of the gene, which affects the brain and therefore a lifelong dysfunction. This indicates the incurable nature of PDD, but also the need to find alternative treatments.

Some alternative therapeutic methods, which have evolved in recent years, are music therapy, occupational therapy and pet therapy, which are examined in this research. Such efforts are underway mainly abroad. Pet therapy is a field that has shown rapid interest in recent years and in particular, it is steadily growing, evolving and being explored, according to Siewertsen et al. [1]. This alternative therapy aims to improve emotional, social and cognitive function as well as the quality of life of people with pervasive developmental disorders and not only them. Research listed below proves the effectiveness of this treatment in people with dementia, Alzheimer's, depression, AIDS, etc. Of course, it is necessary to determine which animals are most effective for this purpose. According to Siewertsen et al. [1] studies mention

mainly dogs and horses, but sometimes other mammals, such as the dolphin. The results of the studies demonstrate an advance in communication, response to stimuli and concentration. These cite fourteen pet therapy studies, which showed improvement in one or more categories related to autism symptoms. Part of the research uses images and sounds of animals, proving at an early stage the immediate response of children as opposed to images of people, to which they react less.

According to the study by Berry [3]. The appearance of a dog in the life of a child with PDD can reduce stress, anxiety, irritation and create a more relaxed environment for children. An equally valuable result of their research is the positive effects of pets on the whole family. Because as the severity of autism decreases and the quality of life improves, the happiness of the whole family is promoted. These findings were gathered from questionnaires completed by parents, who stated that they enjoyed their children's interaction with animals, whether they were dogs, horses or dolphins. Such improvement in child's with ASD behavior could not only support teacher's engagement Antoniou [4]; Charitaki [5]; Vogiatzi [6], but also child's school inclusion Bania [7]; Bania [8]; Bania [9]; Vogiatzi [10]. The present research aims to highlight the positive impact of animals on the life of a child with pervasive developmental disorders – autism spectrum. That is, the development of his socialization, the freedom to express emotions and the improvement of his behavior towards others. Through a case study, the course of behavior of a child with autism is analyzed, comparing the “before meeting his pet” and the “after”, during which the changes he presents are investigated, through semi-structured interviews with the child himself and his close environment.

The questions that have been raised and are being attempted to be answered are the following:

- i. Is there a positive effect on the emotional development of the pupil from the existence of the pet?
- ii. Is there an improvement in behavior and hyperactivity/attention deficit problems of the student from the existence of the pet?
- iii. Is the socialization of the student in relation to his peers enhanced by the existence of the pet?
- iv. Is the student's overall positive social behavior enhanced by the existence of the pet?

Autism

Autism is a congenital pervasive developmental disorder characterized by severe communication and behavior problems. It is called diffuse as it spreads on cognitive, social and developmental levels. In addition, it may exist alone or in combination with other developmental disorders such as mental retardation, deafness, blindness, etc. according to Antonopoulou [11]. A person with

autism lives with it throughout his life. It affects one in one hundred and fifty children, with values increasing in recent years (about 20/10,000) according to the research of Fombonne [12] and occurs more in boys than girls, with a ratio of 4:1, according to Berry [3]. The speculations that have been made about the reasons for this increase concern the increase in awareness on the subject, the increase in interest, the evolution of diagnostic criteria. Notas (2005) analyzes the term pervasive developmental disorders. This term appears in the DCM-IV manuals (diagnostic and statistical manual of the American Psychiatric Association) and ICD-10 (World Health Organization) and covers the entire autism spectrum. At one end is the typical form of autism, known as Kanner syndrome, and at the other, high-functioning ones, known as

Emotional Intelligence

Emotional Intelligence (EQ) is a concept through which the characteristics that play an important role in the success of individuals in their lives and work are described. In summary, it is the ability to accurately perceive, express and understand one's own emotion and that of others Charitaki, Soulis, & Tyropoli [14]. More specifically, Salovey & Mayer [15] state that emotional intelligence is the ability to monitor and regulate the emotions of others and one's own and use them for thought and action. They defined it as the ability to perceive, express and regulate emotion and identified five main skills: people with emotional intelligence have knowledge of their own emotions and have the ability to manage them, are sensitive to the emotions of others, use their own emotions to motivate themselves, and can negotiate with other people emotionally. But the term emotional intelligence became known in 1995 with Daniel Goleman's book. Goleman [16] argues that we have two kinds of intelligence, mental and emotional, which must be developed in harmony with each other. Emotional intelligence is a person's ability to effectively recognize and handle the emotions of others and their own and create motivation for themselves. It does not mean the ability to express one's emotions uncontrollably, but to handle them correctly so that they are expressed correctly and appropriately.

According to the author there are five emotional skills: self-awareness (recognition of emotions as they are created), self-control (awareness, adaptability, control of emotions to be appropriate at any given moment), behavioral motivation (tendency to achieve goals, initiative), empathy (ability to recognize and understand the needs of others), social skills (communication, cooperation, teamwork). In order to increase one's emotional intelligence, one must increase one's skills in the ability to be aware of one's emotions, take responsibility for one's emotions and control one's behavior (self-awareness and self-management), and improve one's understanding of the behavior and motivations of others (social awareness and relationship management). A person with high intelligence understands the emotions and motivations of others, motivates

himself, controls his emotions, easily adapts to the environment, is optimistic and able to communicate and create strong personal and professional relationships. As reported by Salovey & Mayer [15], these individuals are distinguished by a higher ability to make decisions and their positive disposition makes it easier for them to demonstrate their potential. Unlike cognitive intelligence (IQ) that develops in the early years of a person's age, emotional intelligence can develop throughout life. Its cultivation begins from the first years of life, is formed during the school years and then is built. The way to develop emotional intelligence is through self-knowledge, active listening, effective speech. Through self-awareness, the person recognizes their feelings at all times and can make appropriate choices. He pays attention to his feelings and thus understands his needs, after all, the greater the contact with his feelings, the greater the understanding of the feelings of others. Through active listening, the person understands what exactly their interlocutor feels and participates in the topic without being distracted by something else.

Animal Assisted Therapy (A.A.T)

Animals can be used effectively for educational and motor purposes. A therapist bringing an animal with him can reduce the patient's fear and increase the patient's sympathy towards the therapist. However, Chur-Hansen [17], observes that while the human-animal companionship relationship is covered by a large bibliographic reference, at the level of methodological research the data are poor and therefore more scientific studies are needed. The relationship between animal and man has existed for thousands of years. It has been proven, according to Thurston [18], that humans have had a pet for 12,000 years, as it offers companionship, protection, emotional support, and physical exercise to its owners. According to Matuszek [19], due to the good relationship, devotion, love and companionship of the pet towards humans, the idea of animal therapy began. For example, Urichuk & Anderson [20] report that the ancient Greeks used hippotherapy to rehabilitate their wounded soldiers. More recently, in the 1800s, Florence Nightingale made important discoveries in this treatment and was the first to point out the extraordinary companionship that animals offer to bedridden people. Since then, the nursing profession has started implementing therapeutic intervention through the use of animals. This was called Animal Assisted therapy (A.A.T) or pet therapy.

Animal Assisted Therapy

Cole [21] analyzes the terms pet therapy and Animal Assisted therapy (A.A.T). A.A.T. is a method in which the role of the animal is integral and integral, helping to improve their mental, physical, social and emotional health. The animal is selected according to strict criteria and is a necessary part of treatment. The treatment is directed by a qualified professional and is carried out in groups or individual sessions. It has specific goals, planning and plan, depending on the patient's profile. Pet therapy is another term

used in the literature, to describe the work of organizations using animal healers. Volunteers and their animals from various non-profit organizations (pet access league society, pet visitation therapy program) visit facilities such as nursing homes, correctional centers, etc. For an animal to be a suitable healer, according to Urichuk & Anderson [20], it must be healthy, have abilities and skills. They are evaluated for being sociable, receptive to caresses, reliable, predictable, controlled and able to cope with stressful situations and strong emotions. In addition, the animals selected should not jump, because there is a risk that the person will lose his balance or become agitated. They should not bite or bark excessively and should be properly trained to urinate. Their age must exceed one year in order to be predictable and to have completed the training.

Today animal therapy is an emerging field in the mental health profession, providing physical and psychological help. It is officially defined as a targeted intervention, in which an animal that meets specific criteria is an integral part of the therapeutic process, as reported by Kruger [22]. It is an alternative method aimed at improving the functionality of patients on a social, emotional and mental level. It includes specially trained animal therapists. Vanfleet & Thompson [23] argue that through animals, children can develop the ability to recognize the emotions of others, understand when someone is having a hard time, and offer their help, what is called empathy. In particular, when children learn about animal emotions and codes of communication, they are able to apply them to humans. When they feed them, they take care of them, they worry about their pet. Specifically, the dog is the animal healer in the category Canine Animal. So, in A.A.T., an animal healer can be trained, but the most common is the dog according to Matuszek S [19]. The dog is an animal that can be easily trained and is evaluated on special commands and good behavior. After learning simple commands such as sit, get up, stay, etc., he goes through various tests and commands until his certification as a therapy dog is approved. As a therapist, the dog is used by a medical care team for the purpose of understanding thinking and emotional behavior; also helping to improve the social, mental and emotional state of the patient.

People with difficulty expressing emotions

Urichuk & Anderson [20] analyze the effect of animals on individuals who have difficulty expressing their emotions. Often, people with mental disorders are told that their feelings are wrong and that they should not feel that way. This can lead to confusion or guilt when these feelings are repeated. So, the purpose of interacting with an animal is to help the person understand that it is normal to have these feelings, to elicit a range of emotions from laughter to sadness. Animals have a unique ability to demonstrate emotions and behaviors. The warmth and security expressed when sitting next to a person or in his lap is something that is missing from many people's daily lives. The article Urichuk

& Anderson [20] presents cases of children of school age who, coming into contact with an animal, express their feelings, saying that they are felt by their pet.

People with low self-esteem

Another area they analyze is in improving self-confidence. Many people suffer from low self-esteem and self-esteem because of being treated by those around them. Therapy through pet therapy aims to show the animal's ability to create a positive relationship as it does not discriminate by nature and is therefore a unique means of increasing self-esteem. The animal accepts man easily and without judgment, ignoring the financial situation of its owner or its external appearance, unlike people. There are cases of children of school age with low self-esteem and as a consequence, aggressive behavior and irritability. The aim of the intervention through an animal was for the children to be able to talk about the reasons they express themselves aggressively towards their peers and improve their behavior. Three weeks after the children met their pet, they became interested in it, talking to it and taking care of it. They can then open up to their therapist and explain how they feel.

Fradelos [24] in his research, made a systematic review and recording to prove that contact with animals is a complementary therapeutic means in psychiatric patients. The results showed that the benefits cover the physical, social and psychological domains of the patients who took part in these studies. Therapeutic contact with animals was shown to reduce levels of fear, sadness, and psychological distress. It also helps treat anxiety and helps reduce psychological problems and depressive symptoms. It has been reported to help patients orient themselves in the present and improve their psychological well-being. Additional studies report results in people with eating disorders. However, there have been studies in which no changes have been recorded, so the investigations should expand and evolve.

Cole [21], from her research, concluded that there are positive results in a wide field of treatment through animals, such as dementia, depression, management of behavioral problems, improvement of self-esteem as well as treatment of various mental illnesses. He cites studies that have shown encouraging results such as better cardiovascular function in the elderly, improved blood pressure. Martin & Farum [25] also investigated the potential of dogs, acting as therapists, to improve the communication skills of children with pervasive developmental disorders. It is worth noting the results of their research on children with pervasive developmental disorders, such as increased laughter, eye contact, communication with the dog, desire to care for and feed their dog. In short, this study demonstrates that animals encourage the development of social skills and provides a solid basis on which to build further research.

Grandgeorge [26], in their study, evaluated the association between the presence or arrival of pets in families with a person

with autism and the effect on their positive social behavior. The results showed an increase in the desire to share and give. Also, levels of interaction between family members increase with the arrival of a pet, as they spend more time together caring for the new "member". On the one hand, the presence of a pet can have a direct effect, as when interacting the behavior of one influence the response of the other. The pet's behavior contributes to the acquisition of a structured and socially acceptable way of behaving. On the other hand, a pet can have an indirect effect on children through the family. Indeed, many parents have stated that with their pets they have managed to "educate" their children. The conclusions of Grandgeorge [26], show that the arrival of a pet in the family - home, brings changes in the social-emotional field and improves social behavior under specific conditions.

Berry [3] and Karpoutzaki [27], evaluated from their research the effect of therapy dogs on people with problematic behavior, but also on people with autism. The results show that people with problematic behavior improve their social behavior and the language they use and reduce isolation and withdrawal. Children who came into contact with the dog were less distracted, in a better mood, and looked more playful. In addition, there was a decrease in aggression and compulsive manifestations, while smiles and eye contact increased. Therefore, animal therapy, adapted to the difficulty of each individual, can bring positive results that will improve the quality of his life.

Therapeutic Riding

In 1969, the first studies on the benefits of therapeutic riding began with British riding for the disabled association of chartered physiotherapist and North American Riding for the Handicapped Association. Angelopoulou-Sakadami [28] argues that it is a popular therapeutic sport for people with cerebral palsy. It is a physiotherapy, occupational therapy or speech therapy practice, which uses the movement of the horse as part of a comprehensive therapeutic program. The Horseman develops communication with the horse when he tells him "let's go!", "stop", when he strokes him, pulls the reins or when he puts pressure on the legs to start the horse. A relationship of trust is created, sometimes of mutual respect and more rarely of love. Aubrey [29] analyzes the therapeutic method of riding in children with autism and Hamill [30] in children with cerebral palsy. The movement of the horse helps to improve circulation, muscle control and coordination. A very strong bond is formed between rider and horse, as children with autism communicate better with animals.

According to his research, the main results of therapeutic riding are muscle strengthening, increasing joint movement, coordinating movements, improving balance, creating bonds of friendship between horse and rider, creating a sense of self-confidence and self-sufficiency, self-control and patience, creating a sense of respect and love for animals. In addition, children learn to communicate verbally and physically with their horse and see this when the horse reacts. Summing up, the author emphasizes

the most important step, that the person manages to focus on something outside himself. He accepts the fact that research on the effectiveness of hippotherapy is limited, but there are many personal stories in which parents have noticed improvements in communication, speech and coordination of movements. It is therefore concluded that animal therapy is an alternative method applied to people with various diseases, mental illnesses, people with mobility problems, behavioral problems, excessive anxiety and others including people with autism. The purpose of the method is to gain self-esteem, self-respect, self-confidence, increase communication and attention and reduce anxiety. Research in this area is still at its beginning. Based on the results of limited scientific studies and the testimonies of professionals in this field, progress is expected.

Methods

In this thesis, qualitative research will be carried out, as it is based on the understanding of phenomena, i.e. description and interpretation. This method focuses on the study of individual elements in the context of a larger whole. According to Pourkos & Dafermos [31], qualitative research is appropriate when the focus is on describing and understanding the uniqueness of a person in a particular period. The research concerns a case study in a 4-year-old child diagnosed with autism. As Yannopoulos (2006) advises during quality assessment, the necessary data should be collected concerning the image of the child at school in general and in the classroom in particular, according to the words of the teachers who observe him inside and outside the lesson. The methodological techniques that will be used to investigate the research questions are the semi-structured interview with the child, the parents and six teachers. The interview will be based on the SDQ questionnaire. SDQ covers important topics such as "how do you feel about your relationships?", includes statements such as "I get nervous when faced with new situations". It refers to behavioral problems involving emotional problems, difficulties in relationships with others, difficulties in conduct, difficulties in maintaining attention. With SDQ, Goodman refers not only to the difficulties children face, but also to their abilities to achieve things, thus creating a remarkable assessment tool. According to Giannakopoulos [32] and Antonopoulou & Miltsakakis [33], it is a short self-reference questionnaire, used in children and adolescents and examines five areas. 1. Possibilities and difficulties, 2. emotional problems, 3. hyperactivity, 4. Conduct problems and 5. problems in relationships with peers and positive behavior through offering help. Participants will answer the questions before and after the pet's presence, to analyze the results of the research later. In the semi-structured interview, the questions will already be present from the questionnaire, but there will be no specific answers. According to Kalyvas & Avramidis [33] what is important is to develop discussion with topics of interest to both the researcher and the interviewee without it being necessary to have a specific order of questions.

Participants

The study, conducted in 2015, involved a child on the autism spectrum, his parents, five school teachers and his parallel support teacher. The subject of the research, i.e. the student, is 14 years old and attends a general gymnasium. The special assistant also participates in his training, who helps him daily. According to parents and teachers, he can easily orient himself in the space, self-care and handle money quite easily. All participants were aware of the topic and purpose of the survey. They interviewed the researcher after filling out a form stating that they wished to participate in the research and with his approval were transcribed. The interviews were conducted based on Goodman's (2005) S.D.Q questionnaire and lasted approximately 25 minutes each. After collecting the material, the researcher proceeded to analyze the interviews in order to draw conclusions about the image that teachers and parents had of the child during these six months of contact with his pet, but also the student's own views about himself.

Measures

Semi-structured interview

The interview is one of the most basic tools of the qualitative method, it gives the researcher many possibilities to investigate the issues that concern him and through it the interaction and communication between the participants and the researcher takes place. The biggest advantage of the interview is its adaptability. Kalyva E. and Avramidis I. [33] argue that the interview is the appropriate tool, as it allows the researcher to explore not only opinions, thoughts and experiences, but values, prejudices, attitudes and feelings, things that will not be said in words. Also, tone of voice, facial expressions, delay in answering or responding quickly to a question give information, often more important than the content of the answer. Therefore, according to Bell [34], through his communication skills the researcher will derive in-depth information by "reading" the participant.

According to Kyriazi [35], during the interview a psychological relationship is established between the interviewer and the interviewee. It is important that the interviewee feels that they can trust the interviewer. He needs to feel comfortable and speak as objectively as possible. And nothing should affect him, like a grimace or a smile of the researcher. That is why at that time it is more appropriate not to have other people present, so as not to affect the respondents. Kalyva & Avramidis [33] also state that questions should be recorded in order to have an accurate record of the answers. However, participants should make sure that after the transcription the material will be destroyed.

Results

The analysis of the data is done after the collection of qualitative data, in this case through interviews. At this point, according to Mantzoukas [36], the researcher compares, analyzes,

interprets his data and concludes. As it would have been pointless to have collected the data and not had the explanation that would have given the meaning of the words and therefore the interviews. Here the researcher plays the role of interpreter, as he decodes the words, extracting emotions from them. The case study involves a 4-year-old student on the autism spectrum. An important part of its course is the parallel support provided to the child for four years and as a result he attends a general education school. It is a case of functional autism, that after a lot of work through parallel support, the child takes care of himself, orients himself easily in space, has good relations with those around him and is quite quiet and gentle. The boy has no siblings, no friends, and no extracurricular activities. But he is a child with few bouts of anger, quiet and loved by all his classmates, who help him and make sure to be sociable towards him. And he, in turn, is quite sociable, likes to talk and imitate. Of course, his conversations are superficial and often meaningless, but there is the will, willingness and effort to connect with his peers. He loves animals of all kinds and shares this feeling with their teachers, classmates and parents. About eight months ago he got his own pet. It is on this pet-student relationship that the desired results of the interviews are based.

The data collected comes from interviews with parents, the child, the school teachers and the parallel support teacher, conducted before and after the pet enters the child's life. The interviews are based on the SDQ questionnaire of Goodman (2005) and include five areas of behavioral abilities and difficulties, emotional problems, hyperactivity, problems in relationships with others, problems of conduct, offering help or not. Analytically, whether he is anxious, has tantrums or worries him in the slightest, gives an answer in the field of hyperactivity. Problems in relationships with others. They can be seen from the answers to the questions: he has friends, argues with children, is liked by other children, etc. The answers to whether he takes into account the feelings of others, whether he is unhappy or crying, whether he is easily frightened, etc., shed light on questions concerning emotional problems. And finally, the problems of conduct and help are illustrated by the questions: does he complete a task, steals from home or school, often lies and is willing to help someone upset or hurt, willing to help others, etc. The analysis is based on research questions in four points, emotional development, problematic behavior, socialization and positive behavior. Initially, the interviews of the two parents are analyzed, then the five teachers from the student's school and finally the parallel support teacher and the student himself. In closing, there is a comparison of the answers given among the participants.

Parent interview analysis

Parents constantly observe the child and try to get to know his behavior inside and outside the home. He has no siblings and is not involved in extracurricular activities, so inevitably many times he plays alone, without having a problem with it and without there being bouts of anger. In general, he is a quiet and good child,

whose great love is concentrated on animals. From a young age, he stuck to animals, either those he saw in a friend's house or on the street. He caressed them and called them his own. Older he started taking pictures of them and presenting them as his own. This love convinced his parents to get him a dog. However, interviews with parents, before and after acquiring the pet, do not have marked differences. The details are listed below.

Emotional development

As for the emotional development of the child, he is in a stable state. Sometimes he has some fears and is scared, but he doesn't cry easily and doesn't look unhappy. Of course, when it comes to other people's feelings, he doesn't pay much attention, as they don't make much of an impression on him. For example, when he sees someone in pain or looking upset, he doesn't seem willing to help. But his behavior is socially acceptable and rarely inappropriate. He doesn't fight with other kids, he doesn't hit them, he doesn't bully them, he doesn't make fun of them. He does not wriggle nervously and is rarely restless.

Behavioral problems - attention deficit

A real problem arises when it comes to new situations, when there are changes in his schedule. Then he seems to lose confidence, is restless and nervous and needs time to calm down. Another part in which he faces difficulties, is in attention. Whether he is playing or in class, his attention is easily distracted. It is considered a difficulty, because not being able to concentrate takes him away from school goals, such as not being able to carry out a task.

Socialization

Socialization is an important part of people's lives, let alone a child in school. This student does not easily share his toys and rarely plays with other children, but he is sociable. Although he often prefers to play alone, his parents claim that he has friends. In class he is liked and loved by all classmates. They are always willing to help him, play with him and talk with him. As children, they appreciate that he is a quiet child, who does not make fun of or argue, so they treat him the same way.

Positive Social Behavior

In general, he has a positive behavior, as he is a quiet, kind and obedient child. Several times, he volunteers to help his parents or teachers. His parents say he gets along better with adults than with his older and younger children. Also important is that he does not harm others, does not steal or lie. A negative, but expected, fact is that he doesn't think long before acting.

Teacher interview analysis

An interview was conducted with five teachers at the school and the parallel support teacher. All interviews had the same answers and did not diverge at all. In summary, the answers

present a quiet and gentle child. Emotional development refers to the emotions that children express in a socially acceptable way. The ways of expression vary, and children learn to externalize their emotions from an early age. In this part, teachers believe that the student is very willing to help someone who seems upset, sad or hurt. He is willing to help his teachers and classmates. They believe, however, that there are few times when he considers the feelings of others or feels strongly about someone else. He strongly seems to feel for animals. In fact, the enthusiasm towards them is surprising. The student from a young age reacted positively to the sounds and images of animals. Every animal he sees on the street considers it his own. He often photographs them and the next day, he does not miss an opportunity to show his photos to his classmates and teachers and present them to the school as his own.

A behavior is considered problematic or undesirable when, according to Molnar & Lindquist [37], it causes unpleasant feelings in the child itself or in the persons around him. In this case, the student is often anxious and often overactive and complains of being unwell or having headaches. Several times he is concerned about the slightest thing and lies. He whirls nervously and does not stand still. But these situations do not prevail to a pronounced extent. They become quite gentle and are controlled. Intense is the distraction, which is caused constantly and very easily. The student is easily removed and when he watches something, the time he will maintain his attention will be minimal. In general, they are often out of activity. There is also a big problem when it comes to new situations. Because of his lack of flexibility, he becomes very nervous. This condition can cause him low self-esteem. He can get angry and lash out. In these cases, his teachers arm themselves with patience and strength.

Socialization is the process by which one integrates into society, learning its social values and norms. In this area, the student is at a very good level as he sometimes shares with the other children and has several friends. His teachers notice that he is very liked by all the children in his class, and everyone loves him. The student's teachers comment on his social behavior as positive since they met him. They base this on the fact that he does not steal and is not aggressive. He is rarely irritable, sometimes mocking or bullying other children. He is very good with younger children, but gets along better with adults, as he sometimes seems obedient and correct. In general, before doing something he studies it a lot, but he finds it difficult, for example, to complete a task. At this point his teachers attach great importance, since according to Konstantinou & Pleios (1999), from school failure comes social exclusion and vice versa.

In conclusion, the problems are about the same from the arrival of the pet to the present day, contact with the pet has helped little in its behavior. But the child has been dealing with animals systematically for the past four years, and since then there have been big differences. His teachers believe that the child has

problems with emotions, concentration and some difficulties in behavior and interaction with others. Of course, these difficulties hardly upset the teachers and the child and are a small problem in his relations with his peers. The part that they affect a lot is that of his school performance.

Student interview analysis

When it comes to positive emotional development, the child answers questions such as "I feel unhappy", "I try to be liked by others", "I care about the feelings of others". He states that he does not feel unhappy or cry often, on the contrary, he feels cheerful. He also feels that he cares enough about the feelings of others and knows that he is liked by others. These feelings are created by his family and friend's environment and above all by the school bus. To questions about his behavior, such as "I get angry easily and lose my temper," "I can force others to do my thing," "I'm often distracted," "I'm nervous in new situations," he gave the same answers as his parents. For example, he does not argue with anyone and is not irritable at all. He is often distracted and loses his temper when it comes to facing new situations. He also acts spontaneously and does not think before doing something. But unlike his parents and teachers, he thinks he's quiet and hardly hyperactive, but he often tosses and shakes. In addition, very often he feels unwell.

"If he shares with others", if he "plays alone", if he "helps someone who is hurt", if he "has friends", etc. shows how much his socialization has evolved. No major changes are occurring, not even in his personal opinion. But we note that according to him, he easily shares with all children, has several friends and rarely plays alone. He is good with younger children and is willing to offer help to others. His positive behavior is proven by not lying and not taking things that do not belong to him, from home or school. He also considers himself obedient and does what his elders ask him to do. He understands, of course, that he has some difficulties with concentration, behavior, emotions and the ability to get along with others. These difficulties, however, according to the student, have existed since he started school and he often gets anxious about this situation. It is positive, however, that he does not feel that these difficulties are an obstacle in his life, at home, at school and do not inconvenience the people around him.

Through the analysis of the interviews, the research questions on which the research was based were reported. According to the questions (one there is emotional development, behavior improvement, socialization and positive social behavior), the social life and behavior of the child at school and at home, before and after the appearance of the pet, was presented in some detail. In the short time the questions were studied, there were no major changes. In general, however, a child is presented, capable like his peers, with great ability to adapt and self-care. He seems to be able to socialize, as he hangs out with other children and engages in "conversations". Of course, he often speaks endlessly without making sense of what he says, or makes superficial discussions,

without substance, but what we keep in this case, and what is important, is the tendency to communicate. She rarely isolates herself and, according to interviews, shares and plays often with other children. He has very friendly relations with his peers and never argues or acts violently. Like many children, this one, in some cases, shows worry and anger, but for this to happen, there usually has to be a stimulus. For example, when there are changes in his schedule or when he does not follow his established routine, then the child begins to feel unsure, feels that he loses control and confidence, loses his self-confidence and outbursts follow. But this rarely happens.

Comparing interviews with parents and teachers, there are some contradictions in the child's behavior and concern. For example, his teachers claim that he is sometimes anxious, that he cannot remain quiet and still for very long, and that he often whirls nervously. They also report that he often complains of being unwell. While his parents claim that he does not complain of headaches or malaise and that he is fairly quiet, with minimal phobias. Another part that teachers contradict parents is in behavior, as at school, it has been observed by teachers that he sometimes fights with his classmates, while his parents deny this. This of course may be because parents do not have the image of the child at school, but at home. When it comes to his socialization, teachers agree that he has good relationships with younger children and sometimes shares with his peers, while his parents strongly disagree. Also, several times, children happen to make fun of him, which parents ignore. Their answers come to a "rupture" when parents claim that the student does not lie, while his teachers claim that he lies often enough.

The difference in answers between parents and teachers may be due to the different contexts in which the child is surrounded. That is, at school there are many more stimuli and demands than at home. On the one hand, the child is surrounded by many people, to whom, if he is not isolated, he must show appropriate and correct behavior. On the other hand, the teacher will require his student to be quiet and sit in his seat during the lesson. It will also ask him to start and complete a task, not to shout and to be focused on what will be asked. On the contrary, at home there are no such difficult situations. So, of course, parents don't complain about anxious behavior, isolation and lying. As well as the child, not to complain of malaise and headaches.

In the overall results, it appeared that the pet's effect was very small on its positive social behavior. The student himself, his teachers and his parents, noticed small differences in the interval from the acquisition of the animal to the present day. However, his enthusiasm for animals existed from an early age and he always "glued" to animals. He caressed them, showed them love, photographed them. Whatever animal it was, it excited him and considered it his own. Perhaps this feeling and this manifestation of feelings towards animals helped him to be more sociable, as he

is a child quite talkative and pleasant. The main problem presented by the child is the distraction and the difficulty of coping with the change of daily routine. These points, however, need more time for observation and implementation.

The results of the research can be correlated with results with other studies evaluating the effect of animals on children with autism. Abroad there has been a lot of research on the influence of animals. For example, as mentioned in the second chapter, through the research of Matuszek S [19], the positive effect of the dog on depression is demonstrated, an increase in socialization, improvement of behavior and reduction of pain and anxiety was observed. Through James Bossard's research, according to Ascione [38], based on case studies and personal experiences, the positive effect of animals on human routine is demonstrated. Vanfleet R. and Thompson T. [23] argue that through animals, children can develop the ability to recognize the emotions of others – empathy.

Of course, there are also studies that focus on autism, specifically the effect of animals on people on the autism spectrum. Grandgeorge [26], report positive social behavior, social and emotional changes as results of their research on the subject of animal influence. Similarly, Berry [3], observe that people with autism improve their social behavior and the language they use. They also notice a decrease in isolation and distraction. These people seem less distracted, with a better and more playful mood. Aubrey [29] believes that through therapeutic riding, a feeling of self-confidence, self-control, self-sufficiency and patience is created. In addition, children communicate verbally and physically with their horse and are more able to focus on something.

In contrast, the research of Anestis [39], who report that in the effort of researchers to prove the effectiveness of pet therapy, they often use the wrong methodology, resulting in invalid conclusions. The researcher discovered that 12 out of 14 studies were too small to have reliable results. Marino [40] found several faulty studies on A.A.T., as she argues that there is not enough evidence to prove that positive effects result from the presence of the animal, because they may be caused by the animals being very sympathetic.

Limitations

In the present investigation, some limitations that existed and some that arose must be considered. Initially, as qualitative research, it is characterized by subjectivity, since according to Papanastasiou & Papanastasiou [41], in such research participants are constantly affected and prone to the effects around them, so there can be multiple interpretations. Ultimately, the outcome will be judged by the researcher, who will have to draw a conclusion as objective as possible. Moreover, as a case study, it can be strongly criticized, as according to Patton E and Appelbaum SH [42], case studies are subjective and influenced by the researcher. The values of the researcher, his "beliefs", his identity, can influence the study,

either because of his understanding, i.e. confusion between the data and their interpretation, or because of his access to the text.

During the research it was realized by the researcher that time was limited, and in order to become apparent the effects of the pet's effect, it was necessary to spend more time between the child and the animal. Within a few months, parents and teachers were asked to find changes in the child's behavior, evaluate his emotional development before and after meeting the animal and present the positive or not results through questions related to the student's daily life. In Greece there are not many studies based on animal therapy, perhaps because this field is not known enough as abroad. This research focuses on a specific child. It is not intended to generalize, but to analyze the case in depth. The study reported many cases of pet therapy, in people with chronic diseases, with depression, with excessive anxiety, problematic behavior, schizophrenia. The purpose of this analysis is to prove that this method can be applied in many cases of physical and mental illnesses. The present research could be used for subsequent research, in order to analyze and investigate thoroughly either through the qualitative method, or through the quantitative method, whether animals have a positive effect on the behavior of people with autism.

References

- Siewertsen C, French E, Teramoto M (2015) Autism spectrum disorder and Pet Therapy, *Advances* 29(2): 22-25.
- Gena A (2002) *Autism and Pervasive Developmental Disorders*. Athens.
- Berry A, Borgi M, Francia N, Alleva E, Cirulli F (2013) Use of Assistance and Therapy Dogs for Children with Autism Spectrum Disorders: A critical Review of the Current evidence. *The Journal of Alternative and Complementary Medicine* 19(2): 73-80.
- Antoniou AS, Charitaki G, Mastrogiannis D (2023) Supporting in service teachers to stay engaged: A two-step hierarchical linear regression analysis. *Technology, Knowledge and Learning* p. 1-33.
- Charitaki G, Kourti I, Gregory J, Ozturk M, Ismail Z, et al. (2022) Attitudes Towards Teaching All Students: A cross-national exploration. *Trends in Psychology* p. 1-33.
- Vogiatzi CA, Charitaki G, Kourkoutas E, Forlin C (2022) The Teacher Efficacy for Inclusive Practices (TEIP) Scale: Further evidence for construct validity in Greek-speaking teachers. *Prospects* 52(3): 387-403.
- Bania F, Antoniou AS, Theodoritsi M, Theodoritsi I, Charitaki G, et al. (2019) Interaction with Disabled Persons Scale (IDPS): Translation and cross-cultural validation in Greek. *Disability and Rehabilitation* p. 1-8.
- Bania, F, Giannini M, Giannakoudi S, Charitaki G, Matzaroglou C, et al. (2020) The Interaction with Disabled Persons Scale (IDPS): Evidencing Construct Validity with Factor Analysis and Measurement Invariance in Greek-speaking Healthcare Students. *Disability and Rehabilitation* p. 1- 11.
- Bania TA, Giannini M, Charitaki G, Giannakoudi S, Andreas VI, et al. (2023). Attitudes towards people with disabilities across different healthcare undergraduate students: A cluster analysis approach. *Physiotherapy Research International* 28(4): e2032.
- Vogiatzi CA, Charitaki G, Kourkoutas E (2021) Assessing Psychometric Properties of the Sentiments, Attitudes, and Concerns about Inclusive Education scale in a Greek-speaking sample of in-service teachers. *Technology, Knowledge and Learning* p. 1-19.
- Antonopoulou A (2006) *Notes on autism*. Athens: Maraslio Didaskaleio Publications.
- Fombonne E (2009) Epidemiology of Pervasive Developmental Disorders'. *Pediatric Research* 65(5): 591-598.
- Antonopoulou A, Miltsakaki C (2011) Adolescent behavioral abilities and difficulties emotional intelligence and expressiveness: examination of the relationship between them. *Pedagogical discourse* 1: 11-25.
- Charitaki G, Soulis SG, Tyropoli R (2019) Academic Self-Regulation in Autism Spectrum Disorder: A Principal Components Analysis. *International Journal of Disability, Development and Education-Taylor & Francis* 1-18.
- Salovey P, Mayer JD (1990) *Emotional Intelligence*.
- Goleman D (2011) *Emotional intelligence, because EQ is more important than IQ*. Athens: Pedio.
- Chur-Hansen A, Stern C, Winefield H (2010) Gaps in the evidence about companion animals and human health: some suggestions for progress. *International Journal of Evidence- Based Healthcare* 8(3): 140-146.
- Thurston ME (1996) *The lost history of the canine race*. Kansas City: Andrews and Mcmeel.
- Matuszek S (2010) Animal - Facilitated Therapy in Various Patient Populations. *Holistic Nursing Practice* 24(4): 187-203.
- Urichuk L, Anderson D (2003) *Improving Mental Health Through Animal Assisted Therapy*. Canada: Chino Project.
- Cole ML (2009) *Literature review and manual: animal assisted therapy*. Lethbridge: Alberta.
- Kruger KA, Tratchendber SW, Serpell JA (2004) Can animals help humans heal? Animal- Assisted interventions in adolescent mental health. *Center for the interaction of Animals and Society* p. 1-37.
- Vanfleet R, Thompson T (2010) The case for using Animal Assisted Play Therapy. *Play Therapy* 6: 4-18.
- Fradelos E (2014) Therapeutic contact with animals in patients with psychiatric problems: systematic review. *Scientific Chronicles* 19(2): 132-143.
- Martin F, Farum J (2002) Animal Assisted therapy for children with pervasive developmental disorders. *National Library of Medicine National Institutes of Health* 24(6): 657-670.
- Grandgeorge M, Tordjman S, Lazartigues A, Lemonnier E, Deleau M, et al. (2012) Does Pet Arrival Trigger Prosocial Behaviors in Individuals with Autism. *US National Library of Medicine National Institutes of Health* 7(8): 1-8.
- Karpoutzaki C, Kypriotaki M, Markodimitraki M, Charitaki G (2023) The impact of a therapy dog program on children's with ASD Social Skills, Communication, and Behavioral Problems. *Preschool and Primary Education* p. 1-30.
- Angelopoulou Sakadami N (2004) *Special education, developmental disorders and chronic disabilities*. Thessaloniki: University of Macedonia Publications.
- Aubrey HF (2010) *Handbook on Animal Assisted Therapy, theoretical foundations and guidelines for practice*. USA: Academic Press.
- Hamill D, Washington KA, White O (2007) *The Effect of Hippotherapy*

- on postural control in sitting for children with cerebral palsy. National Library of Medicine, National Institutes of Health 27(4): 23- 42.
31. Pourkos M, Dafermos M (2010) Qualitative research in Social Sciences, epistemological, methodological and ethical issues. Athens: Topos.
 32. Giannakopoulos G, Tzavara C, Dimitra kaki C, Kolaitis G, Rotsika V, et al. (2009) The factor structure of the Strengths and Difficulties Questionnaire (SDQ) in Greek adolescents. Annals of General Psychiatry 8(20): 1-7.
 33. Kalyva E, Avramidis I (2006) Research methods in special education, theory and applications. Athens: Papazisis.
 34. Bell J (2005) How to write a scientific paper, guide to research methodology. Athens: Metaichmio.
 35. Kyriazi N (2011) Sociological research Critical review of methods and techniques. Athens: Pedio.
 36. Mantzoukas S (2007) Qualitative research in six easy steps, epistemology, methods and presentation. Nursing 46(1): 88-98.
 37. Molnar A, Lindquist B (2013) Problematic behavior at school, ecosystem approach. Translation: Kalantzi- Azizi A. Athens: Pedio.
 38. Ascione FR (2005) Children and Animals, exploring the roots of kindness and cruelty. U.S.A: Purdue University Press.
 39. Anestis MD, Anestis JC, Zawilinski L, Hopkins TA, Lilienfeld SO (2014) Equine- related treatments for mental disorders lack empirical support: A systematic review of empirical investigations. Journal of Clinical Psychology 70(12): 1115-1132.
 40. Marino L (2012) Construct validity of animal assisted therapy and activities: How important is the animal in AAT? Anthrozoos 25(1): 139-151.
 41. Papanastasiou K, Papanastasiou KE (2014) Educational Research Methodology. Athens: Dion.
 42. Patton E, Appelbaum SH (2003) The case for case studies in management research. Managements Research News 26(5): 464-472.



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DOI: [10.19080/ACJPP.2024.01.555564](https://doi.org/10.19080/ACJPP.2024.01.555564)

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