

Original Article

## The Effect of Drama in Education on Social Skills Development of Children with Autism Spectrum Disorders (ASD)

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### Abstract

**Background:** Drama in Education constitutes an effective medium for the introduction of new skills to individuals with Autism Spectrum Disorders. Specifically, it effectively helps children develop their social skills, communication and empathy, it encourages them to act in social situations while at the same time communication is improved and there is more sensitivity in social interaction.

**Aim:** The purpose of this research study is to examine if Drama in Education can effectively contribute to the development of social skills in children with Autism Spectrum Disorders (ASD) and specifically children who meet the diagnostic criteria of Asperger Syndrome (F 84.5, ICD-10).

**Material and Methods:** The intervention program took place in the Psychiatric Department of the General Hospital of Argolida. 14 interventions were implemented and 10 children participated, aged 6 to 10 years. For the collection of data, Goodman's Strengths and Difficulties Questionnaire (1997/999) was used when conducting the action research, which was completed by the parents before and after the interventions program. Statistical analysis of the results was done with the help of the SPSS software, adopting the parametric criterion t-student for dependent samples.

**Results:** Both the quantitative and the qualitative results of the research showed the effectiveness of the interventions through Drama in Education in the development and improvement of social skills in children with Asperger Syndrome.

**Conclusions:** The results of our research show that Drama in Education can be used for interventions in children with deficits in their social skills, and they add significant evidence in the literature about its use in individuals with Asperger Syndrome. However, better understanding of the peculiar nature of ASD is deemed necessary in the future, both from the teachers and from the mental health experts.

**Key words:** Autism Spectrum Disorders, Asperger Syndrome, Drama in Education, Social Skills, Strengths and Difficulties Questionnaire

## **Introduction**

In the present research study, the contribution of Drama in Education in the development of social skills in children with Autism Spectrum Disorders and specifically in children who meet the diagnostic criteria of Asperger syndrome is attempted to be examined (WHO, 1992). This group of disorders is characterized by qualitative deviations in social exchanges and communication, as well as by a restricted, repetitive, stereotypical repertoire of activities and interests (APA, 1994 ·WHO, 1992). Successful development of communication and social interaction constitutes a lifelong aim for individuals with Asperger syndrome. The acquisition of social skills may positively affect in almost all stages of the development of children that show characteristics of the syndrome (Rutter & Schopler, 1987 ; Gillberg& Gillberg, 1989 ;Szatmari, Bremmer & Nagy, 1989). According to research studies, Drama in Education constitutes an effective medium for the introduction of new skills to individuals with Autism Spectrum Disorders. Specifically, it effectively helps children develop their social skills, communication and empathy (Nelson, & Ramamoorthi, 2011), it encourages them to act in social situations (O' Sullivan, 2015) while at the same time communication is improved and there is more sensitivity in social interaction (Sherratt, & Peter, 2002).

## **Autism Spectrum Disorders**

Autism Spectrum Disorders are a group of neurodevelopmental disorders, they appear in the early childhood and they are characterized by qualitative deviations in communication, social interaction skills, as well as by a restricted, repetitive, stereotypical repertoire of behaviors, activities and interests (APA, 2013).

The term “spectrum” indicates the variability in severity and intensity of the symptoms and the clinical manifestations of individuals with these disorders. The clinical picture of Autism Spectrum Disorders is disparate and ranges from mild to more severe forms. According to the new diagnostic criteria of DSM-5, Asperger Syndrome is included in the Autism Spectrum Disorders

along with the Autistic Disorder and Atypical Autism (APA, 2013).

Asperger Syndrome is used to describe the milder and more functional aspect of the so-called spectrum and it is characterized according to the World Health Organization (1992) by serious difficulties in the aspects of social interaction, communication, behavior, thinking and activities. It differs from the other Autistic Spectrum Disorders in the fact that individuals with the Syndrome exhibit a greater growth as well as a normal intellectual and linguistic development (Klin et al., 2007; South, Ozonoff, & McMahon, 2005). However, it is commonly accepted that all individuals with Asperger Syndrome lack in fundamental social skills (Gutstein, & Whitney, 2002).

## **Social Skills and Autism Spectrum Disorders**

Undoubtedly, social skills are necessary for a successful verbal or non-verbal communication, they lead to the facilitation of forming relationships, to the involvement in teams as well as to the management of close relationships, the expression of ideas and opinions (Elliott, & Gresham, 1987). The lack of social skills may have a lot of negative consequences on finding a job, living independently and it also burdens particularly the mental health of the individual (Hay, Payne, & Chadwick, 2004). Social skills are of vital importance for the successful social, emotional and cognitive development of the individual. Shortcomings in social skills impede the forming of important social relationships and lead to social isolation and rejection as well as to phenomena of school bullying (Carter, 2009).

Research studies on social skills show that individuals with Autism Spectrum Disorders are less likely to start an interaction, initiate and maintain a conversation, wait for their turn to speak and share their emotions (Schall, & McDonough, 2010). In particular, the level of social maturity of children with Asperger Syndrome falls short by at least two years compared to their peers' level (Attwood, 2000). It has been observed that children with AS avoid social interactions, preferring to stay alone or else they become indiscreet, annoying, noisy, irritating

and bother their classmates Children and adults with Asperger Syndrome often become targets of bullying and intimidation. Failure in forming relationships and rejection from their peers have as a result detrimental effects on the child's self-esteem and mental state (Humphrey, & Lewis, 2008).

The training of the social skills of children with ASD concerns more and more families, health experts and teachers who are called to apply suitable treatments, interventions and educational approaches (Cappadocia & Weiss, 2011; Reichow & Volkmar, 2010). Groups of social skills of children with Asperger Syndrome act effectively in social understanding and development of social and peer relationships (Kaat & Lecavalier, 2014; Smagorinsky, 2016). Plenty of educational approaches and therapeutic team interventions have been used for the training of social skills of children with ASD (Corbett et al., 2011; Wolstencroft et al., 2018). Newer researches report the positive effect of Drama on children with Autism Spectrum Disorder (Blythe et al., 2011; Corbett et al., 2011; D'Amico, Lalonde, & Snow, 2015; Guli, et al., 2013; Kempe, & Tissot, 2012; Lerner, Mikami & Levine, 2011; O' Sullivan, 2015).

### **Drama in Education and Autism Spectrum Disorder**

Drama in Education constitutes a new approach of creative learning, expression and communication. It constitutes an experiential procedure of interaction through which the child explores the world, develops his/her social and emotional skills, tries out new roles and experiences different and various situations (Mavroudis & Kondoyianni, 2020; Tsiaras, 2016). Drama in Education can be taught either as an independent art lesson or be used simultaneously as a learning tool for all cognitive subjects, and for the teaching of various subjects of the extensive curriculum (Celume et al., 2020). Dramatic techniques, such as "teacher in role", "frozen pictures", "hot chair" contribute importantly in the arrangement of education and the processing of topics that concern children, such as the health education, interculturalism, environment education, school bullying, education about peace and others (Blythe et al., 2011; Kempe, & Tissot, 2012)

At the same time, due to the variety of techniques that Drama in Education has, it can be altered, so that it addresses children of every developmental stage, with different cognitive skill and personality type (Celume et al., 2020). Moreover, it can be effectively used in environments such as clinics, schools and society aiming at the social and emotional development of children with special needs (Jindal-Snape, & Vettrano, 2007).

The last decade there was a significant increase in the number of books and researches referring to drama and autism. Sherratt & Peter's (2002) book, titled: "*Developing Play and Drama in Children with Autistic Spectrum Disorders*" was between the first books which were published, and it mentions extensively the psychology and pedagogy of autism as well as its relationship with game and drama.

In her book titled "*The Autistic Spectrum*", Wing explains that theater and dance can help in reducing the intensity and disturbed behavior of individuals with autism (Wing, 1996: 196). In his study about the evaluation of approaches for children with Asperger syndrome, Attwood also notes that drama can be used to encourage the child to be active in social situations (Attwood, 2000: 97).

According to Nelson & Ramamoorthi (2011), Dramatic Art constitutes an effective medium for the introduction of new skills to individuals with ASD, it effectively helps them develop their artistic talents, social skills, communication and empathy.

Sherratt & Peter (2002) support that the creative potential of each individual can be developed through structured play. The intervention that takes place through play-drama aims at replacing the "triad of impairments" of the autistic spectrum with a "triad of competence". (Sherratt, & Peter, 2002: 14-15).

The literature review suggests that the use of scenarios as well as the application of programs which involve role play, greatly helps the socialization, communication and cognitive skills in children with ASD. By improvising an everyday situation, the child has the chance to respond and react in a protected environment. The roles are alternated, the scenes are repeated, the plot

progresses through imagination and reality, having the child as a result exploring a wide range of their personal and social skills (O' Sullivan, 2015).

### Methodology

The current research is an action research, which focuses on the designing and application of an intervention program in children with Asperger Syndrome. The intervention program was implemented in the Psychiatric Department of the General Hospital of Argolida. The basic aim of the program was the development of social skills through the use of Drama in Education. The tools which were selected to conduct this action research were the use of a questionnaire, which was administered to the parents, participant observation and critical friend, in order to have valid and reliable research data through the triangulation of methods (McNiff, 2013).

**Sample:** Ten children participated in this research, 8 boys and 2 girls, aged 6 to 10 years, who came from the Regional Unit of Argolida. All the children had been examined and diagnosed with Asperger Syndrome (F 84.5), according to the diagnostic criteria of ICD-10 (WHO, 1992). At the same time, the Child Psychiatrist of the department had collected data and she had thoroughly recorded the history of each child regarding their developmental stage, abilities, skills as well as the difficulties they are facing. The participants had also been evaluated by the Occupational Therapist of the department and according to her evaluation all of them were highly functional, they had a good linguistic and cognitive development, while they lacked considerably in their social skills.

The purposive sampling and convenience sampling methods were used, since the researcher was the Occupational Therapist of the Psychiatric Department, the number of children was small and she targeted children with certain criteria (McNiff, 2013). The children were chosen from a data base of the Occupational Therapist of the Psychiatric Department in the General Hospital of Argolida, and they were in a waiting list for the creation of social skills interventions. They had been diagnosed with Asperger Syndrome (F 84.5), normal Intelligence Quotient, and they were integrated in a general nursery school or primary school (age 6-10 years old). All the children had been following individual speech therapy or

occupational therapy or special education programs in private centers. None of the children, however, participated in a social skills group program. Children with a history of emotional, behavioral disorders or aggressive behavior were excluded from the research.

**Data Collection Tools:** For the collection of data, the Strengths and Difficulties Questionnaire (SDQ) was used, in its expanded form, for the parents of children aged 4 to 16 (Goodman, 1997/1999). The Strengths and Difficulties questionnaire is a concise tool for the early detection of behavioral and emotional characteristics of children and teenagers aged 4 to 16 (Goodman, 1997). The questionnaire essentially assesses the capabilities and difficulties of school age children, which are related to their psychosocial functionality. Its short and fast completion makes it useful in initial clinical evaluation, in early detection and realization of epidemiological studies both in general and clinical population (Goodman, & Goodman, 2009). It includes 25 questions that assess different attributes, some positive and some negative attributes. These 25 questions are divided in 5 scales (5 questions for each scale):

1. Emotional symptoms, (e.g. The individual is usually miserable, disheartened or he/she is crying).
2. Conduct problems, (e.g. The individual usually fights with the other children or mocks them, bullies them, hits them).
3. Hyperactivity/inattention, (e.g. The individual's attention is easily lost, it is difficult for him/her to concentrate).
4. Peer relationship problems, (e.g. The other children have their eyes on the individual or mock him/her or hit him/her).
5. Pro-social behavior, (e.g. The individual often volunteers to help the others (parents, teachers, other children) (Goodman, 1997/1999).

Each one of the 25 questions of the Strengths and Difficulties Questionnaire is scored in a three-point scale: 0=It is invalid, 1=it is somewhat valid, 2=it is definitely valid. The first 4 scales, if added together, provide us with the score of the overall difficulties (0-40). In its expanded form, further criteria regarding the evaluation of difficulties in children are included, which are completed by the parents and the teachers. Additionally, the effect of the difficulties is investigated, their inveteracy, the

children's disfunction and the burden the parents experience. The questionnaire has been translated in over than 80 languages (Goodman, 1999) and it has been used in a lot of researches worldwide. Its standardized form ensures a significant level of validity and reliability (Goodman, 1997). The technique of participant observation was also used in our study. The recording was done in the form of a diary. In the alternative, video recording and photography were used in some of the interventions after the consent of the parents. Someone's presence as a critical friend is often observed in an action research. The role of the critical friend is mainly supportive in the collection of data, the stage of evaluation, self-reflection or wherever the members of the team consider that they need his help (Zuber-Skerritt, 1996). The role of critical friend in our team was undertaken by an upper class woman of the Faculty of Theatre Studies, of the University of Peloponnese.

**Interventions:** The interventions were based on the principles of Drama in Education including creative activities, cooperative games, dramatization, stories, improvisation and process drama (Spolin, 1986). Through the activities particular emphasis was given on the process of interaction between participants and less emphasis on their performance. The structure of the interventions involves three stages of development. In the first stage games are included aiming at the acquaintance between children, warming-up, motivation of the participants and creation of a pleasant atmosphere (Cattanach, 1996 ; Tsiaras, 2016). The games are usually short and aim at developing the psychosocial and communicative skills of the children. At the same time, this is the stage in which the preparation of the team takes place, so that it comes in contact with the dramatic arts (Mavroudis & Kondoyianni, 2020; Tsiaras, 2016). After that follows the stage of dramatization, creation of roles and situations, where the processing of the theme that has been selected by the drama animators takes place. In this stage, themes, ideas and emotions are explored and processed through the dramatic techniques (Cattanach, 1996). The children impersonate roles, improvise, recognize otherness and they are called to find solutions. In this stage several items, materials, stage sets, musical instruments are used by the children and animators, so as that an artistic

form is given in their game (Bolton, 2007). In the third stage, the evaluation of the intervention takes place by the team itself. The children express their opinions on the outcome of the team through the various activities (Tsiaras, 2016). The main aim of the interventions was the development of the basic social skills, which are necessary for the children's acclimation to their social environment. Specifically, the interventions aimed to: the eye contact between participants, improvement of concentration, hearing of others, mutual assistance, verbal and non-verbal communication, initiation of conversation and discussion, social exchange and cooperation, recognition, enrichment and expression of emotions, problem solving (Bolton, 2007; Cattanach, 1996 ;Mavroudis & Kondoyianni, 2020; Stratou &Tsiaras, 2019).

## Results

For the statistical analysis of the data gathered from the answers of the questionnaires administered to the parents the statistical software SPSS was used.

For the needs of the present research a check was carried out on the reliability of the Strengths and Difficulties questionnaire (Goodman, 1997). The check was carried out by calculating the values of Cronbach's alpha for each scale. (Table.1). For the scale "Pro-social behavior" it was found that  $\alpha=0.810$ , a value which is quite high and suggests high reliability. For the rest of the scales the following were found: "Emotional Problems"  $\alpha=0.546$ , "Behavior Problems"  $\alpha=0.310$ , "Hyperactivity"  $\alpha=0.405$ , "Problems with Peers"  $\alpha=0.633$ , "Impact on Everyday Life"  $\alpha=0.532$ .

A test was conducted by using parametric t-test in order to check as to which extent the intervention had a significant impact on the children's skills and behavior. Specifically, it was tested if the means of the scores of each category BEFORE and AFTER the intervention program were different for the designated confidence levels.

According to the above results, statistically significant differences emerge in a 95% confidence level ( $p$ -value (Sig)  $<\alpha=0.05$ ) for the indexes (scores): sum of problems, behavior problems, impact of problems in the child's everyday life. Moreover, statistically significant differences emerge in a 90% confidence level ( $\alpha=0.05 < p$ -

value (Sig)  $<\alpha=0.10$ ) for the indexes (scores): hyperactivity problems, problems with peers, politeness and offer to help. However, no statistically significant difference emerges for the score associated with emotional problems (p-value (Sig) = 0.859 $\approx$ 1).

From the above results, it turns out that the intervention had a positive impact and led to statistically significant differences in most sectors (either in 95% or 90% confidence level). The only sector in which, based on the results, no statistically significant difference emerges due to intervention is the score associated with emotional; problems (too high p-value).

The data from participant observation were a source of valuable information for the outlining of the broader benefits that emerged from the participation of children with Autism Spectrum Disorders in the program of Drama in Education.

Gradually, the participants improved the way they approached others, they showed interest towards the other participants and managed to share their special interests (Lego, cars e.t.c.). They followed the rules of the games as well as the social rules of the team they had been assigned to at the beginning of the program. They felt comfortable with body contact, developed skills in initiating and maintaining a conversation, showed improvement in concentration and eye contact as well as in understanding and expression of feelings. Finally, team cooperation and decision making without the emergence of problematic actions were observed. Notable was the team writing of books on the occasion of an action. It would have been an omission not to mention the attempt in presenting a small improvised performance at the end of the interventions.

**Table 1. Means and standard deviations of the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997).**

Control Team (N=10)	Before		After		Deviation		t	p
	M	SD	M	SD	M	SD		
Sum of Problems	15.00	4.922	11.40	3.748	-3.60	3.806	-2.991	0.015
Emotional Problems	3.00	2.055	2.90	1.663	-0.10	1.729	-0.183	0.859
Behavior Problems	2.90	1.449	1.60	0.966	-1.30	1.16	-3.545	0.006
Hyperactivity	4.70	2.111	3.80	1.687	-0.90	1.524	-1.868	0.095

Problems with peers	4.40	2.797	3.10	1.663	-1.30	1.947	-2.112	0.064
Positive Social Behavior	5.50	2.915	6.70	1.418	1.20	1.989	1.908	0.089
Impact on Everyday Life	3.33	1.732	1.56	1.236	-1.78	1.202	-4.438	0.002

## Discussion

Both quantitative and qualitative results of the research showed the effectiveness of the interventions through Drama in Education in the development and improvement of social skills in children with Asperger Syndrome. It is also worth noting that, despite the fact that the participation of ten children in this research comprises a small sample, the sample is bigger than a lot of researches concerning children with ASD. In a critical study of ten researches that examined interventions in the social skills in children with Asperger Syndrome or High Functionality Autism only three researches contain a sample larger than ten participants (Rao, Beidel, & Murray, 2008: 358). Kempe & Tissot support in one of their researches that in classes with fewer children, more chances are given for the development of social skills (Kempe, & Tissot, 2012).

Through dramatic techniques the participants developed and improved social skills such as politeness and offer to help. O' Sullivan (2015) supports that the activities used in drama and particularly the role-playing games effectively help children cooperate for a common goal. Kempe & Tissot (2012) state that through drama and the process of interaction a safe place is created for the development of social skills in individuals with ASD. Specifically, they found that techniques such

as improvisation, narration, masks, puppets, creative writing contribute to the development of social and creative skills in children with ASD (Kempe, & Tissot, 2012).

Similar results are found in the study of Guli, et al., (2013) where the effectiveness of an innovative Social Competence Intervention Program was explored, which is based on creative drama and addresses children with ASD, at the ages 8 to 14. The findings of the study showed that the participants exhibited considerable improvement in social skills and generally in their social functionality in relation to the control team.

Furthermore, in our study statistically significant changes were found in the positive social interactions and behavior problems. These results confirm a series of studies and researches in the literature. Corbett and his partners (Corbett et al., 2011) explored the effectiveness of the SENSE THEATRE program in 8 individuals with ASD and 8 normally developing children at the ages 6-17 years. The results unveiled that, through the activities of drama, children with ASD showed great improvements in social perception skills, increase in empathy and communication between children with ASD and the normally developing children as well as reduction of stress and stress between participants.

In the current study, it is also evident that, through Drama in Education, children with ASD reduced their hyperactivity. According to D'Amico, Lalonde & Snow (2015), problematic behaviors, hyperactivity, attention deficit negatively affect the ability of children with ASD to focus on school assignments and finish them, as well as follow the teacher's instructions. Overall, these behaviors can affect their learning, academic success and acclimation to the school. Therefore, researchers claim that interventions based on dramatic techniques can help children in adjusting the symptoms of hyperactivity and attention deficit as well as their interpersonal relationships (D' Amico, Lalonde, & Snow, 2015).

An interesting finding is that parents through the Strengths and Difficulties Questionnaire note statistically significant changes in the participants' everyday life. This result is further confirmed by the research of Guli, et al., (2013) in which both parents and teachers observed positive social behavior in natural environments such as the home, the school, the playground, the gym, the canteen. According to D' Amico, Lalonde & Snow (2015), behaviors that involve externalization issues (e.g. outbursts or anger, the individual obeying, scolding, mocking, lying, stealing etc.), Autism Spectrum behaviors (such as non-functional routines) and hyperactivity/attention deficit problems are observable by the parents and teachers in comparison with other problematic behaviors such as the internalization of emotions.

In the quantitative analysis of our research, no statistically significant difference was observed in the participants' emotional problems. This finding is in contrast with other researches as well as with our qualitative results that show the multiple benefits of drama in all skill areas. Lerner, Mikami & Levine (2011) evaluated an intervention called Socio-Dramatic Affective-Relational Intervention, in which 17 children aged 11 to 17 with Asperger syndrome participated, and they found that the individuals who participated showed considerable improvement in social assertion and detection of emotion.

**Limitations:** This particular study had methodological limitations too. One limitation was that the simple random sampling method was not used in the study, but the purposive sampling

method due to the accessibility of the researcher to that specific children population. The results of this particular study cannot be generalized, they simply add new evidence to the international literature, since they are based on other research attempts. Moreover, important limitations were the small size of the sample (N=10) and the lack of a control team in order for the comparison of results to happen.

However, despite these limitations, our research study can be used as a base for further research especially in the population of Greek children with AS. Additionally, its results can contribute significantly to the design of interventions and Drama in Education programs both at schools and at clinical places or the community.

**Conclusions:** Additionally, the qualitative results from the participant observation validate the effectiveness of interventions in the development of social skills in children. It was thoroughly observed that repetition of some techniques and games worked positively towards the acquisition of rules and necessary skills. Similarly, Kempe & Tissot (2012) state that the teaching of new skills in students that require additional support may need constant repetition of activities and games with basic notions.

At the same time, the qualitative results of the research indicated that the participants widely expressed the feeling of interest between them and developed their cooperation skills to a significant extent. They improved their active hearing and learnt to wait for their turn. The interactions between children became creative, cooperative and mutual. The participants positively surprised us mainly in role-playing games, where they had to solve some issue or problem that had occurred, by using the appropriate expressions as well as the appropriate social signals.

The above qualitative findings are backed by the literature who specifically mentions that drama activities contribute to the teaching of the appropriate body language, facial expressions and voice tone, and provide roles for the individual with Asperger Syndrome to impersonate and practice how to react in specific situations, such as when he is disturbed or teased.



**Perspectives:** The results of our research show that Drama in Education can be used for interventions in children with deficits in their social skills, and they add significant evidence in the literature about its use in individuals with Asperger Syndrome. However, better understanding of the peculiar nature of ASD is deemed necessary in the future, both from the teachers and from the mental health experts. More research is definitely required on the long-term effects of Drama in Education as an intervention for social skills and social interaction in children with ASD, in order for the generalization and duration of the effects in other natural environments to be determined. Furthermore, the designing of Drama in Education interventions is deemed necessary, with the aim of a rounded development of skills in children with ASD in mental health places, at school as well as in the community by specifically trained personnel.

In conclusion, the sample of results of our research constitutes a trigger for encouragement of future systematic researches about the contribution of Drama in Education in children with Autism Spectrum Disorders.

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