



THE EFFECT OF SELF MODELING VIDEOS ON THE ABILITY TO BRUSH TEETH IN CHILDREN WITH AUTISM SPECTRUM DISORDERS AT BINA ANGGITA AUTISM SPECIAL SCHOOL YOGYAKARTA

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Abstrak

Penelitian ini mengeksplorasi keterbatasan anak autis dalam menjalani kegiatan menyikat gigi dan mengusulkan Video Self Modeling (VSM) sebagai terapi alternatif. Dengan melibatkan sepuluh anak autis di SLB Bina Anggita Yogyakarta, penelitian menggunakan desain eksperimen subjek tunggal dan memberikan intervensi berupa VSM tentang teknik menyikat gigi. Data dikumpulkan sebelum, selama, dan setelah intervensi melalui lembar observasi menyikat gigi. Hasil penelitian menunjukkan peningkatan signifikan dalam kemampuan menyikat gigi anak autis setelah intervensi, dengan hasil pemeliharaan yang mencerminkan kemajuan yang berkelanjutan. Penelitian ini memberikan kontribusi pada pemahaman tentang penggunaan VSM dalam meningkatkan keterampilan menyikat gigi pada anak autis, mendukung transformasi kesehatan melalui pemanfaatan teknologi kesehatan. Selain itu, hasil penelitian ini dapat menjadi referensi penting bagi studi kesehatan gigi lebih lanjut dan mendukung pengetahuan tentang aplikasi VSM dalam konteks pendidikan kesehatan anak autis. Disarankan untuk menggali potensi penggunaan VSM dalam mengajarkan keterampilan lain seperti pelatihan toilet dan kebersihan pribadi.

Kata Kunci : *Autisme, Gosok Gigi, Video Self Modelling*

Abstract

This research explores the limitations of autistic children in performing toothbrushing activities and proposes Video Self Modeling (VSM) as an alternative therapy. Involving ten autistic children at SLB Bina Anggita Yogyakarta, the study utilizes a single-subject experimental design and provides intervention in the form of VSM on toothbrushing techniques. Data were collected before, during, and after the intervention through a toothbrushing observation sheet. The research results indicate a significant improvement in the toothbrushing ability of autistic children after the intervention, with maintenance results reflecting continuous progress. This research contributes to understanding the use of VSM in enhancing toothbrushing skills in autistic children, supporting health transformation through the utilization of health technology. Additionally, the findings of this research can serve as an important reference for further dental health studies and contribute to knowledge about the application of VSM in the context of the health education of autistic children. It is suggested to explore the potential use of VSM in teaching other skills such as toilet training and personal hygiene.

Keywords: *Autism, Brushing Teeth, Self Modeling Videos*

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INTRODUCTION

Children with special needs physically, psychologically, cognitively, or socially are hampered in achieving goals or needs to the maximum. They need extra guidance and support from their parents and environment to grow and develop in order to live independently. Special education is needed in order to develop their potential as much as possible like other children. One of the children with special needs is a child with Autism Spectrum Disorders (ASD) (Mangungsong, 2009).

Autism is a syndrome caused by complex brain damage that results in impaired behavior, emotion, communication, and social interaction (Priyatna, 2010). Autism comes from the word "auto" which means alone. Autism means the preoccupation of one's own thoughts and fantasies or in other words more oriented to one's own subjective thoughts than to see the reality or reality of everyday life. Therefore, people with autism are often called people who live in their own "nature" (Handojo, 2003).

According to the criteria of the Diagnostic and Statistical Manual of Mental Disorder text revision (DSM IV) the symptoms of autism are social interaction disorders characterized by inability to establish non-verbal social interactions (such as: eye contact, facial expressions, body posture hand movements), unable to play with peers, no empathy, and less able to hold social emotional relationships. Symptoms in the field of communication are characterized by delayed or completely undeveloped speech development, if children can speak not used to communicate, often use strange and repeated language (stereotypes), children's way of playing is less varied, and imaginative. The next symptom is the existence of a pattern that is maintained and repeated in behavior, interest and activity characterized by maintaining interest in a very characteristic way, fixated in useless routines, there are strange movements that are distinctive and repeated, often fascinated at parts of an object. These symptoms appear before the child is 36 months or three years old (Davison., Gerald, C., Neale., John, M., 2010).

The prevalence of autistic children in the world is always increasing. Based on data from the World Health Organization / WHO (2018) states that it is estimated that one in 160 children worldwide suffer from Autism Spectrum Disorder (ASD). According to a 2016 report by the Center

for Disease Control, about 1 in 54 children in the United States is diagnosed with an autism spectrum disorder. In Indonesia, the number of autistic people continues to increase which is estimated to increase by around 500 people every year (Tegal, 2017). According to UN Goodwill Ambassador, Christine Hakim (2011 quoted from Radius, 2011), the prevalence of people with autism is currently as much as 8 out of 1000 population, this prevalence is rising rapidly compared to WHO data 10 years ago which was only 1 in 1000 population. According to the Director General of Health Efforts of the Ministry of Health, Akmal Taher (Hadriani, 2013), if it is assumed that with the prevalence of autism in children in Hong Kong, based on the Central Bureau of Statistics, the number of children in Hong Kong, the number of children aged 5 to 19 years in Indonesia reaches 66,000,805 people, it is estimated that there are more than 112 thousand children with autism in Indonesia. People with autism are five times more male than girls.

Autistic children have the same basic needs as other normal children. However, due to developmental disorders experienced, they are not or less able to meet their needs independently. Children with autism have difficulty in performing daily life skills such as self-care in maintaining healthy teeth and mouth (Jasmin et al., 2009). In addition, it is possible that autistic children have various accompanying medical problems (comorbidities), one of which is oral health problems (B et al., 2016).

Dental and oral health is something that needs to be considered in addition to general body health (Silvia, 2005). According to World Health Organization (2012), dental and oral health is an integral part that cannot be separated by health in general. Dental and oral health is free from oral and facial diseases and throat cancer, infections and sores of the mouth, gum and periodontal tissue disease, and disorders that limit an individual's capacity for chewing, biting, smiling, speaking and psycho-social well-being.

Basically, people with autism have dental and oral diseases that are no different from normal people, but can experience more severe dental and oral diseases because of their inability to maintain oral hygiene. Characteristics of autistic children tend to have oral manifestations such as: low oral hygiene, Caries presentation 50-60%, and periodontal disease around 11-11.5% (Rachmawati & Ermawati, 2019)(Gonçalves et al., 2016). Hariyani's research et al. (2019) also

shows that autistic children have a high prevalence of caries, which is almost 79%. The prevalence of caries in autistic children in Indonesia is higher when compared to the prevalence in Hong Kong of 26%. The high prevalence of caries is related to the behavior of brushing teeth and snack consumption in individuals.

Efforts to maintain dental health are by cleaning teeth by brushing teeth properly and regularly and strengthening teeth with fluoride toothpaste. Proper and regular brushing is able to control the formation of dental plaque which is the cause of dental caries and gum disease. Although brushing teeth is a common activity, there are still errors both in its understanding and in its implementation (Pintauli, S and Hamada, 2008). In principle, brushing your teeth is an action to get rid of dirt or debris attached to the surface of the teeth which is especially done after eating and before going to bed will reduce the risk of dental health problems (Mulkhairul et al., 2023) (Silvia, 2005).

Children with autism often have difficulty carrying out daily activities independently, one of which is the ability to brush their teeth (Borca & Petrescu, 2022) Jasmine, 2009). Therefore, it is necessary to develop abilities so that the independence of autistic children in carrying out daily activities and their quality of life can increase (Borca & Petrescu, 2022). Dental and oral health problems in autistic children can be overcome if children can apply brushing behavior correctly. Children can maintain dental hygiene and do dental care well.

Overcoming the limitations of children with autism needs to take the right approach. There are several types of therapy applied to treat autistic children, including biomedical therapy, speech therapy, behavioral therapy, occupational therapy, and medical therapy. One of the therapies used by autistic children is behavioral therapy where the therapy reduces excessive or unnatural behavior and teaches behavior that is more acceptable to the environment by forming positive behavior (Handojo, 2003).. Teaching Social Skill is the teaching of social skills, with emphasis on social learning (Levy, 2009).

A modeling technique that involves demonstrating desired behavior through video representation is called video modeling. Video modeling involves individuals watching a demonstration shown in a video and then mimicking the model's behavior. Children will

gain broad skills by observing others perform, not just personal experience. The child will imitate and perform the behavior with or without the presence of the model at other times. The models for children most likely to attend are people they perceive as competent and similar to them, i.e. the same physical characteristics, age, same group and ethnicity. According to (Borca & Petrescu, 2022), video modeling is divided into 3 (three) types, namely basic video modeling (MVB), Auto-Modeling Video (AMV) or Video Self Modeling (VSM), and point-of-view video modeling (MVP).

Video Self Modeling (VSM) or Video Auto-Modeling (AMV) is a learning strategy that allows the child to imitate behavior through video with himself as his model (Borca et al., 2022). Self-observation that has succeeded in doing something, then this is the right information on how to do something to succeed and can increase the self-efficacy of children with autism. Self-efficacy is the decision of a person in his ability to achieve the desired result or appearance of the actions performed. Someone who has a high level of efficacy will have a good capacity to regulate his behavior (Peterson & Bredow, 2009). Self-modeling videos can be applied as an alternative therapy that affects self-efficacy in training skills in children with autism.

According to (Borca & Petrescu, 2022), video modeling is an instructional method that can help autistic children to improve functional abilities, reduce the likelihood of errors, and increase children's self-confidence. (Frolli et al., 2020) states that Video Self Modeling is more effective than the Peer Video Modeling method. Research conducted by (Margaretha, 2012) which examined the effectiveness of self-modeling videos on the ability to brush teeth in children with autism showed very satisfactory results in three respondents who were given self-modeling videos. The three respondents were able to brush their teeth independently after being given Video Self Modeling and respondents were also able to maintain their abilities after one week without any intervention.

In dealing with children with autism, the role of several experts such as: neurologists, psychologists, child development experts, speech experts, learning consultants or other professionals who are experts / have knowledge about autism. The role of educators is to provide holistic health promotion through interventions that can support positive development in autistic

children. Interventions given to autistic children aim to reduce the symptoms of conduct disorders. Nurses act as educators and consultants for families with children with autism in basic services and clinics. Nurses provide health education and knowledge to families about how families teach and assist children with autism in the learning process about the ability to care for dental health. Nurses are also caregivers in implementing ASD children (Asmadi, 2008). Nurses can use Video Self Modeling as a therapeutic intervention to children with autism to improve basic skills in daily life.

Based on data from the Youth Education and Sports Office of the Special Region of Yogyakarta in 2019, the number of autistic children in the Special Region of Yogyakarta was 236 people and Yogyakarta City was included in the top 3 most autistic people.

This research has been conducted at Bina Anggita Special School for Autism Yogyakarta. The results of the researcher's preliminary study with the principal of Bina Anggita Special School of Autism Yogyakarta, the school has therapy classes such as ABA therapy (applied behavioral analysis), speech, occupation, play, sensory integration, snozelen, integrated, and environmental socialization, but has never been done Video Self Modeling.

Based on the background above, researchers are interested in examining the effect of Video Self Modeling on the ability to brush teeth in children with Autism Spectrum Disorders.

METHOD

This study used an experimental research design with a single subject experimental design approach. Single subject research is an appropriate design for use in the study of children with disabilities, special needs, intellectual disabilities, and including autism because this study can evaluate performance and behavior changes in individuals (Gats & David, L., 2010). The purpose of single-subject research is to conduct in-depth or specific exploration of a particular event, where the focus is on a small number of events

investigated in depth in a given time span, and focus on individual data as a sample (Sunanto et al., 2005). Single-subject research refers to research strategies developed to document changes in individual subjects' behavior as a result of intervention or treatment (Tawney and Gast, 2010).

Design This research refers to A-B-A design. A-B-A consists of three stages of design, namely; A-1 baseline condition, B measured at the intervention research condition, and A-2 repetition condition Baseline As a control for the intervention phase it is possible to draw conclusions about the existence of a functional relationship between the independent variable and the dependent variable. This study is a single-subject experimental study using design reversal multiple baseline cross subjects That is research conducted on more than one subject with the same target behavior. In this study, the number of subjects was ten people with target behavior, namely brushing their teeth.

RESULTS AND DISCUSSION

This research has been conducted from July 2023 to October 2023. Data has been collected from September 30, 2023 to October 14, 2023. The respondents in this study were 10 (ten) children from Bina Anggita Autism School Yogyakarta who had an age range of 6-13 years. Respondents have learning disabilities with mild criteria and still have dependence on the help of parents or teachers in terms of performing brushing skills.

Data on the ability to brush teeth using observation sheet measuring instruments in accordance with the SOP for brushing teeth. Data collection was carried out by researchers and in collaboration with the Foundation on the schedule for providing interventions. The results of this study are presented in three parts, namely the initial ability to brush teeth before being given Video Self Modeling intervention, the ability to brush teeth after being given Video Self Modeling intervention, adaptation to maintenance ability after no more intervention. The following are the results of the study in detail:

The ability to brush the teeth of children with autism before being given Video Self Modeling intervention.

Table 1. Frequency distribution of respondents based on the ability to brush their teeth before being given Video Self Modeling intervention at Bina Anggita Special School for Autism Yogyakarta.

Session	Brushing Skills																			
	Respondent 1		Respondent 2		Respondent 3		Respondent 4		Respondent 5		Respondent 6		Respondent 7		Respondent 8		Respondent 9		Respondent 10	
	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)
1	6	30	6	30	15	75	3	15	19	95	15	75	16	80	11	55	3	15	12	60
2	6	30	8	40	13	65	12	60	20	100	12	60	14	70	9	45	4	20	11	55
3	7	35	6	30	15	75	12	60	19	95	13	65	16	80	9	45	4	20	12	60
Mean		31.67		33.33		71.67		45.00		96.67		66.67		76.67		48.33		18.33		58.33
(\bar{x})																				

The ability to brush teeth of Autism children after being given Video Self Modeling intervention.

Table 2. Frequency distribution of respondents based on the ability to brush their teeth after being given the Video Self Modeling intervention at Bina Anggita Special School for Autism Yogyakarta

Session	Brushing Skills																			
	Respondent 1		Respondent 2		Respondent 3		Respondent 4		Respondent 5		Respondent 6		Respondent 7		Respondent 8		Respondent 9		Respondent 10	
	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)
4	9	45	11	55	16	80	9	45	15	75	13	65	16	80	11	55	4	20	13	65
5	11	55	12	60	16	80	10	50	13	65	15	75	15	75	12	60	5	25	14	70
6	11	55	14	70	18	90	11	55	16	80	17	85	17	85	13	65	5	25	14	70
Mean		51.67		61.67		83.33		50.00		73.33		75.00		80.00		60.00		23.33		68.33

240| THE EFFECT OF SELF MODELING VIDEOS ON THE ABILITY TO BRUSH TEETH IN CHILDREN WITH AUTISM SPECTRUM DISORDERS AT BINA ANGGITA AUTISM SPECIAL SCHOOL YOGYAKARTA

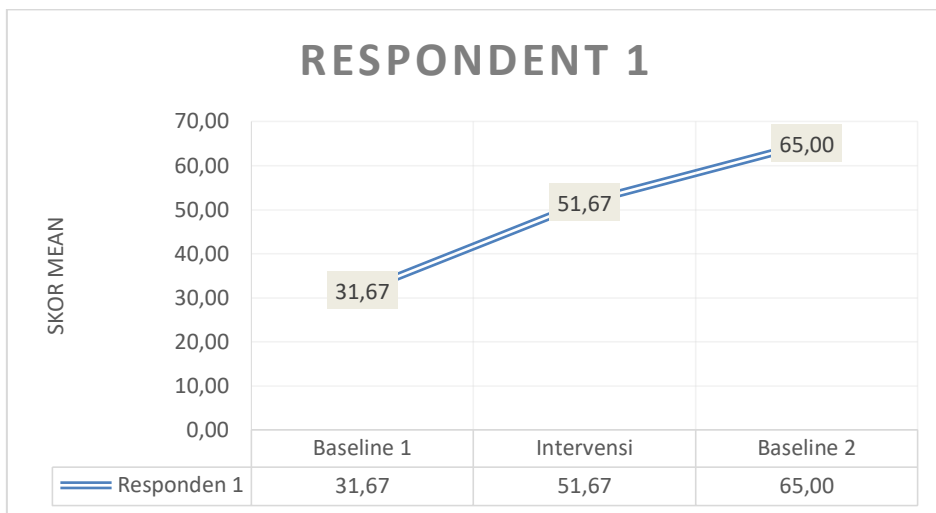
(\bar{x})																				
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Maintenance ability to brush teeth in children with Autism after no more intervention.

Table 3. Frequency distribution of toothbrushing maintenance ability in respondents after no more intervention Video Self Modeling at Bina Anggita Special School for Autism Yogyakarta

Session	Brushing Skills																			
	Respondent 1		Respondent 2		Respondent 3		Respondent 4		Respondent 5		Respondent 6		Respondent 7		Respondent 8		Respondent 9		Respondent 10	
	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)	(n=20)	(%)
7	11	55	15	75	19	95	8	40	19	95	18	90	15	75	11	55	5	25	14	70
8	13	65	14	70	19	95	9	45	18	90	20	100	19	95	13	65	6	30	15	75
9	15	75	16	80	20	100	11	55	19	95	20	100	20	100	15	75	6	30	15	75
Mean		65.0		75.0		96.6		46.6		93.3		96.6		90.0		65.0		28.3		73.3
(\bar{i})		0		0		7		7		3		7		0		0		3		3

Respondent 1

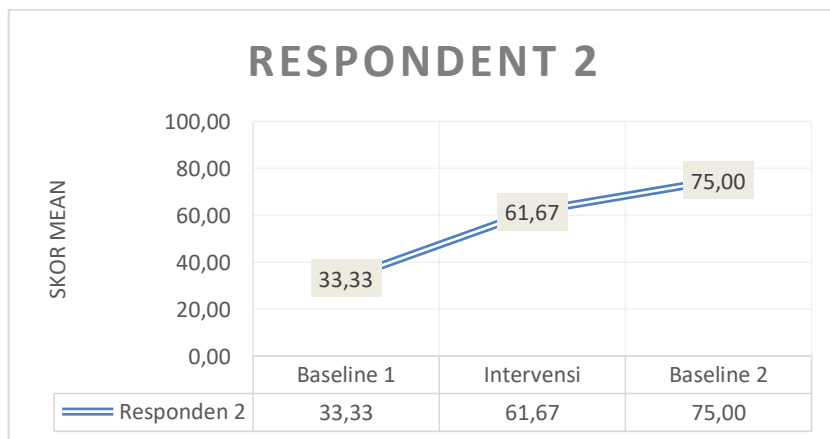


Graph 1 Mean Score on Respondent 1

Based on graph 1, the trend / slope can be interpreted that in this condition the ability of respondent 1 in brushing skills increases. If analyzed for directional trends, capability after intervention increases and maintenance capability also increases. With stable data conditions, good level change direction and an increasing trend of

conditions, it means that respondent 1 is still able to maintain and improve his ability in brushing teeth skills even though he is not given any more intervention. From all phases that have been passed by respondent 1, it shows a very significant improvement.

Respondent 2

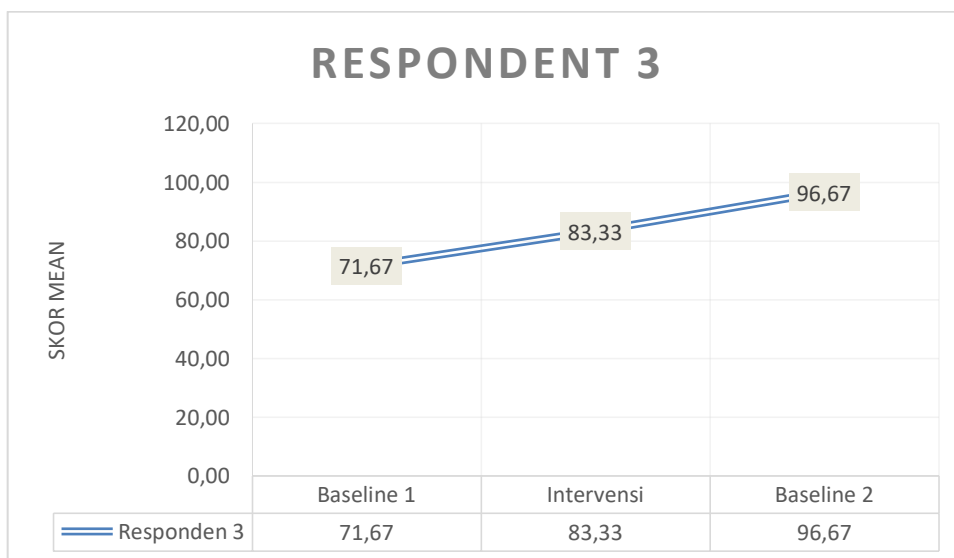


Graph 2 Mean Score in Respondent 2

Based on graph 2, the trend / slope can be interpreted that in this condition the ability of respondent 2 in brushing skills tends to increase. If analyzed for directional trends, capability after intervention increases and maintenance capability also increases. With stable data conditions, good level change direction and an increasing trend of

conditions, it means that respondent 2 is still able to maintain and improve their ability in brushing teeth skills even though they are not given any more intervention. From all phases that have been passed by respondent 2, it shows a very significant increase.

Respondent 3

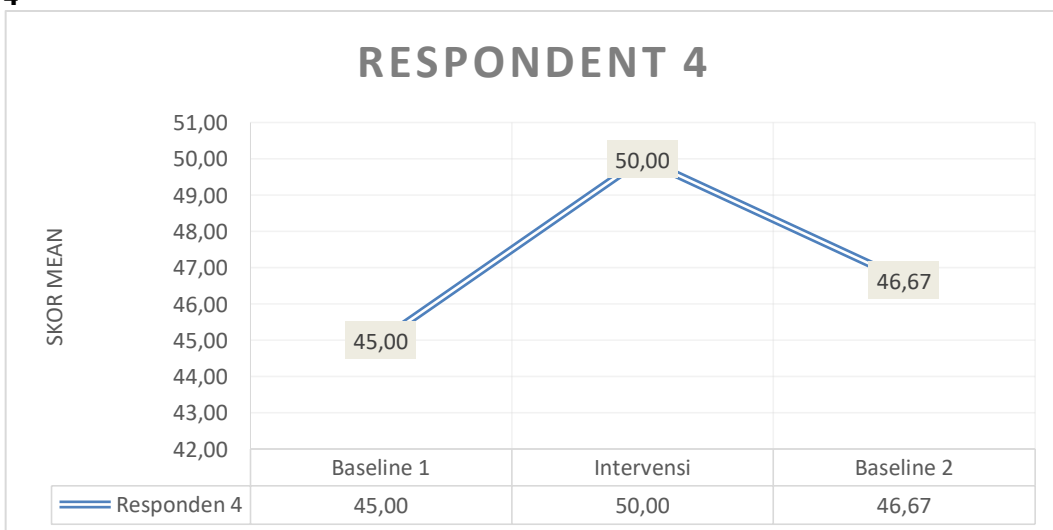


Graph 3 Mean Score in Respondent 3

Based on graph 3, the trend / slope can be interpreted that in this condition the ability of respondent 3 in brushing skills tends to increase. If analyzed for directional trends, capability after intervention increases and maintenance capability also increases. With stable data conditions, good level change direction and an increasing trend of

conditions, it means that 3 respondents are still able to maintain and improve their ability in brushing teeth skills even though they are not given any more intervention. From all phases that have been passed by respondent 3, it shows a very significant increase.

Respondent 4

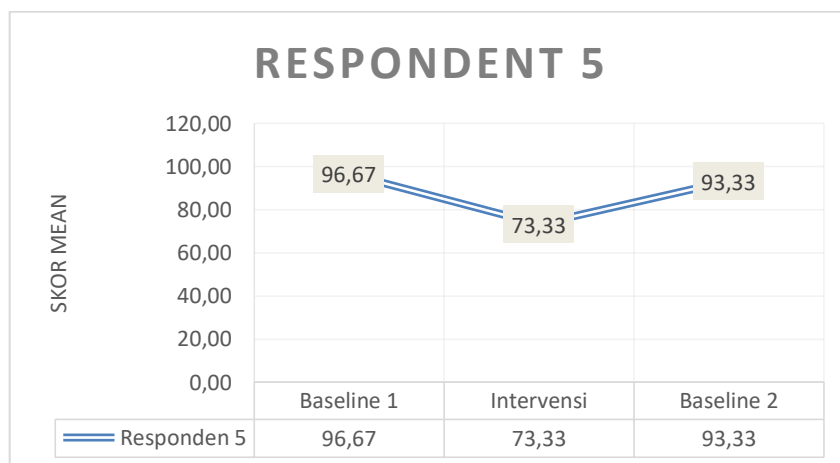


Graph 4 Mean Score in Respondent 4

Based on graph 4, the trend / slope can be interpreted that in this condition the ability of respondent 4 in brushing skills increases. If analyzed for directional trends, capability after intervention increases and maintenance capability also increases from initial capability but decreases than during intervention. However, the data condition is still relatively stable, the direction of

the level change is good and the trend of conditions is increasing, meaning that respondent 4 is still able to maintain and improve their ability in brushing skills even though they are not given any more intervention. Of the entire phases that have been passed by respondent 4, it shows an increase even slightly.

Respondent 5

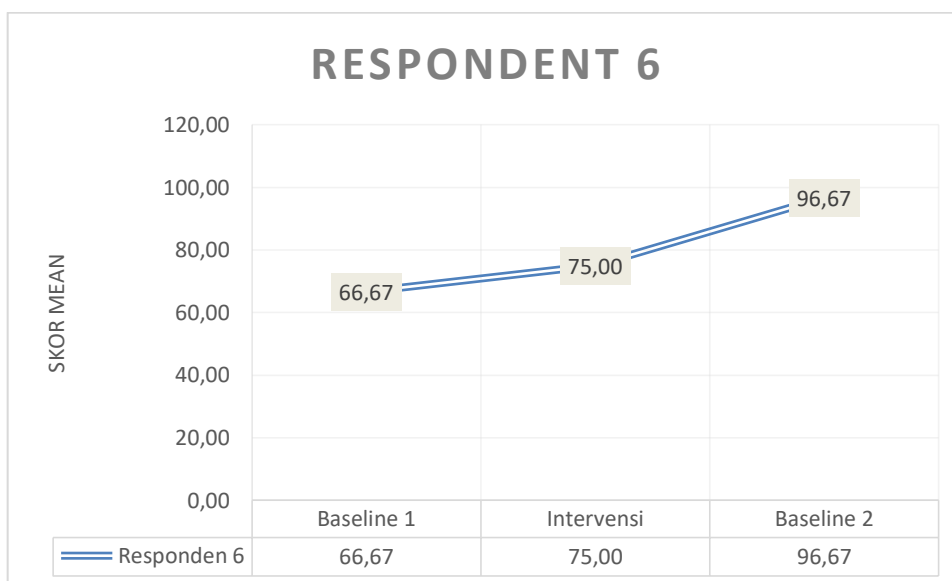


Graph 5 Mean Score in Respondent 5

Based on graph 5, the trend / slope can be interpreted that in this condition the ability of respondent 5 in brushing skills tends to decrease. If analyzed for directional trends, capability after intervention decreases and maintenance ability also increases than during intervention. However, the data condition is still relatively stable, the direction of the level change is good and the trend

of conditions is increasing, meaning that 5 respondents are still able to maintain and improve their ability in brushing skills even though they are not given any more intervention. Of the entire phases that have been passed by respondent 5, there are symptoms of improvement although there is also a decrease from the initial ability phase.

Respondent 6

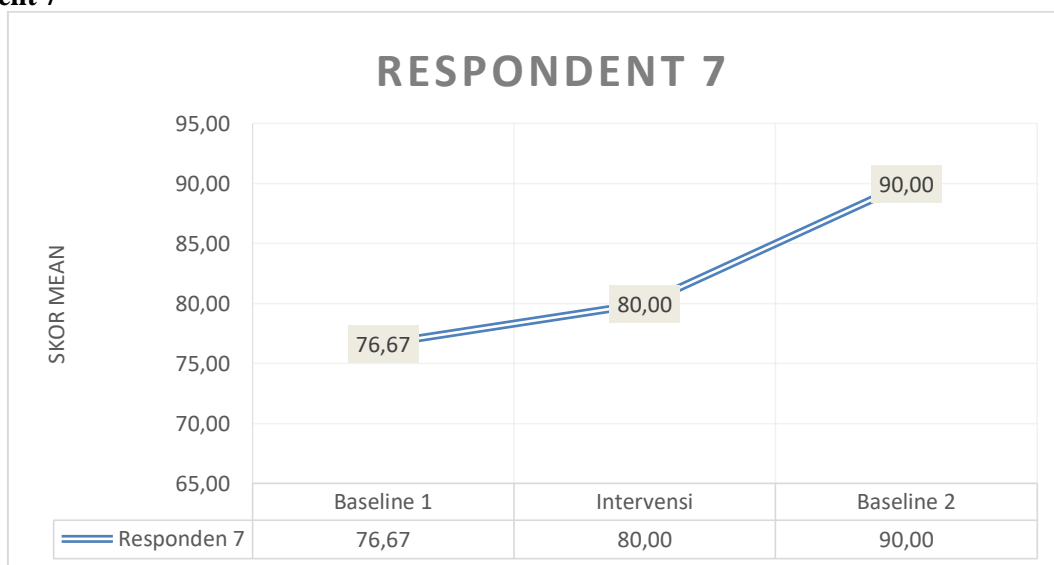


Graph 6 Mean Score on Respondent 6

Based on graph 6, the trend / slope can be interpreted that in this condition the ability of respondent 6 in brushing skills increases. If analyzed for directional trends, capability after intervention increases and maintenance ability also decreases than during intervention. However, the data condition is still relatively stable, the direction of the level change is good and the trend of

conditions is increasing, meaning that respondent 6 is still able to maintain and improve their ability in brushing teeth skills even though they are not given any more intervention. Of the entire phases that have been passed by respondent 6, there are symptoms of improvement although there is also a decrease from the initial ability phase.

Respondent 7

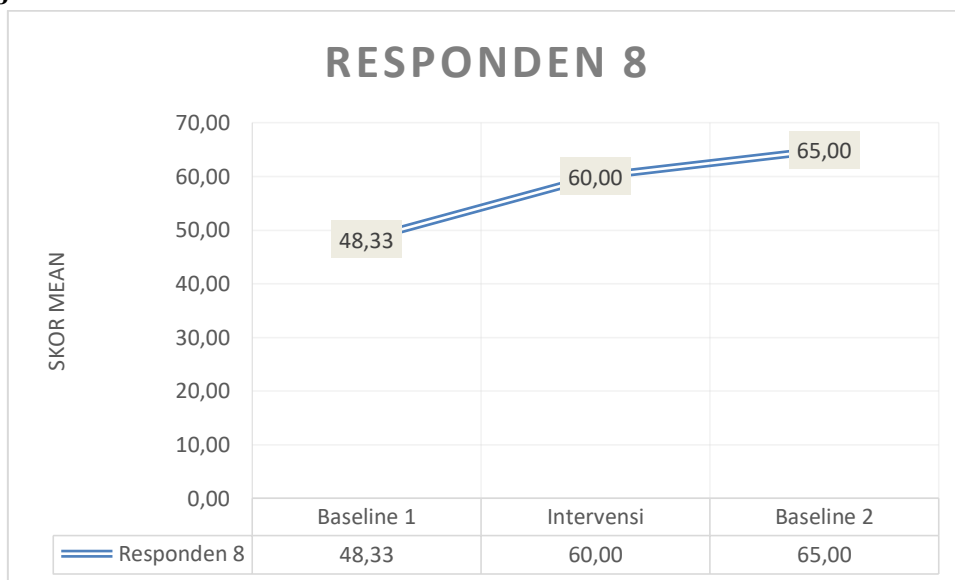


Graph 7 Mean Score on Respondent 7

Based on graph 7, the trend / slope can be interpreted that in this condition the ability of respondent 7 in brushing skills increases. If analyzed for directional trends, capability after intervention increases and maintenance capability also improves than during intervention. However, the data condition is still relatively stable, the direction of the level change is good and the

tendency of conditions is increasing, meaning that respondent 7 is still able to maintain and improve their ability in brushing skills even though they are not given any more intervention. Of all the phases that have been passed by respondent 7, there are symptoms of improvement although there is also a decrease from the initial ability phase

Respondent 8



Graph 8 Mean Score on Respondent 8

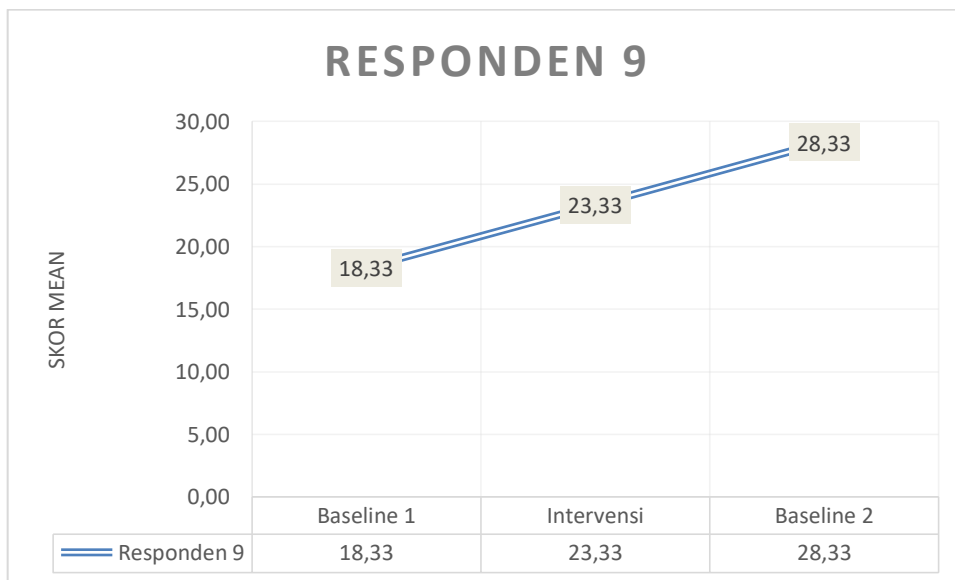
Based on graph 8, the trend / slope can be interpreted that in this condition the ability of respondent 8 in brushing skills tends to increase. If analyzed for directional trends, capability after intervention increases and maintenance ability also

decreases than during intervention. However, the data condition is still relatively stable, the direction of the level change is good and the trend of conditions is increasing, meaning that 8 respondents are still able to maintain and improve

their ability in brushing skills even though they are not given any more intervention. Of all the phases that have been passed by respondent 8, there are

symptoms of improvement although there is also a decrease from the initial ability phase.

Respondent 9

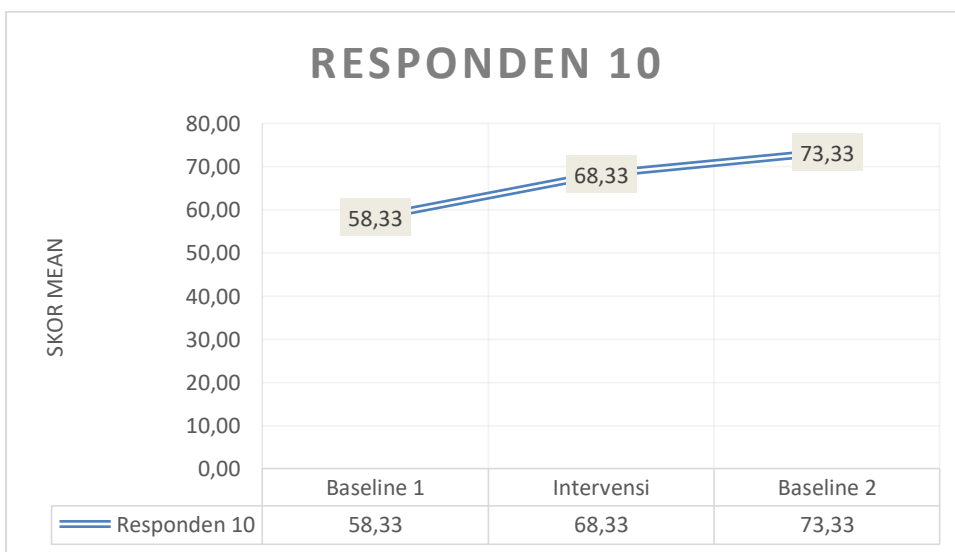


Graph 9 Mean Score on Respondent 9

Based on graph 9, the trend / slope can be interpreted that in this condition the ability of respondent 9 in brushing skills increases. If analyzed for directional trends, capability after intervention increases and maintenance ability also decreases than during intervention. However, the data condition is still relatively stable, the direction of the level change is good and the trend of

conditions is increasing, meaning that 9 respondents are still able to maintain and improve their ability in brushing teeth skills even though they are not given any more intervention. Of all the phases that have been passed by respondent 9, there are symptoms of improvement even though there is also a decrease from the initial ability phase.

Respondent 10



Graph 10 Mean Score on Respondent 10

Based on the graph of 10 trend / slope it can be interpreted that in this condition the ability of

10 respondents in brushing skills tends to increase. If analyzed for directional trends, capability after

intervention increases and maintenance ability also decreases than during intervention. However, the data condition is still relatively stable, the direction of the level change is good and the trend of conditions is increasing, meaning that 10 respondents are still able to maintain and improve

their ability in brushing teeth skills even though they are not given any more intervention. Of all the phases that have been passed by respondent 10, there are symptoms of improvement although there is also a decrease from the initial ability phase

Recapitulation of the overall average of respondents

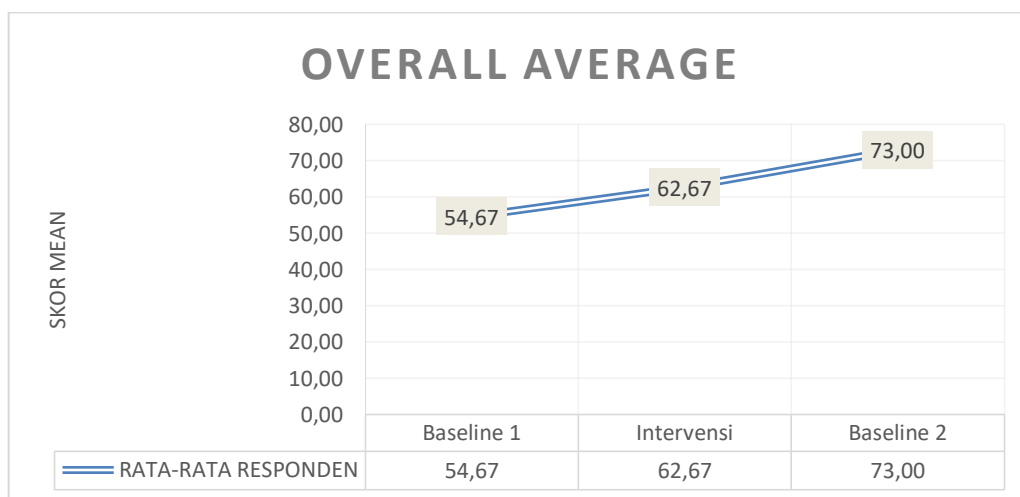
Table 5 Recapitulation of the Mean of all respondents

Score	Baseline 1	Intervention	Baseline 2
Respondent 1	31.67	51.67	65.00
Respondent 2	33.33	61.67	75.00
Respondent 3	71.67	83.33	96.67
Respondent 4	45.00	50.00	46.67
Respondent 5	96.67	73.33	93.33
Respondent 6	66.67	75.00	96.67
Respondent 7	76.67	80.00	90.00
Respondent 8	48.33	60.00	65.00
Respondent 9	18.33	23.33	28.33
Respondent 10	58.33	68.33	73.33
Average Respondents	54.67	62.67	73.00

Researchers recapitulated the overall mean of all respondents, and obtained the highest mean score in the Baseline 1 phase of 96.67% and the lowest mean score in the Baseline 1 phase of 18.33%. Then the highest mean score in the intervention phase was 83.33% while the lowest mean score in the intervention phase was 23.33. In the Baseline 2 phase or post test, the highest mean

score was 96.67% and the lowest mean score was 28.33%.

From the overall mean then the average mean score is calculated again from the entire phase. The mean result of Baseline 1 was 54.67%, then in the intervention phase 62.67%, and finally in the Baseline 2 phase 73%. So that you can see the trend of increasing the overall mean score as outlined in the following graph.



Graph 11 Overall Average

From the results of this study, it can be seen that there is an influence of the learning process through self-modeling video techniques on the ability of children with autism to brush their teeth properly and correctly between baseline phase 1, intervention and baseline 2. From the results of brushing teeth showed different improvements in actions but the average child experienced a pretty good improvement.

This is in line with research conducted by Gina Apriana (2015) who teaches triple tooth brushing skills in children with autism with self-modeling videos. After one week without intervention, it turned out that the three autistic children were still able to perform their skills. In addition, research conducted by Shipley-Benamou et al., (2002) that teaches daily living skills such as setting the table, making letters, and squeezing orange juice using video modeling. After one month of follow-up, it turned out that the three autistic children were still able to do all their skills.

Through Video Self Modeling techniques can teach children with autism to be able to imitate and observe their own behavior, this is in accordance with social learning theory which explains that most learning occurs through observation, mastering others, and seeing what happens to them (Rosenthan & Zimmerman, 1978 quoted from Bastable, 2002). Self-modeling videos of children watching themselves on video and can increase children's motivation because they see themselves behaving positively or doing tasks successfully (Dowrick, 2012). This makes the child's self-efficiency increase, so that the child will believe he is able to do the skills independently.

Video self-modeling interventions that can be used by parents, teachers, psychologists and health workers in providing learning about daily skills. Self-modeling videos are effective in improving academic and behavioral skills (Hitchcock et al., 2003). The learning process through this self-modeling video technique provides benefits relatively quickly. Through video children will learn to observe the skills to be taught, imitate and then adapt these skills as new behaviors.

ASD children concentrate more on their visuals, so VSM is the right learning medium for them. They give their attention well and will focus on the learning process (O'brian, 2010). This intervention can be given repeatedly as needed until the child will remember it and then the child

will imitate the learning given. The ability of visual material to stimulate the senses of sight and hearing will multiply the information remembered.

Research Limitations

This research on self modeling videos seems to be effective but there are some limitations that need to be noted and considered. The video editing process is complicated and requires special skills so that the manufacturing process takes a long time. The complexity of making videos is due to the many movements of children that do not match the steps of the brushing task. The video must be edited as if the child seems able to do it independently, so we have to cut every part that is taught or assisted by researchers.

Plus sometimes children can experience psychological conditions that are not good. So it can get angry and its effects can hurt yourself in this case throwing yourself to the floor. Children who sometimes do not respond to commands, make researchers have to have ways and strategies in handling them, such as providing rewards for children who cooperatively do the entire process of brushing their teeth properly and correctly.

REFERENCH

- Asmadi, A. (2008). *Basic concepts of nursing*.
- Borca, C.-V., & Petrescu, G. (2022). Video Modeling and Daily Living Skills Training in Students with ASD. *Journal of Educational Sciences*, 23, 76–87.
- Davison., Gerald, C., Neale., John, M., & K. (2010). *Abnormal psychology ninth edition*. PT. King Grafindo Persada.
- Dowrick, P. W. (2012). Self model theory: Learning from the future. *Wiley Interdisciplinary Reviews: Cognitive Science*, 3(2), 215–230.
- Frolli, A., Ricci, M. C., Bosco, A., Lombardi, A., Cavallaro, A., Operto, F. F., & Rega, A. (2020). Video modeling and social skills learning in ASD-HF. *Children*, 7(12), 279.
- Gonçalves, L. T. Y. R., Gonçalves, F. Y. Y. R., Nogueira, B. M. L., Fonseca, R. R. de S., de Menezes, S. A. F., da Silva e Souza, P. de A. R., & Menezes, T. O. de A. (2016). Condiciones de Salud Oral en Pacientes con Autismo. *International Journal of Odontostomatology*, 10(1), 93–97.
- Hadriani. (2013). No Title. *Tempo.Co*. <http://www.tempo.co/read/news/2015/02/02/>

- 174472198/Anak-Autis-Ada-di-Sekeliling-Kita
- Handojo, Y. (2003). *Autism*. PT. Bhuna Popular Science Gramedia Group.
- Hitchcock, C. H., Dowrick, P. W., & Prater, M. A. (2003). Video self-modeling intervention in school-based settings: A review. *Remedial and Special Education, 24*(1), 36–45.
- Jasmin, E., Couture, M., McKinley, P., Reid, G., Fombonne, E., & Gisel, E. (2009). Sensorimotor and daily living skills of preschool children with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 39*, 231–241.
- L., G. & D. (2010). *Single Subject Research*.
- Mangungsong, F. (2009). *Psychology and Education of Children with Special Needs Volume I*.
- Margaretha. (2012). *Effectiveness of Self Modeling Video on the Ability to Brushing Teeth in Children with Autism Spectrum Disorders in Banyumas Residency*. Faculty of Medicine University of Indonesia.
- Mulhairul, I., Bany, Z. U., & Gani, B. A. (2023). Analisis Tingkat Kesejahteraan Terhadap Kinerja Tenaga Kesehatan Gigi Dan Mulut Di Poliklinik Gigi Puskesmas Banda Aceh. *Jurnal Ners, 7*(1), 506–510.
- Peterson, S. J., & Bredow, T. S. (2009). *Middle range theories: Application to nursing research*. Lippincott Williams & Wilkins.
- Pintauli, S and Hamada, T. (2008). Dental caries. *USU Press*.
- Priyatna, A. (2010). *Amazing Autism, Understanding, Nurturing, and Educating Autistic Children*. Erlangga.
- Rachmawati, D., & Ermawati, T. (2019). Status kebersihan mulut dan karies pada siswa berkebutuhan khusus di SLB Autis dan TPA B SLB Branjangan Kabupaten Jember. *Warta Pengabdian, 13*(3), 74–79.
- Shipley-Benamou, R., Lutzker, J. R., & Taubman, M. (2002). Teaching daily living skills to children with autism through instructional video modeling. *Journal of Positive Behavior Interventions, 4*(3), 166–177.
- Silvia, A. (2005). *The relationship between the frequency of brushing teeth and the level of dental and oral hygiene of public elementary school students in Palaran District, Samarinda Madya City, East Kalimantan Province*.
- Sunanto, J., Takeuchi, K., & Nakata, H. (2005). Introduction to Research with Single Subjects. *Center for Research on International Cooperation in Educational Development (CRICED): University of Tsukuba*.
- Tegal, A. A. K.-A. B. S. I. (2017). Sistem Pakar Diagnosa Autis Pada Anak Dengan Menggunakan Metode Forward Chaining. *Speed-Sentra Penelitian Engineering Dan Edukasi, 9*(1).