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Total-Task Presentation to Improve Shoelace-Tying Skills in Children with Down Syndrome

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Abstract
Activity daily living is an ability in daily life such as self-care and self-care activities. One of the activities of daily living activities is the ability to tie shoelaces. The ability to tie shoelaces is important, especially in children with special needs, one of which is Down syndrome for daily independence. One way to improve the ability to tie shoelaces is to apply a total-task presentation. This study aims to determine the effectiveness of total-task presentation can improve shoelace tying skills in children with Down syndrome. The type of research used was an experimental quantitative approach with a Single Subject Research (SSR) design of the A-B-A design. The sampling technique in this study is purposive sampling. The number of research subjects was one child with Down syndrome who had difficulty tying shoelaces independently and participated in an inclusion class program at high school/vocational school equivalent. The results showed an improvement in shoe lacing skills after the intervention, with success scores gradually increasing from baseline to follow-up. In conclusion, total-task presentations can improve the ability to tie shoelaces in children with Down syndrome by comparing scores between baseline and follow-up. Further research is suggested using the medium of miniature brightly colored shoes to increase learning interest and involve parents in controlling the development of subjects at home.

INTRODUCTION

Down syndrome is a genetic disorder due to trisomy of the 21st chromosome that causes excessive protein production, interferes with body growth and brain development, and results in physical delays and learning ability (Irwanto, 2015). Based on the DSM-5 (Association, 2013), this condition is categorized as intellectual disability. Globally, Down syndrome occurs in 1 in 1,000 live births with 3,000–5,000 new cases per year. In Indonesia, Riskesdas data in 2018 recorded 0.21% of children aged 24-59 months experiencing Down syndrome, while in Malang Raya 540 babies were born with this condition.

Children with Down syndrome experience both gross motor (running, jumping) and fine motor difficulties (moving objects, using a clamp grip), as well as obstacles in the regulation of emotions, behavior, and cognitive processing (Alesi & Battaglia, 2019; Mardiah, 2022). This condition has a direct impact on the ability of Activity Daily Living (ADL), which is basic self-care skills such as bathing, eating, dressing, and tying shoelaces. ADL is essential for independence, but children with Down syndrome need special programs and tailored approaches to learn it (Qolbi & Kasiyati, 2019). Children with Down syndrome

have a below-average IQ and take longer to absorb learning, so intervention methods must be adjusted to each child's conditions, needs, and obstacles (Firdaus & Pradipta, 2019).

The subject is a 19-year-old inclusion student at SMKN X Malang City. Based on psychological assessments, subjects have intellectual abilities equivalent to children aged 2–8 years and are currently in pre-school programs. The subject is not able to tie the shoelaces independently and always needs the help of the mother at home, as well as the help of a special assistant teacher (GPK) or peers at school. GPK needs to deliver instructions gradually accompanied by concrete examples at each stage because the subject has difficulty understanding direct verbal instructions.

Behavior modification through chaining techniques is a commonly used approach for children with special needs. Chaining is of three types: forward chaining, backward chaining, and total-task presentation (Habsy et al., 2024). Total-task presentations teach the entire series of behaviors from start to finish in each session, accompanied by prompts at each stage and reinforcement after the entire series is completed (Nugrahanti & Suparmi, 2024). The prompts used can be verbal, gesture, modeling, or physical prompts, and are gradually reduced as the subject's abilities improve.

Compared to forward or backward chaining that focuses on mastering each step separately, total-task presentations provide a more comprehensive picture of skills, accelerate independence, and minimize frustration (Martin & Pear, 2015). Spooner's (1983) research proves that total-task presentation is superior to backward chaining. Various studies have also proven the effectiveness of chaining for self-development skills: backward chaining for fastening clothes (Wibowo & Tedjasaputra, 2019), forward chaining for wearing shirts (Wahyuningsih & Hartiani, 2021), as well as total-task presentations for self-care of children with disabilities (Ayuni & Kusumastuti, 2023) and self-driving skills for ASD children (Edwina & Tjakrawiralaksana, 2018).

The effectiveness of chaining is strengthened by the use of visual learning media. Children with intellectual disabilities are more interested and responsive to visual media (Santrianawati, 2018). The use of learning videos in chaining techniques has been proven to be effective in improving shoelace tying skills in children with moderate intellectual disabilities (Wibowo & Kemala, 2019) and ironing skills in children with mild intellectual disabilities (Maifajri & Rahmahtrisilvia, 2024). In this study, the intervention was carried out by showing a video of the stages of tying shoelaces, followed by a live demonstration using miniature shoes, and direct practice by the subjects on their own miniatures and shoes after school.

Based on the description above, the formulation of this research problem is: how effective is the total-task presentation in improving the ability to tie shoelaces in children with Down syndrome? This study aims to find out whether total-task presentations can improve the ability to tie shoelaces in inclusion students with Down syndrome at SMKN X Malang City. Theoretically, this study is expected to enrich the psychological literature on behavior modification in children with Down syndrome. Practically, the results of the study can be a reference for teachers, schools, and parents in designing appropriate self-development interventions to increase the independence of children with Down syndrome. The hypothesis of this study is that the total-task presentation can improve the ability to tie shoelaces in 19-year-old students with Down syndrome at SMKN X.

RESEARCH METHOD

Research Design

In this research, a type of experimental quantitative approach with a single subject (Single Subject ReseaCRH). According to (Kazdin, 2011) The single-subject research design provides a rigorous method for evaluating interventions by systematically observing behavior under a variety of conditions. In this study, the subjects were (N = 1) students Down syndrome. This study has one variable (X), namely the ability to tie shoelaces with the intervention technique used, namely total-task presentation. The research design used in this study is the A-B-A design. According to Neuman & Mc Cornnick (Prahmana, 2021) The A-B-A design consists of phases baseline (A), treatment phase (B) and phase Follow-up (A). The baseline phase is the phase of behavioral measurement before being given treatment or intervention. Treatment phase (B) is the intervention phase and the intervention phase Follow-up (A) namely the phase after the intervention and the measurement of behavior after being given treatment.

A B A'

Research Subject

The subject in this study is a 19-year-old 11th-grade male student majoring in APHP (Agribusiness Processing of Agricultural Products) at one of the SMKN Malang City who has down syndrome. The subjects in this study were determined using purposive sampling techniques, where the subjects were in accordance with the criteria determined by the researcher. The criteria in this study are Down syndrome children who have difficulty tying shoelaces independently and enter an inclusion class at one of the equivalent high schools/vocational schools. Based on the results of the researcher's assessment at SMKN in Malang City, there are students with Down syndrome and have not been able to tie shoelaces.

As a result of interviews with the school and also parents, students with the initials A have not been able to tie their shoelaces properly, every time they leave for school, A is always assisted by her mother to tie the shoelaces. Likewise at school, after A prays *dzuhur* or is about to go home from school, A is always helped by GPK or his peers to tie his shoelaces. A is only able to use his shoes but cannot tie his shoelaces. So, currently A has not been able to tie his shoelaces and has difficulty tying his shoelaces. Activity daily living A is not optimal because it still depends on the people around him to tie the shoelaces. Based on the Activity daily living aspect used, Activity daily living A's ability has not been maximized, especially in the aspect of self-care seen from the ability to tie his shoelaces. Then, based on the type of daily living activity, the ability to tie shoelaces is included in the type of instrumental daily living activity where the ability to tie shoelaces requires quite long and concrete stages. The following is a table of the characteristics of the subject's intellectual disability.

Table 1. *Characteristics of the subject's intellectual disability*

Yes	DSM 5-TR Intellectual Disability Criteria	Subject Conditions	Yes	No
1.	Academic skills are usually at a basic level and support is required for all skills use and daily life.	Academic skills such as *calistung* are still very basic and need to be learned over and over again with the help of others.	✔	
2.	Social judgment and decision-making skills are limited and need the help of people around them to make decisions	It takes the help of people around you to make decisions by being given choices and elaborations on each choice to make decisions.	✔	
3.	Spoken language is the main tool for social communication but is much simpler than other peers	Because they cannot read and understand abstract things well and optimally, the most effective communication for now is oral language.	✔	
4.	Communication or social limitations	The pronunciation of language or sentences is quite difficult to understand so that during communication there are several sentences or words that cannot be understood by the interlocutor	✔	
5.	Requires additional support and long-term learning opportunities	In *calistung* learning, it takes longer because the material is given repeatedly to be able to understand or recognize what has been learned.	✔	
6.	Can do self-training such as eating and dressing even though it is quite a long time and reminders at all times.	At the time of meals, it is necessary to be reminded that it is time to eat and it takes a long time to eat about 30-40 minutes.	✔	

Source: DSM-5-TR criteria (American Psychiatric Association, 2013) adapted by researcher based on subject assessment, 2024

Research Variables and Instruments

In this study, there is one variable, namely the ability to tie shoelaces as a dependent variable and total-task presentation as an intervention technique used. Total-task presentation is a chaining technique based on analyzing tasks in which, the subject will learn to complete the entire series or steps of a task in each session. Meanwhile, the ability to tie shoelaces is to be able to combine or unite shoelaces into a knot correctly. In the total-task presentation, the subject will complete all the steps with direction and prompting from the researcher during the intervention process until the subject is able to complete all the steps independently. In this study, total-task presentations will be given to improve students' skills in tying shoelaces, through visual media to make it easier for students to understand by displaying videos that show the stages of tying shoelaces in a clear and structured manner and the researcher re-

exemplifies the stages in the video on the miniature shoes that have been provided. Students will be given the task of tying the shoelaces with a total-task presentation and will be assessed based on their ability to complete all stages in tying the shoelaces independently.

Then, the instruments used in this study were interviews with GPK and parents, observations on subjects and Behavior checklist. Behavior checklist the study is designed to record in detail every step in the process of tying the shoelaces that students must do. Each step involved in the process will be recorded in detail, and the researcher will assess whether the student has successfully completed the step correctly or needs further assistance. Based on research and instruments (Wibowo & Kemala, 2019) tying shoelaces on children with intellectual disabilities level moderate With a clear assessment using a yes/no scale, with a value of 1 if not done, a value of 2 if it is done partially, and a value of 3 if it is done perfectly. The success indicators in this study are that each step is given a clear assessment, with a score of 1 not to be done, a value of 2 to be done in part, and a value of 3 to be done perfectly. However, in this study, a yes/no scale was used with a value of 0 if the subject could not complete the stages or still needed it Prompting and a value of 1 if the subject can complete the stages without Prompting.

An instrument or set of behavioral steps tying a shoelace (Wibowo & Kemala, 2019) as follows.

Table 2. *A series of behavioral steps to tie a shoelace*

Step Sequence	Steps in the behavior of tying shoelaces
1.	Crossing the rope
2.	Pulling the rope to make a knot
3.	Completing the first node
4.	Making two circles with the right and left strings
5.	Crossing the two rope circles
6.	Pressing in the middle on the crossed rope
7.	Pulling a rope circle to make a ribbon knot
8.	Completing the second ribbon node

Source: Wibowo & Kemala (2019), modified by researcher for subject's condition, 2024

Based on the shoelace tying instrument (Wibowo & Kemala, 2019), there are several stages that have been revised because they adjust to the subject's ability to understand the instructions for tying shoelaces. The following are the steps to tie the shoelaces that have been revised and listed in the learning video.

Table 3. *Steps to tie the shoelaces on the video*

Stage 1	Stage 2	Stage 3	Stage 4
			
Pull and adjust the length of the shoelaces	Cross the two ropes	Create the first node	Making two circles on the right and left strap
Stage 5	**Stage 6**	**Stage 7**	**Stage 8**
			
Crossing the two rope circles	Pressing the center on the crossed rope	Pulling a rope circle to make a ribbon knot	Pull to tighten the tape knot

Source: Researcher's own work based on modified behavioral steps, 2024; documentation of learning video development

In this study, the validity used is internal validity. According to (Scott, 2019) Internal validity is the validity of the study that addresses the question of the extent to which changes in dependent variables in a study are actually caused by independent variables rather than other variables whose influence is not visible in the study. In this study, the modules compiled and used by the researcher have been carried out Expert judgement to subject-specific assistant teachers and psychologists. The results of the expert judgement are suitable for use with some advice from psychologists and have been adjusted by the researcher. This study looks at the extent to which total-task presentation can improve shoe lacing skills.

Implementation Procedure

This research was conducted in August 2024 - January 2025 starting from the determination of the subject and the initial assessment of the subject to the implementation of intervention and follow-up on the subject. The place of research was carried out in one of the vocational schools of Malang, in the source room with the position of the subject and the researcher sitting on a bench and facing the table in the middle. This research was carried out in three stages, namely the preparation stage, the data collection stage and the data analysis stage. In the preparation stage, the researcher assesses the subjects by making observations on the subjects and conducting interviews with special assistant teachers (GPK) and the subject's parents related to the subject's abilities and daily development both at school and at home.

At the data collection stage, the researcher intervened in a total of three sessions and was given for thirteen sessions with a time of 45 minutes with three treatments per session. The first session was baseline measurement on subjects to measure the ability to tie shoelaces on subjects with observation and behavior checklist based on the stages of tying shoelaces for three consecutive days. The second session is the core or implementation of the intervention

by providing a total-task presentation with visual media video of the stages of tying shoelaces and miniature shoes. The third session is a follow-up which is carried out for three sessions.

In each session during the intervention, if at a certain stage the subject has not been able to perform, the researcher will give prompt. According to Miltenberger (Murpratiwi et al., 2018) that the use of prompt can make the learning process or practice more efficient. Types prompt given in the form of prompt verbal then prompt physical. According to Miltenberger, 2008) in use total-task presentation, researchers are free to use this type of prompting. According to him, in many cases, the total-task presentation is successful by using the type prompt commonly used are prompt physical and verbal. In this study prompt physical when prompt verbal has not helped the subject to perform his or her stages well and if the subject succeeds in performing each stage without prompt, then the researcher will provide Positive reinforcement with verbal forms such as "Good job", "smart" and "very good".

The third session is a follow-up that is carried out three times, namely one day after the intervention, then two weeks after the intervention and one month after the intervention, where the researcher will assess the extent of the subject's ability to tie the shoelaces without prompt after being given the intervention treatment. The following is a table of practical steps during the implementation of the intervention.

Table 4. Practical steps during the implementation of the intervention

No.	Sessions	Steps
1.	*Baseline*	Establish rapport between the researcher and the subject Provide an explanation to the subject about the activity to be carried out Introduce the media/tools to be used during the activity to the subject Provide a shoelace tie test to the subject to find out the extent of the subject's ability to tie the shoelaces
2.	Intervention	**Opening** The researcher greets and asks how the subject is doing. Then, the researcher explained that the researcher and the subject will learn to tie the shoelaces using the learning video, miniatures of lace-up shoes and the subject's own shoes. **Core** In the 4th-13th session, the researcher invited the subjects to listen to the learning video of tying shoelaces. Then, the researcher gave an example or applied how to tie the shoelaces in the video thoroughly by using a miniature of lace-up shoes and the subjects were asked to listen to them. After that, the researcher repeated the shoelaces in the video from stages 1 – 8 and instructed the subjects to apply how to tie the shoelaces in stages 1 to 8. The researcher provides prompting when the subject is not able to perform at that stage. **Closing** The researcher thanked the subject for following the instructions well as a form of appreciation for the subject.
3.	*Follow Up*	**Opening** The researcher greets and asks how the subject is doing. Then the researcher explained to the subjects the purpose of the session 3 activity, namely *the follow-up* or the test of the ability to tie the shoelaces after the intervention activity.

	Core In the 14th session, the researcher asked the subjects to tie shoelaces on a miniature media of lace-up shoes. This was repeated 3 times. Then, the subject continued to use his shoes to tie his shoelaces. **Closing** The researcher thanked the subject for following the instructions well as a form of appreciation for the subject. Then the researcher gave *a reward* according to the initial agreement because the subject had succeeded in tying the shoelaces well.

Source: Researcher's own work based on Miltenberger (2008) and intervention protocol, 2024

The following is a table of time and stages of the implementation of this research.

Table 5. Time and stages of research implementation

Yes	Date / Day	Activities	Remarks
1.	Wednesday, 7 August 2024	Initial Assessment	An assessment was carried out on inclusive students at one of the SMKN in Malang to find out the problems that will be intervened in
2.	Monday, August 12, 2024	Subject observations	Observations were made on students during KBM activities at school from coming to school
3.	Friday, August 16, 2024	GPK Interview	GPK interviews related to student development or activities while at school
4.	Thursday, August 29, 2024	Determination of the subject of the intervention	The subject of the intervention is determined based on characteristics that correspond to the needs of the intervention
5.	Monday, September 2, 2024	Interview of the subject's parents	Interviews of the subject's parents regarding the condition of student development and daily activities, especially at home
6.	Tuesday, September 3, 2024	Determination of the behavior to be intervened in	Determination of what behavior is appropriate for intervention with the consent of GPK and the student's parents
7.	Wednesday-Friday, 4-6 September 2024	Module Setup	Preparation of predetermined behavioral intervention modules.
8.	Monday – Wednesday, 9 - 11 September 2024	Baseline measurements	Baseline measurements are carried out in schools by testing students' ability to tie shoelaces
9.	Tuesday – Wednesday,	Implementation of	Interventions are carried out

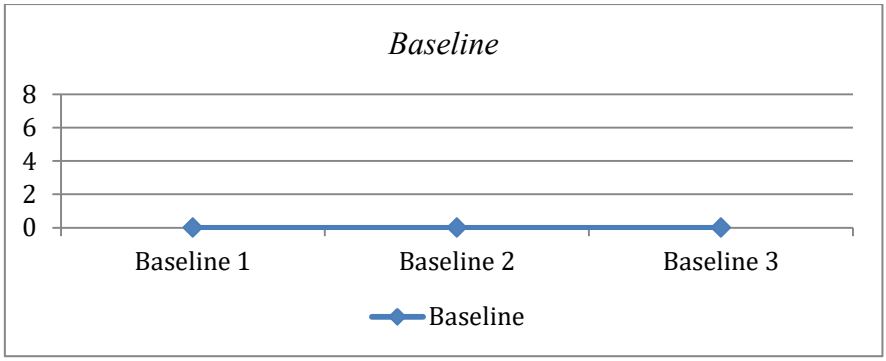
Yes	Date / Day	Activities	Remarks
	17 September - 13 November 2024	interventions	conditionally at certain times in that time span because they adjust to the situation and conditions of the subject
10.	Thursday, 14 November 2024 Monday, December 16, 2024 Monday, January 12, 2025	*Follow-up*	*Follow-up* was carried out the day after the intervention activity was carried out, then for *the next follow-up*, the researcher was assisted by GPK in following *up* related to students' skills in tying shoelaces.

Source: Researcher's own work, documentation of research schedule at SMKN X Malang City, August 2024 – January 2025

The modules used in this study have been carried out *by expert judgement* by subject assistant teachers and psychologists. Furthermore, data analysis was carried out by comparing the results of *baseline* measurements and *follow-up* before and after treatment. The researcher will also describe the development and condition of the subjects as well as the obstacles during the implementation of the intervention.

RESULTS AND DISCUSSION

In this study, the subjects involved were 19-year-old Vocational High School students with Down syndrome. Before administering the treatment, the researcher measured the subject's shoelace binding ability baseline by giving the subject's shoelace tying test three times for three consecutive days. Then, the subjects were given treatment for eighteen sessions. After being given the treatment, the subjects were given a shoelace tying test for 3 sessions for follow-up and found out the improvement in the ability to tie the shoelaces after being given the treatment. The intervention process should be carried out for 45 minutes per session. However, at the time of the intervention, the subjects could only follow the intervention for 15-20 minutes, so the researcher made up for the lack of time by adding more intervention sessions. The shoelace-tying test consists of eight stages with a maximum score assessment of eight and a minimum of zero according to the number of stages, for example, the subject can do stage one, then get a score of one and a score of zero, if the subject cannot do the stages at all, the results of the shoelaces tying test on the subject are as follows.

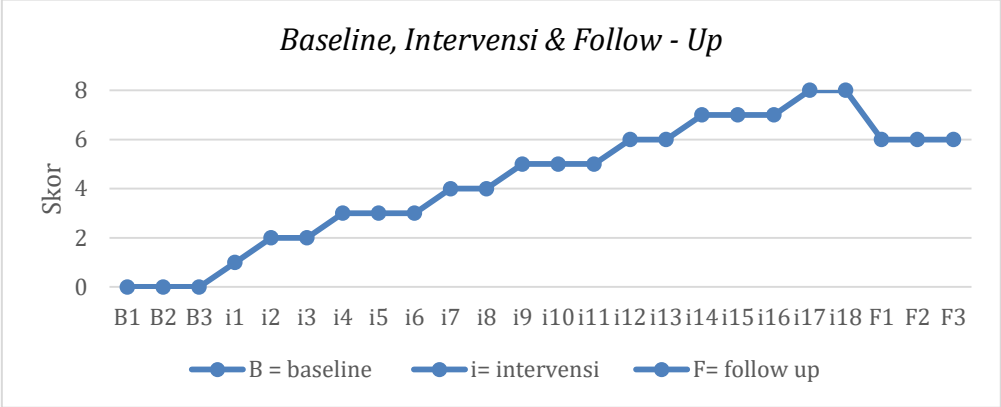


Graphics 1. Baseline score tying the subject's shoelaces
Source: Researcher's data processing from baseline measurement results (sessions 1–3), 2024

Based on the graph above, the subject's score at the time of baseline measurement for three (3) consecutive days was zero (0) out of a total score of eight (8) which means that the subject could not do the stage of tying the shoelaces from the first stage (1) to the eighth stage (8). Subjects scored at the time of three follow-ups with the first follow-up conducted the day after the intervention, the second follow-up was conducted one month after the intervention and the third follow-up was conducted after two months of intervention. During the first to third follow-up activities, the subjects had a consecutive score of six (6) which means that the subjects could tie their shoelaces until the sixth stage out of a total of 8 stages of tying the shoelaces completely. Judging from the results of baseline and follow-up measurements above, there was an increase in shoelace tying skills after being given the original treatment before being given treatment with a score of 0 and after being given treatment with a score of 6 which means that the subject can do the stages of tying the shoelaces up to stage 6 out of a total of 8 stages.

During the intervention, the subjects were given treatment in the form of a learning video of the stages of tying shoelaces and the researcher gave an example of tying the shoelaces in the initial to the end stage with miniature shoe media and applied with a total-task presentation to the subject. Before being given a direct example, the researcher provided a learning video to tie the shoelaces first. Then, each intervention session of the researcher first provided a learning video to tie the shoelaces followed by an example of tying the shoelaces directly by the researcher, after which the subjects were asked to tie the shoelaces on a miniature shoe according to the learning video and direct examples from the researcher. After that, the subject will directly apply the steps of tying the shoelaces every day at school on his personal shoes when the subject finishes performing the *dzuhur* prayer and will go home from school. The researcher prompts the subjects when the subjects are not yet able to perform the steps of tying the shoelaces. The researcher will eliminate prompting gradually when the subject has been able to carry out each step of tying the shoelaces. There was a difference in the instrument in baseline measurement and intervention sessions because the researcher adjusted to the abilities of the subjects at the time of baseline measurement. So that in the intervention session instrument, the researcher adjusted the instrument to the subject's ability to make it easier for the subject to understand the steps to tie the shoelaces. The

researcher makes the first and second steps in detail and detail, making it easier for the subject to understand and process the steps more quickly.



Graphics 2. Baseline score, intervention & follow-up tying the subject's shoelaces
Source: Researcher's data processing from baseline, intervention (sessions 1–18), and follow-up (sessions 1–3) measurement results, 2024–2025

In the first session of the intervention, the subjects watched the learning video, after which the researcher gave a direct example of the steps to tie the shoelaces from the beginning to the end using a miniature shoe, then the researcher asked the subjects to tie the shoelaces on the miniature shoes according to the steps in the learning video and which had been exemplified by the researcher from the beginning to the end. In this session, subjek is still in the early stages of learning. The main focus is to understand the basic steps and try to perform the first steps. The new subject can hold and straighten both ends of the shoelaces, which is the first step. The next step to the end of the subject still requires prompting from the researcher. The prompting provided by the researcher is verbal, modelling and physical prompting at each stage of tying the shoelaces. In this session, the subject's motor ability in the hands is still limited or stiff in the process of pulling and straightening the shoelaces so it requires habituation or consistent practice in tying the shoelaces. With that, the subjects managed to make the first step of tying the shoelaces so that they were entitled to a score of one.

In the second session of the intervention, the subjects successfully completed the first step followed by the second step, it can be seen that the progress of the subjects succeeded in doing the second step, namely by crossing the two shoelaces. The next step is to complete the first knot by inserting one of the strings down and pulling the two strings tightly to make the first knot, the subject still needs prompting from the researcher. The prompting given by the researcher is verbal, modelling and physical prompting at each stage of tying the next shoelaces. With that, the subjects managed to make the first and second steps of tying the shoelaces so that they were entitled to a score of two. In the third session of the intervention, the subjects still survived in the second step, i.e. in the second step crossing the two ropes. The subject attempted to tuck one of the laces down and pull both shoelaces to make a knot, but this still required prompting from the researcher. The prompting provided by the researcher is verbal, modelling and physical prompting at each stage of tying the shoelaces. Even so, there was still a slight improvement by the subjects in the smooth movement of the

hands when crossing the two shoelaces, the subjects still needed verbal, modelling and physical prompting to complete the first knot to the final step. Since the subject can do up to the second step then the subject gets a score of two.

In the fourth session of the intervention, the subjects successfully completed the first and second steps well and began to show improvement by successfully inserting one of the shoelaces pulling tightly and completing the first knot. However, the subject still struggled to maintain the consistency of the node and was unable to proceed to the next step. In this session, the subjects complete the first step to the third step without prompting, so the subject is entitled to a score of three. In the fifth session of the intervention, the subjects managed to complete the first step to the third step and refine and maintain the consistency of the initial node that was successfully done in the fourth session, but could not proceed to the next step, which was to make two circles on the right and left ropes without prompting. In this session, the subjects began to be more confident in pulling the rope even though they still experienced errors in the balance in the rope circle. So, in this session, the subject can complete the shoelace tying step well without prompting until the third step, with which the subject is entitled to a score of three.

In the sixth session of the intervention, the subjects were still trying to perfect the first node, even though the subjects were still trying to perfect the circle by prompting the researcher. In this session, the subject's mood was not good so that the subjects were less enthusiastic in learning to tie shoelaces. With that, the subject still tied the shoelaces in the third stage, so the subject was entitled to a score of three. In the seventh session of the intervention, the subjects managed to tie the shoelaces in the third stage by being able to make the first circle without prompting. However, for the fourth to eighth steps the subjects still need prompting from the researcher. Because in the seventh session the subject can complete up to the fourth step, the subject is entitled to a score of four.

In the eighth session of the intervention, the subjects began to understand the sequence of steps better and showed faster progress than the previous session. Subjects were able to complete the first stage to the fourth stage and improved by being able to make the first circle more stalely. In this session, the subjects tried to cross the two nodes but still needed prompting. With that, in the eighth session, the subjects managed to tie their shoelaces in the fourth stage so that they were entitled to a score of four. In the ninth session of the intervention, subjects completed the first to fourth steps well and successfully crossed both shoelace circles in the fifth stage without prompting from the researcher. In this session, the subjects could not proceed to the sixth stage so they needed full prompting from the researcher. With that, the subjects successfully completed the first stage to the fifth stage so that they were entitled to a score of five.

In the tenth session of the intervention, subjects successfully completed the first stage to the fifth stage of tying the shoelaces without prompting. Then, the subject tried to cross the two circles as the sixth stage but the subject could not so still need prompting from the researcher. With that, in this session, the subjects managed to complete the first stage to the fifth stage so that they were entitled to a score of five. In the eleventh session of the intervention, the subjects were not much different from the previous session. Subjects successfully completed the first stage through the fifth stage tying the shoelaces well without prompting. Then, the subject proceeds to cross the two ribbon circles as the sixth stage

however, the subject is not yet able and needs prompting from the researcher. With that, in this session, the subjects managed to complete the first to fifth stages so that they were entitled to a score of five.

In the twelfth session of the intervention, the subjects successfully completed the first to sixth stages, namely pressing on the middle of the rope that was crossed without prompting. Then, the subject attempted to insert one of the rope circles to become the second knot however, the subject was unable to and still needed full prompting from the researcher. Thus, in this session the subject can complete the first to the sixth stage well without prompting, so the subject is entitled to a score of six. In the thirteenth session of the intervention, the subjects were able to complete tying the shoelaces in the first to sixth stages, namely pressing the middle of the lace that was crossed properly without prompting. Then, the subject tried inserting one of the rope circles to create a second knot but the subject still needed prompting from the researcher. Because in this session the subject was able to complete the first to the sixth stage, the subject was entitled to a score of six.

In the fourteenth session of the intervention, there was an improvement in the subjects because the subjects were able to complete the first stage to the seventh stage, which was inserting one of the rope circles to make a second knot. The subject was able to complete the seventh stage however, the movement of the hand to insert one of the rope circles took longer than the other stages because the motor ability in the subject's hand was stiff enough to insert the circle, even so, the subject managed to complete up to the seventh stage without prompting and may require regular exercise to improve the subject's motor skills. With that, the subjects managed to complete up to the seventh stage so that they were entitled to a score of seven. In the fifteenth session of the intervention, the subjects still survived by being able to complete the first stage to the seventh stage without prompting. In completing the seventh stage, the subject's hand was not as stiff as the previous session when inserting a circle to make a second knot. However, in this session the subjects were not able to complete the knot by pulling tightly to form a perfect knot and required prompting from the researcher. Therefore, in this session, the subject can complete the stages without prompting, namely the first to the seventh stage, so that the subject is entitled to a score of seven.

In the sixteenth session of the intervention, the subjects were still the same as the fifteenth session the subjects were able to complete the stage of tying their shoelaces up to the seventh stage without prompting. Then, the subject is still trying to complete the eighth stage but it is not optimal and requires prompts from the researcher. With that, in this session, the subjects were able to complete the first to seventh stages without prompting so that they were entitled to a score of seven. In the seventeenth session of the intervention, the subjects experienced improvement because they were able to complete the stage of tying the shoelaces in the first stage to the eighth stage or the last stage. The subject was able to complete the eighth stage without prompting, but it did take longer than the other stages because the fine motor skills in the subject's hands were still stiff and required regular practice for the future. With that, the subjects successfully completed all stages of tying the shoelaces from the first stage to the eighth stage so that the subjects were entitled to a score of eight.

In the eighteenth session of the intervention, the subjects watched the learning video, after which the researcher gave a direct example of the steps to tie the shoelaces from the beginning to the end using a miniature shoe, then the researcher asked the subjects to tie the

shoelaces on the miniature shoes according to the steps in the learning video and which had been exemplified by the researcher from the beginning to the end. In this session, just like the seventeenth session, the subjects were able to complete the first stage to the last stage of tying the shoelaces without prompting although it took longer because the subject's hands were still stiff. With that, the subject is entitled to a score of eight. However, after this last session, the subjects need to continue practicing to make a routine and get the ability to tie the shoelaces to the maximum.

In the follow-up session which was carried out for three sessions, namely the day after the intervention, one month after the intervention and two months after the intervention, the subjects were able to complete tying the shoelaces in the sixth step in a row for three sessions so that the subjects were entitled to a score of 6 in the follow-up session. Based on the graph of the results of the baseline, intervention and follow-up above, it was found that the scores obtained by the subjects starting the baseline session, intervention and follow-up experienced a significant increase. Therefore, it can be concluded that total-task presentation can improve the ability to tie shoelaces in children with Down syndrome.

Based on the results of the research carried out, it can be known that total-task presentation effective for improving the ability to tie shoelaces in children Down syndrome. According to research (Neldita Sonya et al., 2024) total-task presentation can also improve Activity Daily Living namely the ability to eat in children Down syndrome. Judging from the increase in the score of baseline and Follow-up, the difference in score occurred due to the provision of interventions that had been carried out. The score always increased during the administration of the intervention, proving that the ability to tie the shoelaces could be applied with total-task presentation. Before the intervention, the researcher measured the subject's ability to tie their shoelaces by asking them to tie their personal shoelaces for three consecutive days as baseline. This is done to ensure that the subject does have difficulty tying the shoelaces.

Furthermore, during the intervention process, the subjects and researchers learned to tie shoelaces using visual media and also shoes belonging to private subjects which were repeated three times per session. According to (Zhan et al., 2018) Repetition during the learning process can improve memory and retain what has been learned. In some children, especially children with Down syndrome have difficulties and some things have to be repeated several times, this is because the child Down syndrome have cognitive limitations. Based on (Komalasari, 2025) Son Down syndrome Experiencing delays in the development of cognitive functions so that they have difficulty in understanding abstract concepts and processing information. In addition, it also has an impact on the child's fine and gross motor development Down syndrome so that it is delayed and takes more time to do Activity Daily Living.

In the intervention session, the subjects got a relatively high or steady score, the score that the subjects had never decreased or decreased. In the first and second sessions, it consistently increased by one score per session. In the second session, the subjects had a little difficulty crossing the rope because the subject's hands were still confused and stiff when crossing the rope, when the process of crossing the rope took a long time but the subject managed to finish. In the third session and until the last session, to complete each stage of tying the shoelaces, the subjects can complete one stage with a range of two to three sessions

in each stage. In the third session, it is still the same as the second session, the subject was able to complete the second stage and could not continue to the next stage because the subject's hands still lacked coordination and were a little stiff when completing the second stage so that the score remained like the second session. This was until the last session of the intervention, however, there was still little improvement in hand coordination and it was not as stiff as in the previous session when tying the shoelaces.

Children Down syndrome experiencing difficulties in fine motor development, one of which is hand movements. In line with opinion (Paula et al., n.d.) that the child with Down syndrome have low motor skills. Next, in the Follow-up a total of three sessions. Sessions Follow-up The first is carried out the day after the implementation of the intervention, the subjects can complete the first stage to the sixth stage. Sessions Follow-up The second is carried out one month after the implementation of the intervention, the subjects can complete the first to sixth stages. Then, the session Follow-up The third or last is carried out two months after the intervention session and the subjects successfully complete the stage of tying the shoelaces in the first to sixth stages. Based on results Follow-up With three sessions, it can be concluded that the subjects can complete the stage of tying the shoelaces in the first to the sixth stage, which means getting a score of six.

The visual media used is a learning video of the stages of tying shoelaces and miniature shoes. Based on (Horn, 2018) that with learning videos succeeded in improving the ability to Activity Daily Living in children with special needs. In this study, the subjects will be asked to observe the learning video of the stages of tying shoelaces, after which the researcher will apply the stages of tying the shoelaces in the learning video to miniature shoes from start to finish. After that, the researcher will ask the subjects to apply the stages of tying the observed shoelaces on the miniature shoes that have been prepared for three experiments. The subjects were less interested when learning to tie shoelaces using their personal shoes because the weight of the shoes was heavy and black which caused the subjects to have difficulty in making knots on the shoelaces. Thus, the researcher used a miniature of brightly colored shoes, namely green shoes and yellow shoelaces as an alternative to attract the interest and enthusiasm of the subjects in learning to tie shoelaces. Based on (Laeeque & Akmal, 2017) that cool and warm colors such as green, blue, orange, red and yellow positively increase children's motivation to learn. Based on this, the subjects were interested in learning to tie shoelaces using miniature shoes with a brighter color than the color of their shoes.

If during the intervention the subject has not been able to complete the stages properly, the researcher will provide assistance in the form of Prompting verbal, prompting then gesture Prompting physical. Prompting physical given when Prompting gestures and verbal are not enough to help the subject to complete the stages of tying the shoelaces. This is applied until the final stage of tying the shoelaces if the subject has not been able to complete the maximum to improve and train the subject's independence in tying the shoelaces. When not given Prompting then the subject will experience dependence on the people around him to do Activity Daily Living especially on tying shoelaces. In line with (Murpratiwi et al., 2018) that by giving Prompting aims to encourage the emergence of desired behaviors, thus training the subject to solve independently. Without Prompting, the subject will have difficulty understanding and completing the steps of tying the shoelaces, so the learning process

becomes slower. Therefore, Prompting plays an important role in facilitating the learning process so that children can master the steps more optimally.

At each stage, if the subject successfully completes without Prompting then the researcher gives Reinfocer In the form of sentences "Good job", "great" and "smart" to motivate the subject to complete the next stage. According to (Martin & Pear, 2015) Giving Reinforce Directly after the subject completes the task can increase motivation and speed up the subject's learning process. In the intervention session, the subjects smiled and were more excited when the researcher gave a sentence Reinfocer and conveyed that if they can complete the stages to the end, they will get Reinfocer in the form of chocolate and chocolate variants of the subject's favorite. In line with (Peterson et al., 2016) that the child will give rise to a higher response when getting Reinfocer his preferences or those that suit his wishes.

Then, in the last session of the intervention, the subjects will be given another shoelace tie test which will be used as a score Follow-up during three sessions with a span of one day after the implementation of the intervention, one month and two months after the implementation of the intervention. This is done to see the success and the extent to which total-task presentation in improving the ability to tie the shoelaces consistently or not over a long period of time on the subject. In addition, Follow-up It is also carried out to evaluate or determine follow-up after the intervention is carried out. Based on (Malak et al., 2024) Follow-up must be carried out after the intervention activity to determine follow-up by the therapist or parents in the future in children who have delayed motor development.

In this study, total-task presentation used with video media learning to tie shoelaces and shoe minus. The ability to tie the shoelaces on the subjects improved after the implementation of the intervention total-task presentation with learning video media and miniature shoes. This shows that total-task presentation succeeded in improving Activity Daily Living children with special needs, especially in improving the ability to tie shoelaces. In line with research (Safitri et al., 2019) that total-task presentation can improve the ability to build self-eating in children with intellectual disabilities after being applied total-task presentation. Application total-task presentation with visual media, namely learning videos and miniature shoes, this study succeeded in helping the subject, namely children Down syndrome in improving the ability to tie shoelaces. In accordance with research (Magdalena & Madjid, 2018) successfully implemented total-task presentation with a video of the stages of learning in wearing a t-shirt without buttons.

Research using total-task presentation with visual media to enhance Activity Daily Living not much has been done. Many studies state that visual media can increase learning motivation in children with special needs. One of them is according to research (Puspitaloka et al., 2022) that visual learning media can improve the development of children with special needs, namely the disabled. Therefore, the researcher uses visual media to apply total-task presentation in this study. However, the implementation of this intervention was only carried out in schools without the direct involvement of the subject's parents so that there were things beyond the control of the researcher when outside the school. Involving parents in child intervention Down syndrome It needs to be done to facilitate its capabilities. In line with (Fauzi & Darmiyanti, 2024) that parental involvement is very important in improving the development of children with special needs both physically and socially, so that the implementation of interventions is more controlled and optimal to achieve the desired goals.

In addition, the number of subjects in this study is still minimal, so it needs to be proven again with a larger number of subjects to test total-task presentation in improving Activity Daily Living especially in the ability to tie shoelaces.

CONCLUSION

Based on the results of the research that has been conducted, it can be seen that the total-task presentation has succeeded in improving the ability to tie shoelaces in children with Down syndrome. It is evidenced by the difference in baseline and follow-up scores obtained. Many studies have used the chaining method to improve the ability of daily living activities of children with special needs, especially tying shoelaces. However, there are still few studies that use the total-task presentation type chaining method with learning video media and miniatures to improve the ability to tie shoelaces, especially in children with Down syndrome. The suggestion from this study, for future research that will research on the same topic is expected to use the media of shoe monitors, it is recommended to use bright colors to make it easier and interesting for the subject to learn to tie shoelaces. Then, the next researcher is also expected to apply total-task presentations to other daily living activities in addition to tying shoelaces. In addition, during the research process, it is expected to involve the subject's parents to control the condition of the subjects while at home.

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