

## The Training of Self-Help Eating Ability of the Autism Spectrum Disorder Student using Social Reinforcement Intervention in Early Childhood

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### Article Info

#### History Articles

Received:  
November 2019  
Accepted:  
December 2019  
Published:  
January 2020

#### Keywords:

autistic,  
early childhood,  
self help,  
social reinforcement

#### DOI

<https://doi.org/10.15294/jpe.v11i3.36055>

### Abstract

The deficit of help-self ability is one of the characteristic of individuals with autism. The impact of low self-help ability can result in delays in the child's growth and development tasks. This research aimed to analyze the effectiveness of social reinforcement towards the self-help eating ability of autism students. The research method used was single subject research with the design A-B-A. The subject on this study was a male autism student in class B of Kindergarten Talenta Semarang. This research was divided into three phases namely baseline A1 (observation) for 5 sessions, intervention B for 8 sessions, social reinforcement intervention given in this phase in the form of verbal praise, soft touch, and so on. The last phase is Baseline A2 which lasts for 4 sessions. The data analysis used was the data analysis inside the condition and among the conditions. To measure the ability of self-help eating autistic students, used 15 performance indicators which include activities before eating, at mealtime, and after eating. The finding of indicator performance in this Baseline A1 phase which obtained the range of data 6- 4,9 , intervention B phase obtained the range of data 14-11, and the range of data in baseline A2 phase was 11-9. The tendency of the direction from baseline A1 phase to the intervention phase was flat then increased, meanwhile the intervention phase to the baseline A2 was increased then decreased. However the result of the changing of the level in baseline A1 phase to the intervention +5, meanwhile the intervention phase to the baseline A2 -3. Based on that data analysis result, it can be concluded that the treatment of social reinforcement intervention had the long-term effectiveness towards the self-help ability of autism student as long as it is maintained and conducted optimally.

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[p-ISSN 2252-6404](#)

[e-ISSN 2502-4515](#)

## INTRODUCTION

Through the good development process, many things can be reached by children, one of them is strongly related to the independence. Therefore, the independence related to the personal development aspect should be trained as early as possible to make the further development process goes well. Therefore, as the effort of the independence development of early childhood, the skill which is called as “self-help” is totally needed to support the process. It is related to the statement of Parker (2006) which states independence is related to the independent and creative personal which can make an individual adapts and manages all the needs. The lack of self-help ability in children besides producing personal negative effect, also can possibly cause stress of the parents. The previous research Keenan (2010) also mention the behavior of children which is difficult. It considers that parents as deficit manifestation in the social skill and communication of their children and the lack of the self-help ability.

In some previous researches, it is known that the patient of Autism Spectrum Disorder (ASD) has deficit in some aspects. As stated by Carbone (2013) that social skill, cognitive skill, and language skill of most children with autism are failed in their development. According to Lucker (2009), it can be well understood that many children with autism will face significant difficulties in the development of self-help ability as the function of social deficit, behavior, and communication which decide neurological disturbance. According to steatment Flynn (2012) Individual with ASD frequently shows the deficit which is good in the social skill and the help-skill ability. Based on the description, it can be stated that the problem of the children with autism can be affected by motoric, cognitive, and emotional problems.

One of the components of help-self ability which is consistent to be conducted by children in the school environment is the ability to eat. The eating self-help ability has same stages from time by time. Therefore, Wantah (2007) Stated that the self-help eating ability of children is showed by

the activities such as; a) the ability in taking food; b) the ability to use spoon and fork; c) the ability to implement the polite eating way, and also; d) the ability to clean the table after eating.

An effort to achieve the ability to help themselves to eat in children with autism cannot be fulfilled by themselves. Interventions are needed to improve the self-help eating ability. Karsih (2012) in her research using the intervention method and the level of intelligence revealed an increase in autistic children self-help. So that the purpose of providing interventions in this study is as a training of self-help ability to eat in autistic children.

One approach that can be used as a training intervention for self-help ability is social reinforcement. Research related to social reinforcement was conducted Mustikawati (2018), in her study of a teenager with mild intellectual disability. The teenager got training to improve the abilities in bathing independently, especially in maintaining abilities that have been mastered and training abilities that were not yet available or demonstrated. In addition, the results of the study Murpratiwi (2018) prove that the reinforcement technique is effective in increasing children's skills in buttoning clothes independently. The purpose of social reinforcement si not only instilling targeted behavior, but also used as a reduction in undermined behavior. As in research by Putra (2014) In addition to cognitive abilities, successful social reinforcement can also be seen in reducing children's negative behavior.

The method of social reinforcement or reward is the gift or reinforcement of a behavior so that children want to continue to be and understand the concept. Reinforcement of this type refers to the reinforcement such as a smile, acceptance, praise, praise, and attention from others. Some researchers have compared the effectiveness of social reinforcement with other types of reinforcement. Previous research Terrell (1957) mentioned that children learn almost twice as fast when given responses like praise than candy prizes. The increase in the average number of completeness by children increases with the provision of social reinforcement

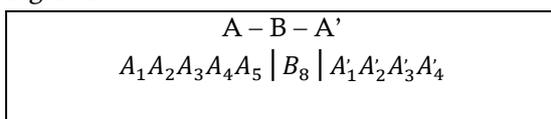
Mahanani (2017). From the mid-baby period, the responses of parents and other important adults form references that children use to ascertain whether their behavior is permitted, satisfying, or commendable.

Shadow teacher is chosen as a mediator for social reinforcement interventions because these environmental settings naturally occur in autistic children, so that the behavior modification process is easier to do. Supporting these efforts requires competence and knowledge about the child's social, emotional and cognitive characteristics. Through this background, this research tries to reveal about how the actual effect of giving social reinforcement on the self-help eating ability in children with autism.

## METHODS

The method used in this study was quantitative experiment with a single subject research approach. The research design used was A-B-A design. The design included the first A is the baseline A1 of the observation phase before the giving of an intervention, B is the phase of giving an intervention, while the last A is the baseline A2 of the last observation stage after giving an intervention Sunanto (2006).

The description of the single subject design by using of the A-B-A design as described in Figure 1.



**Figure 1.** A-B-A Research Design

Explanation:

- (A1) : Baseline -1 = initial condition of target's behavior before the giving of intervention was conducted in 5 sessions.
- (B) : Intervention = the condition of the intervention giving, with the implementation of Social reinforcers in the process of eating conducted in 8 sessions.
- (A2) : Baseline -2 = the repetition of initial condition after the giving of intervention conducted in 4 sessions.

The subject studied was a student of Kindergarten Talenta who has autism disorders aged 7 years with low self-help ability to eat. The mediator of social reinforcement intervention is

a shadow teacher who accompanies the subject in eating activities.

In implementing the intervention, social reinforcement will be paired with physical prompting. One positive result for giving prompting is to improve the quality of student learning outcomes Ambaryanti (2013). Furthermore, according to Miltenberger (2012) the prompting technique is one of technique which is mostly used to teach behavior and attitude to children. The use of prompting is also efficient in teaching daily life skills to children with moderate intellectual disability. Because the experiment needed is lesser so children can master those skills Sabielny (2014). The intervention to the subject was conducted in 8 sessions while the activities. In the stage of the reinforcement giving, it should be conducted immediately after the behaviour appears. Meanwhile, the variation of social reinforcement technique was clearly described by Kazdin (2013) social reinforcers as a verbal praise, care, physical contact (including affection or pride, touch, and holding hands) and face expression (including smiling, eye contact, nodding, and wink) is the conditioned reinforcement.

In this study, deficits in the social abilities of subjects with autism were taken into consideration in providing reinforcement. The short duration of focus and weak two-way verbal interactions result in Social reinforcement dysfunction, so it does not work as it should. Through these characteristics, it takes action in the form of physical contact first, with the aim of getting the subject's attention. The provision of social reinforcement in this study uses physical contact as the first stage, followed by other social reinforcement such as facial expressions and gestures. Non-verbal reinforcement interactions by educators such as reinforcement in the form of mime and body movements, by approaching, with fun activities, in the form of touch, symbols, and objects are carried out as positive reinforcement Rinawati (2019).

The data obtained were then collected using data collection techniques in the form of observations (the interval table of self-help eating), and documentation. After the data in the

three phases A-B-A are collected, then analyzed using simple descriptive statistical techniques in the form of data analysis in conditions and data analysis between conditions.

## RESULTS AND DISCUSSION

### Baseline A1 Phase

Data on this condition was obtained through the observation of the self-help eating ability before being given an intervention. This observation was conducted in 5 sessions from July 29<sup>th</sup> to August 2<sup>nd</sup>, 2019. For more details on the self-help eating ability, data can be seen in the Figure 2.

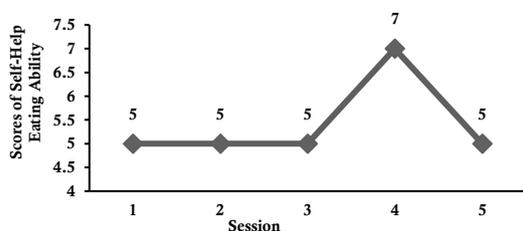


Figure 2. Chart Self-Help Eating Baseline A1

### Intervention Phase

In this study, the intervention was given as many as 8 sessions or 8 treatments. The intervention provided in the form of Social reinforcement was carried out from August 6 to August 15, 2019. The following is a graph of the results of data retrieval of the subject's self-help ability in the intervention phase as described in Figure 3.

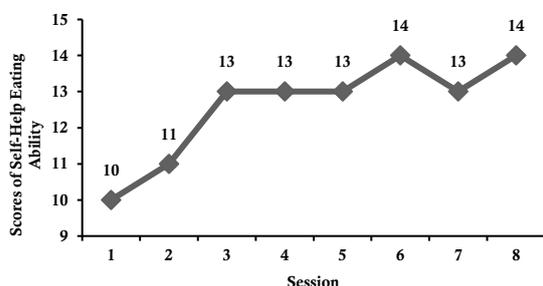


Figure 3. Chart Self-Help Eating Intervention

### Baseline A2 Phase

After the intervention was given for 8 sessions, the subject was re-observed its self-help ability to eat without giving social reinforcement.

In this A2 baseline phase, subjects were taken for 4 sessions, from August 19<sup>th</sup> to August 22<sup>nd</sup> 2019. The following is an A2 baseline chart as in Figure 4.

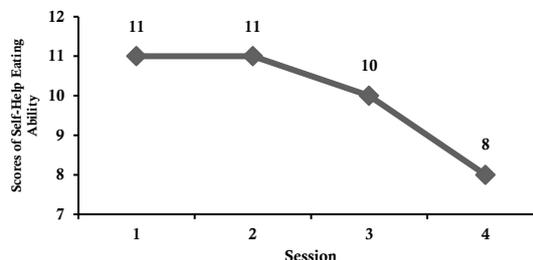


Figure 4. Chart Self-Help Eating Baseline A2

Based on the results of data collection in the baseline phase 1 (A), intervention (B), and baseline phase 2 (A'), the following is a comparison chart data of the three phases as described in Figure 5.

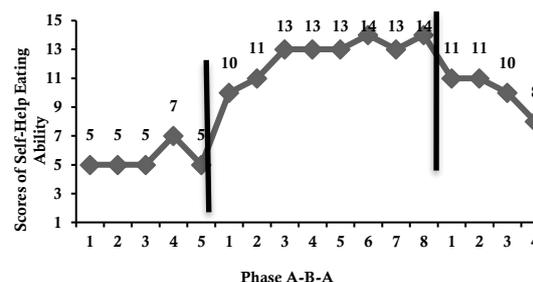


Figure 5. Chart Self-Help Eating Phase A-B-A

### The Analysis inside Condition

The component of analysis inside condition can be summarized as described in Table 1.

Table 1. The Analysis inside Condition

Condition	Baseline A1	Intervention	Baseline A2
The length of condition	5	8	4
The tendency of direction	(=)	(+)	(-)
The tendency of stability	Stable (80%)	Stable (87.5%)	Stable (75%)
Data record	(=)	(+)	(-)
The level of stability and range	Stable 4.9-6	Stable 11-14	Stable 9-11
The level of changing	5-5 (= 0)	14 – 10 (= 4)	8-11 (= -3)

Based on the analysis of the conditions delman table, it can be seen the length of the condition that is an indicator that shows the number of sessions that have been conducted on the subject. The direction trend shows a constant graph at baseline A1, while ascending in the intervention phase, then decreases again in the last phase. Analysis of stability trends based on data changes in the level of stability of subject data. In the intervention phase it increased to 87.5%, while at the end of the phase or baseline phase 2 (A') the stability of the subject data was 75%. Then the acquisition of stable data in conditions can be seen in the stability and range level columns. Stable data in the baseline 1 (A') range has a lower limit of 4.9 and an upper limit of 6, the intervention phase is at the lower limit 11 and the upper limit 14, while the baseline phase 2 (A') is at the lower limit 9 and the upper limit 11.

The change in level at baseline 1 (A) is 0, while in the intervention phase it is 4, and the baseline phase 2 (A') is -3. The level change is determined by finding the difference between the first data and the last data in a phase. Signs (+) indicate changes in improved data, signs (-) indicate worsening data, signs (=) indicate data that has not changed. So through analysis of level changes in the three phases it can be seen that the baseline 1 (A) phase has a stable level from the beginning of the session to the end of the session. Then the increase occurred in the intervention phase by 5 points and again decreased by 3 points in the baseline 2 (A') phase.

**The Analysis Between Condition**

The component analysis among conditions consisting of the analyses of the changing variables, the changing of direction tendency, the changing of stability, the changing of level, and the presentation of overlap data in Table 2.

**Table 2.** The Analysis between Condition

Condition	Baseline A1	Intervention	Baseline A2
The number of changing variables		1	
The change of the tendency of direction and its effect	A1/B		B/A2
	(=)    (+)		(+)    (-)
The changing of stability	A1/B		B/A2
	Stable (80%) to Stable (87.5%)		Stable (87.5%) to Stable (75%)
The changing of level	A1/B (5-10 = +5)		B/A2 (14-11 = -3)
The presentation of overlap data	A1/B		B/A2
	= 0/5 x 100%		= 2/8 x 100%
	= 0%		= 25%

Then after analyzing the data that were obtained, it was concluded that the use of social reinforcement interventions to improve the self-help eating ability had an influence. These result was supported because there were changes in data from baselines A1 to A2. Data showing the mean results in the baseline phase A1 = 5.4, social reinforcement interventions = 12,625, and baseline A2 = 10. Similar conditions also occurred in the direction of horizontal social reinforcement (A1), ascending (B), and decreasing (A2). It was also supported by a comparison of the percentage overlap between the conditions of social reinforcement interventions with a percentage ratio of 0% and 25%. The results of the overlap comparison were

strengthened by Sunanto's opinion (2006) which stated that the smaller the comparison of the results of the overlap percentage, the effect of an intervention on the target behavior being studied were better. So that there are different progressive results in the analysis of the baseline phase data A1 to A2.

Through various kinds of data obtained from the three phases, it can be seen that social reinforcement interventions influence the improvement of the self-help eating ability. The effectiveness of the reinforcement is also found in Carbone (2013) which stated that eye and face view can be conditioned as social reinforcement in the context of reinforcement such as goods and activities preferred.

The success of the intervention can be planned through measurement of the right amount of social reinforcement. In several sessions, it was found that the amount of reinforcement that was too small caused a decrease in behaviour in subsequent tasks. Conversely, too much reinforcement leads to failure to decrease subject behaviour.

Some notes in the form of identifying the characteristics of the subject need to be known before intervening. In this study, for example, the weak social and verbal abilities of the subject make the subject less responsive to verbal reinforcement. So that before verbal or gesture social reinforcement is given, it is preceded by social reinforcement in the form of physical contact. The effectiveness of the procedure is experienced throughout the intervention phase. A similar confirmation was stated efforts are needed to provide specific learning methods with their interests, so that the attention span is increased.

There was a significant change in the treatment given during the 8 intervention sessions. These changes are obtained through natural environmental intervention obtained by children in school, so that the teaching provided will be more easily accepted by the subject. The benefits of treatment gained through the natural environment, and initiation and retaliation are not cliché statements but involve the use of common language that is appropriate to the social context Gena (2007).

The results of this study indicate that the deficit in self-help ability to eat in children with autism can be spurred on by using social reinforcement techniques. Through the provision of social reinforcement the child can find out whether his behavior is accepted or not, besides gifts in the form of gentle strokes, high fives, and praise motivate children to bring up the same behavior. In the care of autistic children, warmth and care for child development, control and consistency in the discipline of parenting and the support of parents for children to train children's independence Kurniawan (2018).

## CONCLUSION

Based on the results of data analysis in this study, it can be concluded that there are differences in the ability to help themselves eat autistic children before and after getting social reinforcement interventions. The change in self-help ability to eat in children with autism is not only based on factors from social reinforcement, but there are environmental factors such as (schools, families, therapeutic institutions), and dietary eating factors that were not previously examined in this study.

## ACKNOWLEDGMENT

This research was supported by Talenta Kindergarten. We thank our colleagues from Semarang State University who provided insight and expertise that greatly assisted the research.

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