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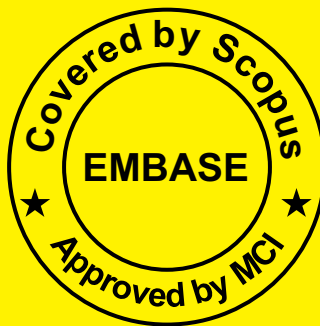
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# Implementation of Speech Therapy and Social Stories Increasing Social Interaction in Children with Autism

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## ABSTRACT

Autism is defined as developmental disorders with the main characteristics i.e. social interaction disorders, communication disorder and restricted imagination interest and ability whose symptoms begin to appear before a three-year-old child (Amanda, 2017). *Social Skill Training*, one of them is *social stories therapy* become important to be owned by children with ASD (*Autism Spectrum Disorder*) so that they can behave in accordance to the social rule. The study aimed to analyze the differences between the influence of speech therapy and social stories in increasing social interaction on children with autism. The research method was a pre-experimental study with a pre and post-test with control group design. This study was divided into two groups and observed in two stages. After the data was fulfilled then an analytical test was used *paired t-test* and *independent t-test*. The results found that the influence of speech therapy in increasing social interaction  $p = 0,004$ ,  $p < \alpha = 0,005$ . It was obtained the influence of *social stories* therapy as well in increasing social interaction  $p = 0,004$ ,  $p < \alpha = 0,005$ . There was a significant difference between obtaining speech therapy and social stories in increasing social interaction on children with autism. The speech therapy and social stories were necessary to improve their social interaction that it could increase children's with autism ability to interact with their surrounding social environment.

**Keywords:** *Speech Therapy, Social Stories Therapy, Social Interaction, Children with Autism*

## Introduction

According to Baron S and Cohen (2009), autism is a state of person since he/she had been born or toddler made him/her could not form social relation or normal communication, in addition, he/she overcomes trouble to understand anything from other people's point of view<sup>1</sup>. As a result, they are isolated from others and go into repetitive world, activity, and obsessive desire as well as difficult to develop their ability to create interaction and relation<sup>2</sup>. There are some therapy methods used to overcome social interaction disorder on children with autism either by medical or non- medical therapy<sup>3</sup>. One of medical therapy often used in resource center is

speech therapy to improve their social interaction. The speech therapy is applied to train the speaking ability of children's with autism<sup>4</sup>.

Gresham and Kern (2004) in Raymond (2008) stated that in order to create effective social skills training, students who observe must be able to pay attention to whom as models of behavior, able to remember what they had been observed, be able to imitate what they have seen, and have the motivation to engage in new behavior<sup>5</sup>. Based on the latest theory, social skills training has become one of the most efficient therapies for autistic healing, especially in the treatment of social stories focusing on methods of giving examples of social life through a story, so that it indirectly stimulates children to follow the main character's behavior<sup>6</sup>. Social therapy stories are a new therapeutic technique for autistic children, where therapists provide an overview of stories about people's culture that aim to help students who experience impaired social interaction of which aims at understanding social rules of the culture<sup>7</sup>.

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In some developing countries like Indonesia, children with autism can reach 66,000,805 people. According to data from the East Java Education Office in 2011 there were 388 SLBs of 13,159 students. In addition, there are 93 inclusive schools with students with special needs 1,476 children and 15% (221) of them are autistic children. Based on preliminary data from researchers at the Gresik District Resource Center in October 2016, there were 48 autistic children and 45% experiencing impaired social interaction. Based on the research results of Achmad C (2009) in the “Kasih Mama” therapy center, it was found that play and storytelling therapy could improve the abilities and social skills of children with autistic disorders <sup>7</sup>.

From the 50 children with autism who experienced social interactions disorder, 35 children had mild social interactions (70%). Social interaction on children with

autism who were left on an ongoing basis could have a negative impact on their life such as being isolated from the environment because they were happy with their own world but ignoring others around him <sup>8</sup>.

### Methodology

This research method was a pre-experimental study by designing pre- and post-test with the control group design. The sample was taken by purposive sampling technique that matches it according to specified inclusion criteria. The independent variable was speech therapy and social stories, while the dependent variable was the social interaction of children with autism. This study was divided into two groups and observed in two glasses. After the data was fulfilled, then the analytical test was carried out using the paired t-test and independent t-test<sup>9</sup>.

### Research Result

#### Effect of Speech Therapy in Improving Social Interaction on Children with Autism

**Table 1: Effect of Speech Therapy in Improving Social Interaction on Children with Autism in May-October 2017 at Resource Center**

Variable	Group	Mean	SD	Min-Max	t	p-value
Social Interaction	Before and After Treatment	7,000 13,750	1,82574 1,25831	5,0-9,0 12,0-15,0	-7,905	0,004

The results showed that the average score of social interaction in the experimental group carried out speech therapy before nurse competency test was 7.00 and after the test given was 13.750 so that its points increased 6.75. The Result of the statistic was  $p\text{-value} = 0,004$  and  $\alpha = 0,05$  which showed  $p\text{ value} < \alpha$  or  $p\text{ value} < 0,05$ , it meant that  $H_0$  was rejected so that the speech therapy affected to Improvisation social interaction on children with autism.

#### Effect of Social Story Therapy in Improving Social Interaction on Children with Autism

**Table 2: Effect of Social Story Therapy in Improving Social Interaction on Children with Autism From May-October 2017 at Resource Center**

Variable	Group	Mean	SD	Min-Max	T	p-value
Social Interaction	Control Before After	7,000 10,250	2,16025 1,89297	4,0-9,0 9,0-130	-3,6	0,035

The results showed that the average score of social interaction in the control group treated with social stories before nurse competency test was 7.00 and after doing the test was 10.250 so it increased 3.25 points. The statistic test result was  $p\text{-value} = 0,035$  and  $\alpha = 0,05$  that showed  $p\text{ value} < \alpha$  or  $p\text{ value} < 0,05$ , it meant that  $H_0$  was rejected so that the social story therapy affected to improve social interaction on children with autism.

## The Different Between Implementation of Speech and Social Stories Therapy in Improving Social Interaction on Children with Autism

**Tabel 3: The Different Between Implementation of Speech and Social Stories Therapy in Improving Social Interaction on Children with Autism From May-October 2017 at Resource Center**

Variable	N	Mean	SD	T	p-value
Social Interaction					
Speech Group	4	13,75	1,258	3,080	0,022
Social Story Group	4	10,25	1,893		

The statistic result showed that independent test of  $p\text{-value} = 0,022$  dan  $\alpha = 0,005$  depicted that  $p\text{ value} < \alpha$  or  $p\text{ value} < 0,05$  which meant  $H_0$  was rejected so that there was a significant difference in social interaction between experimental and control groups. The result of social Interaction on the experimental group after and before carrying out speech therapy treatment showed higher than social stories group.

### Discussion

**Effect of Speech Therapy in Improving Social Interaction on Children with Autism:** The statistical test resulted in the effect of speech therapy in increasing social interaction on children with autism. The results of the analysis obtained the minimum-maximum value in the experimental group experienced an increase in social interaction after speech therapy. There were several therapeutic methods that could be used in dealing with social interaction disorder on children with autism both through medical therapy and non-medical therapy. One of non-medical therapy commonly used in resource centers was speech therapy to increase social interaction on children with autism. Speech therapy aimed to train the speaking ability of children with autism. Social interaction was influenced by several factors, i.e. motivation, gender, environment, value, background, and age <sup>10</sup>.

Before speech therapy, the level of social interaction ability of children with autism reached a minimum of 5 and a maximum of 9, because the characteristics of respondents were 5-12 years old. The phase of school children aged 5-12 years experienced various patterns of development such as intellectual, language, emotional, social, moral, motoric, and religious appreciation. At point no. 2 (they will care when their friends fall), 4 (they can greet others), 8 (they have good attention), 15 (they are sensitive to other people's feelings) and 20 (they care when their parents left), all respondents did not have those

abilities. After carrying out speech therapy, it increased their social interaction of children with autism that was a minimum score of 12 and a maximum of 15. This state could be seen from their achievement of social interaction values in points 4, 8 and 20, which were most children with autism could afford to greet others, to show good care and to provide care when parents left. The provision of speech therapy was carried out in 8x meetings using teaching aids so that it could stimulate the children to show and to tell things related to the picture in question. This speech therapy would train children with autism to communicate and speak. Moreover, their parents must be patient and should not give up in training them as it is not like training normal children <sup>11</sup>.

**Effect of Social Stories Therapy In Improving Social Interaction On Children with Autism:** The results of statistical tests showed that social stories therapy increased social interaction on children with autism. The results of the analysis obtained the minimum-maximum value in the control group got an increase in social interaction after the therapy, yet it was not too significant. The social therapy stories are a new therapeutic technique for children with autism done by therapists who provides a description of stories about community culture that aims to help students who experience social interaction disorder <sup>12</sup>. It aimed to understand the social rules of the culture of society. And it could be given once a week <sup>7</sup>.

Before implementing social stories therapy, the level of social interaction ability of children with autism reached a minimum score of 4 and a maximum score of 9. At point no. 2 (to care if friends fall), 4 (to be able to greet others), 6 (to want to budge), 9 (to want cooperating and not challenging, 13 (be able to share), 15 (be sensitive to the feelings of others) and 18 (gestures directed/focused), all respondents did not have the ability in that matter. After therapy social stories experienced improvement, the social interaction of children with autism reached a

minimum of 9 and a maximum of 14. It could be seen in the achievement of social interaction scores in point no. 4, 6, 9, 13 and 18, most of them were able to greet others, want to give in, work same and not challenging could share and gesture directed/focused.

Social therapy stories aim to increase social interaction on children with autism so that those who initially don't budge refuse to work together and challenge them eventually to budge and cooperate with friends<sup>13</sup>.

**Different Between Implementation of Speech Therapy and Social Stories in Improving Social Interaction on Children with Autism:** The results of the statistical analysis showed that there were significant differences in social interactions between experimental and control groups. The social interaction in the experimental group after speech therapy was higher than the control group.

Social interaction was a dynamic relationship, involving relationships between individuals, between groups and between individuals and groups. Two conditions for the occurrence of social interaction according to Gillin (2010) were the existence of social contact (social context) and social communication<sup>14</sup>. In the experimental group after speech therapy, most of the respondents were already at the stage of social communication which item no.5 indicated that all respondents had contact with other people and most children who experienced autism worked together and were not challenging. According to Pamoedji G (2007) The level of success in handling autism in children was not only dependent on the therapy process, but there were factors that could influence it, including role and involvement of parents in the treatment of children with autism, Teaching and education processes on them, their health conditions, their level of intelligence, their level of abnormalities (mild, moderate, severe) and their ages when first handled<sup>15 16</sup>.

### Conclusion

The results showed that speech therapy had an effect on increasing the social interaction of children with autism as well as social stories therapy and there were differences in speech therapy and social stories on social interactions in children with autism. The speech therapy and social stories were one alternative therapy that has many known benefits in the field of health. However, responding to speech had more influence in increasing

the social interaction of children with autism. For this reason, therapists at the Gresik Resource Center were advised to more optimally apply speech therapy in their implementation, especially on children with autism who experience social interaction disorder.

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**Ethical Clearance:** This study was approved by the Health Research Ethics Committee (KEPK) University Airlangga of Surabaya and the Regional Departement of Health (Gresik, Indonesia). All participants were provided with a participant information sheet written in Bahasa Indonesia, and they signed the consnt from prior to participating in the study

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