

Teaching Interventions for the Development of Friendship in Students with ASD



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ABSTRACT: Children with ASD are called from an early age to meet social demands and to interact with peers. This fact leads them from a very early age to face difficulties, which specifically concern the creation of social relations, the full awareness of these relations and difficulties in their social integration. Stress levels increase with age and mood disorders and secondary difficulties are often observed. They therefore end up experiencing more loneliness, compared to their normal developing classmates. The present research paper aims to investigate the levels of friendships that develop in three case studies, of a girl and two boys with ASD, after the implementation of targeted teaching interventions. In addition, a comparison of these levels is made according to the gender of the students. The interventions are compatible with the abilities and interests of the three students, so that they are functional and efficient. Development of friendships was observed in all three cases, with higher levels of conversation flow for older children, and with a stronger desire for the girl and more demands from friendships, compared to boys.

KEY WORDS: friendship, autism spectrum disorder, didactic interventions

INTRODUCTION

Autism spectrum disorder is a neuro-behavioral syndrome which seems to be appearing in a soaring rate. It is imperative for the special educator, the educator in an inclusive school as well as the society in general, to follow this rate, with respect, awareness, timely and valid information, responsibility and scientific support.

According to Heward (2011), autism is a neuro-developmental disorder which creates a series of deficiencies and difficulties in various sectors of an individual's life. It is considered a developmental disability and according to DSM-4 (American Psychiatric Association, 2000), it falls under the umbrella of Pervasive Developmental Disorders (PDD), but after the changes in DSM-5 (American Psychiatric Association, 2013), they are replaced with the term autism spectrum disorders (ASD) used by Volkmar and Pauls (2003). The subtypes which fall under the ASD (Heward, 2011), are autistic disorder, childhood disintegrative disorder, pervasive developmental disorder and Asperger's and Rett's syndromes. There are now three ASD categories based on the level of support needed for the children with ASD (Galanis, 2017).

Children with ASD find it difficult to start and maintain friendly relations and they appear to be indifferent and self-centered (Frith, 2009). Their participation in structured and informal entertaining activities is significantly less than their peers often resulting in social isolation. It is common for them to engage only in entertaining activities in which the parent is actively involved (Simpson, Keen, Adams, Alston-Knox & Roberts, 2018).

The present study examines the attempt to manage the arising difficulties during the beginning and the course of friendly relations of students with ASD. There are three study cases which are investigated, of a girl and two boys with ASD. The difficulties on a socio-emotional level are recorded along with communication, and research references of literature review are also studied in order to comprehend friendship and the level of interactions. The profiles of the students are presented with a focus on their skills and interests, as well as the suggested targeted teaching interventions. Through the semi-structured interviews (two for each case – before and after the intervention), it appears that there is a development of friendly relations in all three cases, with the girl expressing stronger desire and more demands from friendship compared to the boys, and also higher levels in the flow of conversation for older children.

Difficulties in Autism Spectrum Disorder

Individuals with ASD face significant difficulties in their communication and social interactions. Deficiencies in non-verbal behaviors, little eye contact and minimum gestures and facial expressions limit communication and deter the creation of complete frameworks of social approaches. There appears to be an inability to show emotional reciprocation and empathy as well as

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expression of feelings. Very few will be the times when people with ASD will seek peers to share thoughts, interests and skills (Volkmar, 2013). Verbal communication is characterized by special intonation which involves echolalia and oftentimes incoherent speech, which in combination with the inability of these people to perceive the figurative use of language, may create further difficulties in communication (Heward, 2011). They prefer inner isolation and engagement with specific objects. They even seem indifferent towards their own family. The comprehension of the others' emotional state becomes incomprehensible and indifferent. They are not able to express how they feel while they seem not to be interested in creating friendly approaches. They rarely use social gestures in order to greet a person or show an object (Heward, 2011). Through studies which were conducted targeting the increase of social interaction of children with ASD, it was discovered that they were finding it difficult to essentially proceed in greeting with a "hi" their normal developing peers (Gaylord-Ross, Haring, Breen, Pitts-Conway, 1984). Affection and tenderness are usually non-existent feelings while there are times when they feel distress with others' hugging. Self-stimulating behaviors, deceleration of "social smile", lack of proper feeling as well as spontaneous reactions are some of the things that deteriorate the social deficiencies of children with ASD (Charlop & Walsh, 1986).

According to the approach of the Theory of Mind, individuals with ASD do not perceive the autonomy of another person's thought and cannot interpret his psycho-emotional conditions. It is impossible for them to be led to logical explanations and decode actions and behaviors thus, it is very hard for them to comprehend the other individual's intentions, special characteristics and personal demeanor (Shamsi, Hosseini, Tahamtan & Bayat, 2017). Their psychic world is overwhelmed with feelings of anxiety and loneliness. Introversion and social indifference lead to loneliness (Papageorgiou, 2005), and very often they manifest problematic emotional moods and behaviors (Benvenuto, Battan, Porfirio & Curatolo, 2013). The existence of hallucinations is perceivable, they communicate and talk to themselves and they get very annoyed when someone invades their routine (Heward, 2011).

Children with ASD perceive fragments of what they receive through their senses and find it difficult to construct connections in order to create a picture of their wholeness. They see each tree as separate from others and are not able to perceive the concept of a forest (Wicks-Nelson & Israel, 2003). Therefore, they seem to have a peculiar sense of their environment, they detect any subtle change and manifest inexplicable tensions for some stimuli.

Baron-Cohen and Howlin (1993), focusing on the lack of social interaction and communication of these individuals, refer to five significant deficiencies. A deficiency in comprehension the interests of the other party, a deficiency in perception of misunderstandings, a deficiency in perception of being tricked by others, a deficiency in the ability of tricking others as well as a deficiency in comprehension of other people's intentions, incentives and thoughts. Furthermore, there is often a sign of deficiency in the process of thinking the thought therefore a lack of metacognitive skills and inability to correlate an individual's feelings with his behavior (Graziano, 2002). These difficulties emerge from the cognitive approach of interpretation of ASD with the theory of the mind, according to which, daily intellectuality (Wooley & Wellman, 1993) which permeates communication and social relations rendering them functional, does not exist in individuals with autism.

The aforementioned difficulties cause problems in communication, education, social life, friendly relations and adaptability of the individuals with ASD. These individuals experience social anxiety, under the pressure of the difficulties, and often choose social withdrawal. Loneliness, for certain, intensifies anxiety and leads to depression (McVey, et al., 2018). Half of the population within the spectrum faces anxiety disorders, and more often specific phobia, obsessive-compulsive disorder, social anxiety and agoraphobia (Postorino, et. al., 2017).

Friendly Relations between Students with ASD

There is a variety and number of difficulties which in combination with one another become more tense resulting in the creation of further difficulties in the social, family and school life of children with ASD. It is a frequent phenomenon, students with ASD to face difficult situations due to uncooperative and unaccepting classmates, as well as unpredictable behaviors from their normal developing peers which shows an underlying attitude of the school communities and the society in general, about individuals with disability. In inclusive school environments of students with ASD, there are a lot of deficiencies in development, preservation and comprehension of relationships, and severe difficulties are found during a game or a collaborative activity in the learning process or during the creation of friendly relations (American Psychiatric Association, 2013).

Children with ASD are called to respond from a very early age to social demands, interact with peers and create social and friendly relations. This fact, leads them to the realization of the difficulties which are confronted with, from a very early stage in life, which specifically concern the creation of social relations, the full awareness of these relations, and the difficulties during their social and school integration (Attwood, 2000). Stress levels increase along with age, while they appear to manifest mood disorders and secondary difficulties (Myles, 2003). Therefore, due to the difficulties, they end up experiencing more loneliness and social isolation, compared to their normal developing peers (Bauminger & Kasari, 2000; White & Roberson-Nay, 2009).

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Studying further the theory of mind, it is evident that there should be well-documented scientific explanations for the deficiencies of students with ASD. It is claimed that there are difficulties in the comprehension of diversity, of others' thinking, their feelings and desires, and there are also difficulties in the comprehension of mutuality and empathy (Tager-Flusberg, 2001). According to the same theory, the aforementioned deficiencies, may hinder the development and comprehension of mutuality and mutual relations and lead to a superficial perception of friendship and interpersonal relations from the individuals with ASD (Bauminger & Kasari, 2000). It is evident that friendship is a difficult matter and a challenge for students with ASD (Orsmond, Krauss & Seltzer, 2004).

However, after a more careful literature review, it seems that there is research which has concluded and established confirming or not, in part, what has been previously mentioned. High functioning children with ASD, from the first years of their life, show and mention that they wish to create relations and interact with their peers (White & Roberson-Nay, 2009). Some of them are successful in developing ways of recognition and expression of interpersonal and emotional experiences. Friendship follows a developmental course in autism and contributes to the reinforcement of their skills and social interaction (Bauminger, Solomon, Aviezer, Heung, Gazit, Brown & Rogers, 2008). The relationships, however, differ in quality and number from the ones normal developing children create (Bauminger & Kasari, 2000; Bauminger & Shulman, 2003).

The role friendship plays in the prosperity and wellbeing of school children is decisive. Its consequences affect long-term self-esteem and total self-perception of students (Mendelson, Gates & Lerner, 2016). Research has shown that the same goes for children with ASD at prepubescent years. More specifically, children at prepubescent age of 8-12 with autism spectrum disorder (ASD), perceive the concept of friendship in a similar way with the normal developing children at the same age and are aware of the process of interpersonal communication (Bauminger et al., 2008). Forming friendly relations reinforces their skills for social interaction, while children at prepubescent age may form friendly and meaningful relations and consistent in time (Bauminger et al., 2008). Not only the formation of friendly relations, but also their preservation requires certain skills, such as recognition of emotions, communication skills and self-regulation (Calder, Hill & Pellicano, 2012).

Children's Profiles and Friendship before Intervention

1st Study Case

Student G. is nine years old and goes to Fourth Grade of Elementary School. The consult, at the age of five from a developmentalist and the Hellenic Scientific Network for ASD, mentioned that the student presents autism spectrum disorder with significant symptoms level II, using the criteria of DSM 5 (American Psychiatric Association, 2013). From the first grade he has been supported by a parallel support special educator. Student G. is cooperative and high functioning, he presents a few of the symptoms which characterize his disorder (Gena, 2002), his intellectual level is satisfactory and his family supports him in every difficulty.

His stereotypies are intense with repetitive behaviors and attention deficit disorder in most subjects, except for activities involving mathematical process and calculus, with IT and use of video. He has great ease with Maths while in IT he enjoys using computers. He gets excited and participates in video analyses whose conclusions are recorded in the form of social stories which he studies carefully. He is quite independent as far as nutrition and use of bathroom are concerned, but he faces difficulty in changing his books and notebooks during the school process.

Interview elements before intervention: Student G. mentions that he finds it difficult to begin and preserve a conversation, he cannot perceive others' intentions and feelings and he rarely attempts to share his own. He achieves little eye contact with the other party and understands simple sentences with low factual content (Norbury, Gemmell, & Paul, 2014). He does not pay attention to his classmates and he feels unmotivated for social interactions. He does not form close friendly relations and does not pursue his participation in games. Even when the parallel support special educator creates the proper conditions for his participation in them, G. joins in for a few minutes of group playing and then he withdraws.

2nd Study Case

Student K. goes to the Fifth Grade of Elementary School, he presents autistic spectrum disorder according to DSM-5 (American Psychiatric Association, 2013). The development of his vocabulary is average. He finds it difficult to focus on objects which do not interest him. He often repeats phrases and words (Heward, 2011) and a lot of times he does not comprehend his classmates' figurative speech. In the school subject of the Greek language, he has difficulty in the spelling of homonymic words (Stasinou, 2013). He enjoys calligraphy and is willing to learn things showing great interest for things that attract his attention. As long as his attention is focused, he is calmly provided with analytical instructions (Stasinou, 2013) which he almost always follows to a great extent. He responds to the teacher's questions; he copies his classmates' phrases and movements and he would like to play more with them. Furthermore, he has visual memory which helps him to classify pre-existing knowledge in a very specific way. He presents high functioning in places where the objects around him are arranged in neat rows (Stasinou, 2013). He likes bright colors very much, puzzles and cartoons, whose dialogues he knows in detail.

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Interview elements before intervention: Student K. mentions that he finds it difficult to make friends and he often spends his school break alone (Heward, 2011; Stasinis, 2013). Sometimes when he participates in games, activities or conversations, the atmosphere with others is getting tense and he becomes aggressive (Heward, 2011); Stasinis, 2013), because he does not have the patience to wait for his turn (Heward, 2011). He mainly focuses on his inability to understand what others think, their expressions, the tone of their voice, and the jokes that are being made (Heward, 2011). As a result of all these, his classmates often avoid him and he feels bad about it.

3rd Study Case

Student M. is in Fourth Grade of Elementary School and she has been supported by a parallel support special educator since kindergarten. She was diagnosed with ASD Level I – Need for Support (American Psychiatric Association, 2013) at the age of four. It was deemed necessary to repeat kindergarten for one more year so that her transition to elementary school would take place with fewer problems. She is a polite child, a conventional student and quite likeable to all the educators at her school.

She has a satisfactory level of speaking and reading, however, she faces difficulty in writing, using only simple sentences. She loves watercolor painting and looks forward to the Art class. Her paintings are abstract but the combination of colors is beautiful and special. She shows great enthusiasm for Maths and responds enthusiastically to solving arithmetic operations of multiplication (Gena, 2002). She has great interest for computers which she operates with ease, spending a lot of time in front of a screen. She is familiar with all areas of the school and is independent with no particular problems.

Interview elements before intervention: Student M. mentions that she has friends at school. She seeks their company and insists on speaking with them about things she is interested in, such as comics which she reads on websites online. If anyone invites her to play a game, she usually withdraws and sits somewhere in the schoolyard that is not crowded (Gena, 2002). She says that in these particular circumstances she likes loneliness because loud voices and crowds disorganize her (Katsougri, 2021). Finally, she has lost friends from her exaggerating love for her personal belongings. She wants them arranged in a particular place, with a particular way (Lennard-Brown, 2004), and unfortunately, she throws a tantrum when a classmate of hers takes something that belongs to her without her permission.

Interventions for the Development of Friendships of Students with ASD

Friendship is an interpersonal accomplishment, with children practicing and developing fundamental social behaviors, such as mutual care, companionship and empathy (Bauminger et al., 2008). On the contrary, lack of social and friendly contacts has shown that leads to the development of feelings of social rejection and is related to subsequent adjustment problems (Burgess, Wojslawowicz, Rubin, Rose-Krasnor & Booth-LaForce, 2006).

Based on the research findings of White & Roberson-Nay (2009) for the high functioning students, concerning their first years of life when they show and mention that they wish to form relations and interact with peers, as well as the findings of Bauminger, Solomon, Aviezer, Heung, Gazit, Brown & Rogers (2008) that a friendship with a child of the same age constitutes a safe social experience for a student at prepubescent age with ASD, while at the same time it helps him practicing in cooperation and exchange, this present research comes to intervene in all three aforementioned study cases.

Through targeted teaching interventions, the aim is the development of friendly relations by leading these specific students to reduced levels of social rejection feelings and subsequent adjustment problems. It is worth mentioning that the interventions are designed and materialized based on common elements of focus on skills and interests which result from the qualitative analysis of the interviews and the observation of corresponding school environments. The suggested interventions targeting the development of friendly relations are based on the Applied Behavior Analysis (ABA), according to which teaching is designed, conducted and evaluated based on the observation of the student's relation with his environment, the stimuli and how he reacts to them learning (Heward, 2011). With ABA the students' skills are utilized to the fullest in relation to the way they learn and manage situations and therefore, there is an increased possibility to develop the level of their friendly relations. At the same time, students' special interests are utilized with quite a few positive effects on basic sectors of difficulties and mainly psychological reinforcement (Heward, 2011).

There are two interventions which are implemented identically in all three cases. Through (ABA) the type of intervention followed is 'natural environment training'. With this specific method interventions are carried out in real conditions in the children's environment, aiming at their direct implementation on everyday activities as well as in general. More specifically, the 1st intervention involves the use of video and social story, while the 2nd involves cartoon video and role play. The reason why the video, the social story and the role play are chosen is because they appertain to the special interests of the three students with ASD (Heward, 2011) and therefore, they will be able to focus on these. Furthermore, all children like cartoons and these particular ones are short and comprehensible, appropriate for the age of the children. Before every intervention, the simplification and order in the area is checked and secured by the class educator and the parallel support special educator so that the attention of students is not distracted (Polychronopoulou, 2012).

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1st Intervention: Participation in a Group Game

The intervention has four goals: Students with ASD, a) to state with no previous recommendation their interest in the game and to claim their participation, b) to abide by the rules, and carry on until the end, and c) to accept their defeats and reward the winners. For their classmates, d) to acknowledge the different students the right to participate in the game, and manage correctly their behavior so that there can be a feasible result. In this case, it is all about the integration of the inclusive school in disability.

In the classroom a short video (1.23 minutes long) is played showing a student with physical disability being invited by his classmates during the school break to play with them. Afterwards a discussion follows about his right to participate, despite his difference, in the group activities. The discussion focuses on the development of empathy for all students and on the suggestions for the unhindered participation of different students in the game.

(<https://www.youtube.com/watch?v=3SzazN2OrsQ&list=PLYbkMbRxc976EwWsfMEWdQ7CMneSRcx21&index=1>) The video analysis is combined with the following social story which is also in written form at the disposal of the three students, before and during the game. The game takes place at the schoolyard of the school units during school break. The phrases accompanying the pictures in the social story are: 1. When the bell rings I go out to the schoolyard, 2. I approach my classmates, 3. If they decide to play a game, I let them know that I want to play, 4. My classmates are happy to see me play with them, 5. We reward the winning team, 6. I am polite with everyone, 7. The game makes friendships and fills us with joy! The teacher orally supports whenever necessary.

2nd Intervention: Make New Friends

The intervention has six goals: the students with ASD, a) on a level of knowledge to discern rudeness from politeness, b) on a level of capabilities to implement a polite greeting when they meet a new friend, and c) on a level of attitudes to realize their similarities with the boy John in the video. For their classmates, d) on a level of knowledge to recognize the characteristics of ASD, e) on a level of attitudes to develop positive dispositions for friendly relations with the students in question, and f) on a level of capabilities to interact with them effectively.

In the classroom a short cartoon video (3.30 minutes long) is played which shows the meeting of two girls and a boy with ASD. Before the video is played a question is asked: What do we do and say when we meet a new friend? All students express their experiences or expectations. After the projection of the video, a video analysis follows with the following questions: Who are the protagonists? – Where are they? – What are they doing? – How do you characterize John's behavior? – Is his behavior acceptable? – What are the reasons for John's behavior? – Can we detect the characteristics of autism spectrum disorder? – How do we treat children with ASD? – How do we manage the company and the friendly relations? – Which actions characterize us as polite? (<https://www.youtube.com/watch?v=rKqBUM9w6EY>) The video analysis is combined with a role play. Students are asked to pretend that they do not know each other, and are provided with instructions – opportunities to get to know one another and form friendly relations. In order for the game to be more fun, the students wear masks and use funny nicknames. Educators and students work in a diversified and inclusive manner developing social skills with everyone's special awareness for ASD matters, forming friendly relations and promoting an original integrational culture, that is, the integration of a common school in disability, in a flexible and fun way.

DISCUSSION

The basic goal of this research study is the examination and management of the arising difficulties during the beginning and the course of friendly relations of students with ASD. Three study cases are investigated, recording the difficulties, abilities and interests, as well as research references of literature review, in order to comprehend friendship and the level of interactions. The results of the present research study after the qualitative analysis of data from the interviews and the observation, before and after the targeted teaching interventions, present particular interest.

Before the interventions, friendly behaviors, interactions and attitudes of the students with ASD at prepubescent age, differ in many sectors compared to their normal developing classmates. Quality of friendship and friendly relations are on low levels, behaviors regarding friendship are fewer, as well as the flow of their conversations. They perceive their friendships in total as less useful, close and familiar (Bauminger et al., 2008), and they also face difficulty in their executive functions (Liss, Fein, Allen, Dunn, Feinstein, Morris, Waterhouse & Rapin, 2001).

Student G., student K., and student M. mention that they find it difficult to form friendly relations, they are not able to perceive others' intentions, they do not pursue their participation in games while they often withdraw or throw a tantrum when they are bothered and become aggressive. The outbursts and the inability to perceive others' intentions result in their classmates' distancing, their own anxiety, and loneliness while they consider that there is a deficiency in their social skills.

These research data of the three study cases confirm the hypotheses of the researchers White & Roberson-Nay (2009) who showed that in the sample that participated in their research of high functioning students with ASD, 7 to 14 years old, anxiety levels were

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high and they were experiencing social loneliness to a great extent. Similar were the findings of the research of Bauminger and Kasari (2000) in a sample of children with ASD at the same age. Children mentioned that they felt lonely while their friendships were characterized with low rates of companionship, security and help. The feeling of loneliness may arise from the unfulfilled desire to create friendly relations and the lack of emotional bonds (Bauminger & Kasari, 2000). Therefore, the conclusion that can be drawn is that anxiety constitutes a frequent concern for students with ASD, who tend to cover their need for the creation of relationships and emotional and social bonding by having close to them familiar (to them) individuals (White & Roberson-Nay, 2009).

After the interventions, all three children state that the beginning and maintenance of friendly relations with normal developing peers affects them in a positive way. More specifically, children with ASD seem to respond effectively during their interaction with their classmates, they present strong language skills, longer physical proximity, smile, and positive signs in social orientation (Bauminger, Solomon, Aviezer, Heung, Brown & Rogers, 2007). Furthermore, in the half-structured interviews they mention that through their friendly relations their needs are covered while at the same time, they feel that the levels of satisfaction from their friendly relations are high. It is worth mentioning that their classmates refer to similar levels of satisfaction (Petrina, Carter, Stephenson & Sweller, 2016). The indicator of the satisfaction level from friendly relations is the satisfaction level of the expectations of children with ASD (Hall, Larson & Watts, 2011).

Using the method of observation for the spontaneous interactions in natural environments, such as the school classroom and the schoolyard during school breaks, there can be detected mainly positive social behaviors and very rarely negative behaviors, such as the outbursts of student M. and the aggressive behavior of student K. The children can now activate social skills and there is often eye contact and communication with their classmates.

Student K. and student M. as the older children in the study, appear more social behaviors, higher flow in conversation, higher emotional proximity and coordinated play, in comparison with the younger student G., a finding which coincides with the findings of Bauminger, Solomon, Aviezer, Heung, Gazit, Brown and Rogers (2008).

Student M. states that after the interventions and the change of attitude from her classmates, the creation and maintenance of friendly relations is of utmost importance for her. Her desire to make friends has become more intense. She prefers friendships with girls, she is familiar with the dangers of the Internet, as well as the importance of trust. Her demands from her friendships have increased compared to the boys in the other two study cases, a finding which coincides with the findings of Ryan, Coughlan, Maher, Vicario και Garvey (2020).

Finally, the research study focuses on the fact that high functioning children with ASD aged 8 to 12, prefer to interact with their normal developing classmates, and quite frequently the beginning of the interaction initiates from them. Therefore, high functioning children with ASD can be socially expressive and wish to create friendly relations. It is deemed imperative to investigate further the practices and prospects of high functioning students with ASD, as far as their friendships are concerned, and examine the social and moral repercussions of the various interventions (Calder, Hill & Pellicano, 2012).

The findings certainly contribute to the improvement of the school experience, the respect of diversity, the comfortable sensation of high functioning children with ASD to operate in interaction processes and the provision of support from an early age to create new friendships and maintain the existing ones without the need to proceed further to personal adjustments (Cook, Ogden & Winstone, 2017). Friendships are built in diversified inclusive school environments, with the school unit integrated in disability.

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