



The Effectiveness of Puppet Play Therapy On Increasing Communication Skills Through Social Stories for Children with Autism in Rasht

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ARTICLE INFO	ABSTRACT
<p><i>Received: 18 October 2022</i></p> <p><i>Reviewed: 26 October 2022</i></p> <p><i>Revised: 30 December 2022</i></p> <p><i>Accept: 12 January 2023</i></p>	<p>Purpose: Autism is a neuro-developmental disorder that appears in the first three years of life and its main characteristic is a defect in communication and social interactions. Autism affects people's understanding of the world and their interactions with people. Communication skills are one of the most important issues for patients with this disorder, which itself requires therapeutic intervention. The purpose of this research is to determine the effectiveness of puppet play therapy on increasing communication skills through social stories for children with autism in Rasht.</p> <p>Methodology: The current research is practical in terms of its purpose and semi-experimental in terms of data collection. The statistical population of the present study is children from autism schools in Rasht, all of whom were diagnosed with autism by a psychiatrist. A certain number of them were selected as the study sample. 15 of them were randomly selected for the experimental and control groups. Communication skills questionnaires were administered simultaneously for both groups. Then, 16 sessions of training program were implemented in a 45-minute class period for the experimental group, and the control group did not receive any training. Then the mentioned questionnaire was implemented again for the both groups. Multivariate covariance analysis was used to analyze the research findings and test the research hypotheses.</p> <p>Findings: The obtained results show that according to the evaluation of parents' and teachers' opinions regarding the comparison of the communication skills scores of these children, the level of communication skills scores is much higher than the control group, which means that the mentioned training course was effective. According the findings, it can be said that the puppet play therapy is effective and useful in increasing the communication skills of autistic children with the help of social stories. It is also effective in improving cooperation, assertiveness and self-control, so this approach can be used to support the communication skills of autistic children.</p> <p>Originality/Value: This study was conducted in order to investigate the effect of puppet play therapy on increasing the communication skills of children with autism, through the use of social stories in autism schools of Rasht city, and the results indicate the improvement of their communication skills and the acceptable effectiveness of this method.</p>
<p>Keywords: <i>Puppet Play Therapy, Communication Skills, Social Stories, Autism.</i></p>	

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1. Introduction

Childhood is one of the most sensitive and decisive periods of human life, because the basis of moral and personality characteristics of a person is laid at the beginning of this period, especially in the early years of life. The main basis of human personality formation is related to the first 7 years of life. The sensitive period that the children spend with their parents and learn many concepts from them, especially mothers, and model their personality according to the way of parent's treatment. Children make up a major part of the world's population, so that in developing countries, their share of the total population reaches almost 50% [1].

Family as the most important social group of which an autistic child is a member, plays a significant role in the evolution of their social and emotional cognitive structures. The family's role in the education of exceptional and especially autistic children is very serious and important. For example, a family with an autistic child needs different information and skills than a family with a normal child [2].

As international statistics show, in any society, more than ten percent of children were born with different characteristics than other children, and they are psychologically different from normal children. This group of children is the attention of the education authorities of all countries and so far special programs have been developed for their education. Of course, for each group of these children, special planning should be done according to their physical condition, and special methods should be implemented for their education. But it should be considered about all of them that, they have benefited from human rights just like other people and in this respect they are no different from other children [3]. Research shows that socialization and the ability to interact with others is very important in life. In other words, communicating with others requires the development of social skills. However, autistic children have major deficits in social skills. numerous researches show that autistic people have major problems in social participation, initiating interactions with others and responding to interactions with others. These social limitations cause major problems in their daily life [4]. Unfortunately, the deficiency in social skills not only hinders the growth of these children, but also causes the lack of acceptance and rejection of these children by friends, peers and adults and leads to their loneliness and isolation. Also, other harmful consequences of deficiencies in social skills include poor academic progress, social failures, anxiety, depression, barriers to social communication, and social isolation [5]. In other words, social skills can be the basis of behavioral and communication disorders. Children who avoid social contact with others or are not accepted by their peers are at risk of various behavioral-emotional problems and have difficulty in academic progress [6]. Therefore, socialization and the ability to interact with others is very important in life, and autistic children have serious deficiencies in this field. For this reason, these children need support and training in the field of social skills so that they can acquire the necessary social skills [7].

Therefore, it is very necessary to design and implement suitable intervention methods and programs to improve their social skills. The methods that are used today are the External Balance Assessment (EBA), Methodology and play therapy. These methods mostly concentrate on teaching cognitive concepts to children, and the Pragmatic Experiential Method (PEX), focuses on communicating the child with the environment and meeting their needs. Play therapy is a child therapy method which is used to treat children's problems and issues. Although the applications of play therapy for children with problems have been emphasized in various articles, the multiplicity of these methods has led to the

question that which one of them can be more effective and lasting in the improvement of these children [8].

One of the functions of play in the growth and development of children is its therapeutic role. Breaking down the resistance in the child, creating worthiness and ability, creative thinking, emotional discharge, role playing, imagination, symbolic education, creating and promoting relationship and attachment, positive emotions and overcoming fears related to growth are among the benefits of play therapy for children. The play, with its therapeutic role, provides a hypothesis for the children so that they can vent their concerns and dissatisfactions from the environment and express their emotions [9].

In this way, the counselor teaches the child new skills and encourages the child, while focusing on the child's thoughts, feelings, fantasies, and environment, and using adaptive strategies and the counselor also uses adaptive strategies. Many researches have been done regarding the efficiency and effectiveness of story therapy in children. Chung & Chen, which was conducted to investigate the effectiveness of story therapy in increasing the social skills of preschool children, reported a significant reduction in social inadequacy and storytelling ability in teaching children's social skills [10]. Ayuningtyas et al., consider storytelling-based education as an effective method in improving social skills and solving children's externalized problems [11].

The possibility that puppet play therapy as a therapeutic technique can have an effective role in the treatment and control of autistic children's disorder is strengthened according to the mentioned contents, literature review and by investigating the conducted researches in the field of play therapy centered on puppet play and its effectiveness. Especially, the research on various play therapy methods and its effectiveness on children with autistic disorder is useful because it does not have the side effects of drugs. Therefore, in this research, the effectiveness of puppet play therapy centered on social stories on increasing the social skills of autistic children aged 7 to 14 in Rasht, will be investigated.

Researches have proven that autistic children are more likely to suffer from mental health disorders than normal people, because many psychological conditions are associated with excesses in adaptive skills and children with autism often have deficits in social and academic skills. Investigating the nature of these social and academic skills and their relationship with mental health disorders are important, because they are necessary and important in designing prevention or treatment programs for mental health disorders. Disturbance in these skills is related to a wide range of problems such as delinquency, social isolation and rejection, aggression and social behaviors, challenging behaviors and running away from school in teenagers. Therefore, the evaluation and treatment of these children in different dimensions is the main focus of clinical approaches and experimental studies [12].

2. Methodological approach

The current research is a type of applied research. The research method in this article consists of a semi-experimental method, pre-test - post-test with a control group. The statistical population of this article was 30 children between the ages of 7 and 14 from Rasht's autism schools, all of whom were diagnosed with autism by a psychiatrist. Randomly selected children were divided into two experimental and control groups and the questionnaire of social skills was completed in two monitoring sections (parents and teachers). For the experimental group, puppet play therapy sessions centered on social stories were held by the researcher. At the end of the counseling session and holding the meetings, the post-test was implemented again for the mentioned groups and the results were compared. In order to analyze the

data according to the proposed hypotheses and research variables, descriptive statistics including frequency, average and standard deviation and inferential statistics including multivariate covariance analysis were used. Data were analyzed through SPSS 18 statistical software

2.1. Research tool

In this article, Gresham Valiot's social skills questionnaire (1990) has been used, that the internal reliability of the scale for the questionnaire related to teachers is from 0.74 to 0.95. Also, the total reliability of this scale was 0.81 after checking for two weeks on 10 people. This scale has consistent and favorable validity and its diagnostic and therapeutic use for children has been confirmed in several studies.

The questionnaire for students includes two forms for the 3rd to 6th grades and the 7th to 12th grades. The questionnaire for teachers and parents has two general scales of social skills and behavioral problems. While the questionnaire for students only examines social skills, this questionnaire has 40 three-choice questions (never, sometimes and often). The content of this scale includes two main parts of social skills and behavioral problems, which has 30 items in the field of social skills and 10 items in the field of behavioral problems. In this article, its social skill part, which includes behaviors such as cooperation, assertiveness, and self-control, has been used. And the behavioral skills that include scales of external behavior and internal behavior and hyperactivity have not been used.

2.2. Puppet play therapy centered on social stories

Puppet play therapy centered on social stories took place during 16 sessions of 45 minutes, at least two sessions a week. The tools used during the intervention were a play house, cloth hand puppets of boy, girl, man, old man, donkey, bear, cat, dog, chicken, sheep, and finger puppets of farm animals and forest animals, as well as small balls and etc., which were used to tell and perform social stories.

- **The first, second and third session**

In order to create a proper and effective relationship with autistic children it is very important that the play environment and researcher will be accepted by them. For this reason, in the first three sessions, children entered the playroom and were allowed to use and touch the dolls and play equipment. In these three sessions, the researcher used dolls to communicate with children.

- **From the fourth session to the sixteenth session**

From the third session onwards, every three sessions, a social story written based on the instructions of Carl Gray (2000), and children's needs after examining their questionnaire, was narrated by a doll house, hand puppets and toys. In the first session, the story was told with dolls, in the second session, the child him/herself was added to the story, and in the third session, the children answered the researcher's questions using dolls. It should be mentioned that the children's stories were different since the social stories of each child were written according to him/her target behavior and social problems and according to the instructions of Gray (2000). Here we are going to tell four stories as examples of the stories told and that all these stories were first performed by dolls, then by children, and in the third session, the child was asked to perform the desired action or speech (such as looking).

2.3. Content of stories

The first social story: My name is Ahmed. I come to school every day. Sometimes when I see my friend, I don't look at him. When I do these things, my friend gets upset. I try to look at my friend and smile at him.

The second social story: My name is Ahmed. I am in the second grade and I go to the yard during break time. Sometimes I am alone in the yard. When I am alone, our Schoolmaster gets upset. I try to go to my friend Ali and play with him.

The third social story: My name is Ahmed, I am in the second grade and I sit next to Saeed in the class. Sometimes I speak loudly, the teacher gets upset and angry. I try not to talk loudly anymore and not to leave the class without permission.

The fourth social story: My name is Ahmed. I go to a party with my father. Sometimes I don't look at others and I don't shake hands with them, and my father gets very upset. I try to look at other people at the party and shake hands with them.

3. Findings

The first sub-hypothesis: The puppet play therapy with the help of social stories is effective in increasing the cooperation of autistic children in Rasht city.

3.1. The first part: By parent's judgment

Table 1. Covariance analysis

	sum of squares	Degrees of freedom	Average	F	Significance
Modified model	729/264	2	364/632	81/095	.000
Intercept	98/128	1	98/128	21/824	.000
pre-exam	233/131	1	233/131	51/849	.000
group	624/942	1	624/942	138/988	.000
error	121/402	27	4/496		
Total	13664/000	30			
modified total	850/667	29			

* Dependent variable: post-test

The difference is significant because the significance level of the group is less than 0.05. The result of the covariance analysis test shows that with 95% certainty it can be said that, according to the opinions of autistic children's parents, after controlling the pre-test scores and also taking into account the post-test scores, the children of the experimental group had much higher cooperation scores than the control group, which means that the training course was effective. The table of adjusted averages shows this difference in grades.

Table 2. Adjusted averages of covariance analysis

	Adjusted average	The standard deviation	95% interval certainty	
			lower bound	upper bound
Control	15/997	0/554	14/860	17/133
examination	25/336	0.554	24/200	26/473

According to the results of the table, P-value is less than 0.5, so the difference is significant.

3.2. The second part: By teachers' judgment

Table 3. Covariance analysis

	sum of squares	Degrees of freedom	Average	F	Significance
Modified model	702/505	2	351/252	67/327	.000
Intercept	157/450	1	157/450	30/180	.000
pre-exam	164/871	1	164/871	31/602	.000
group	649/153	1	649/153	124/428	.000
error	140/862	27	5/217		
Total	14369/000	30			
modified total	843/367	29			

* Dependent variable: post-test

The difference is significant because the significance level of the group is less than 0.05. The result of the covariance analysis test shows that, according to the opinions of autistic children's teachers, after controlling the pre-test scores and taking into account the post-test scores, the children of the experimental group had much higher cooperation scores than the control group, which means that the training course was effective. The table of adjusted averages shows this difference in grades.

Table 4. Adjusted averages of covariance analysis

	Adjusted average	The standard deviation	95% interval certainty	
			lower bound	upper bound
Control	16/460	0/598	15/234	17/686
examination	26/007	0/598	24/781	27/233

According to the results of the table, P-value is less than 0.5, so the difference is significant.

The second sub-hypothesis: The puppet play therapy with the help of social stories is effective in increasing assertiveness of autistic children in Rasht city.

3.3. The first part: By parent's judgment

Table 5. Covariance analysis

	sum of squares	Degrees of freedom	Average	F	Significance
Modified model	610/690	2	305/345	69/802	.000
Intercept	114/445	1	114/445	26/162	.000
pre-exam	263/890	1	263/890	60/325	.000
group	520/665	1	520/665	119/024	.000
error	118/110	27	4/374		
Total	15514/00	30			
modified total	728/80	29			

* Dependent variable: post-test

The difference is significant because the significance level of the group is less than 0.05. The result of the covariance analysis test shows that with 95% certainty it can be said that, according to the opinions of autistic children's parents, after controlling the pre-test scores, and also considering the post-test scores, the children of the experimental group had much higher assertiveness scores than the control group, which means that the training course was effective. The table of adjusted averages shows this difference in grades.

Table 6. Adjusted averages of covariance analysis

	Adjusted average	The standard deviation	95% interval certainty	
			lower bound	upper bound
Control	17/806	0/555	16/668	18/945
examination	26/594	0/555	25/455	27/4732

According to the results of the table, P-value is less than 0.5, so the difference is significant.

3.4. The second part: By teachers' judgment

Table 7. Covariance analysis

	sum of squares	Degrees of freedom	Average	F	Significance
Modified model	696/236	2	348/118	36/995	.000
Intercept	100/213	1	100/213	10/650	.003
pre-exam	382/603	1	382/603	40/660	.000
group	541/374	1	541/374	57/533	.000
error	254/064	27	9/410		
Total	11441/00	30			
modified total	950/30	29			

* Dependent variable: post-test

The difference is significant because the significance level of the group is less than 0.05. The result of the covariance analysis test shows that, according to the opinions of autistic children's teachers, after controlling the pre-test scores and also taking into account the post-test scores, the children of the experimental group had far higher assertiveness scores than the control group, which means that the training course was effective. The table of adjusted averages shows this difference in grades.

Table 8. Adjusted averages of covariance analysis

	Adjusted average	The standard deviation	95% interval certainty	
			lower bound	upper bound
Control	14/188	0/817	12/511	15/864
examination	23/212	0/817	21/536	24/889

According to the results of the table, P-value is less than 0.5, so the difference is significant

The third sub-hypothesis: The puppet play therapy with the help of social stories is effective in increasing the assertiveness of autistic children in Rasht city.

3.5. The first part: By parent's judgment

Table 9. Covariance analysis

	sum of squares	Degrees of freedom	Average	F	Significance
Modified model	584/686	2	292/343	52/349	.000
Intercept	76/143	1	76/143	13/635	.000
pre-exam	120/552	1	120/552	21/587	.000
group	579/631	1	579/631	103/793	.000
error	150/781	27	5/584		
Total	11414/00	30			
modified total	735/467	29			

* Dependent variable: post-test

The difference is significant because the significance level of the group is less than 0.05. The result of the covariance analysis test shows that with 95% certainty it can be said that, according to the opinions of autistic children's parents, after controlling the pre-test scores, and also considering the post-test scores, the children of the experimental group had much higher self-control scores than the control group, which means that the training course was effective. The table of adjusted averages shows this difference in grades.

Table 10. Adjusted averages of covariance analysis

	Adjusted average	The standard deviation	95% interval certainty	
			lower bound	upper bound
Control	13/664	0/669	12/292	15/036
examination	24/069	0/669	22/698	25/441

According to the results of the table, P-value is less than 0.5, so the difference is significant.

3.6. The second part: By teachers' judgment

Table 11. Covariance analysis

	sum of squares	Degrees of freedom	Average	F	Significance
Modified model	576/248	2	288/124	25/166	.000
Intercept	41/228	1	41/228	3/601	.0068
pre-exam	180/215	1	180/215	15/741	.000
group	554/660	1	554/660	48/447	.000
error	309/119	27	11/449		
Total	11451/00	30			
modified total	885/367	29			

* Dependent variable: post-test

The difference is significant because the significance level of the group is less than 0.05. The result of the covariance analysis test shows that, according to the opinions of autistic children's teachers, after controlling the pre-test scores and taking into account the post-test scores, the children of the experimental group had much higher decisiveness scores than the control group, which means that the training course was effective. The Table of adjusted averages shows this difference in grades.

Table 12. adjusted averages of covariance analysis

	Adjusted average	The standard deviation	95% interval certainty	
			lower bound	upper bound
Control	14/101	0/912	12/231	15/971
examination	23/432	0.912	21/562	25/303

According to the results of the table, P-value is less than 0.5, so the difference is significant

4. Conclusion

The results showed that puppet play therapy with the help of social stories had a significant effect on increasing the communication skills of autistic children. So that it was also effective in increasing their cooperation, assertiveness and self-control. it should be said that in this method, social stories explain confusing situations that are incomprehensible to autistic children and teach them how to behave in different situations and in this way, it increases the improvement of their communication skills.

One of the important issues in autistic children is the mind theory and their failure in understanding the thoughts and feelings of other people which can be corrected by social stories. Perspective sentences are used in social stories. These sentences teach the autistic child how other people's views, thoughts and feelings are different from each other and every behavior causes different feelings. Social stories help autistic children to recognize signs and facial expressions and it makes them able to respond based on these signs. In fact, through the pictures and symbols of the stories, it is explained to the autistic child how to respond to other people based on the conditions and the situation and to perform the behavior that is suitable for the same conditions. therefore, social stories provide them with the opportunity to understand different points of view, and in this way, they develop cognitive and emotional abilities in these children.

In a general conclusion, it should be said that in order to reduce the problems related to the communication skills of children with autism, in addition to the general cultural, social and health development, the society needs to have useful and effective planning in the field of educational facilities, especially training courses for parents, coaches and teachers, as well as general courses for community members. Also, increasing the attractiveness of the treatment program in line with children's interests and increasing their participation is considered as a measure of the effectiveness of the treatment program. So, if attractive programs are provided, the child's desire to attend the puppet therapy playroom is clearly seen and it is the first place in the school that children are very interested in.

All this shows that autistic children have seen benefits and advantages in the puppet play therapy program centered on social stories, or that the appeal of this method was great for them because they were interested in being in that space. It is suggested to the authorities of exceptional education to use this method in order to achieve more effective communication and interaction. We believe that his method should be widely used throughout autism schools so that teachers can teach autistic children appropriate social behaviors.

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