

FLOORTIME APPROACH: CAN IT IMPROVE THE LEARNING OUTCOMES OF SIDE-ROLLING EXERCISES FOR AUTISM SPECTRUM DISORDER STUDENTS?

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Abstract

The study aims to analyze the Floortime Approach to Improving Side-rolling Learning Outcomes in Adaptive Physical Education Learning in Autism Spectrum Disorders (ASD) Students. This study is a class action study. Research is conducted in 2 cycles, while each cycle has four components (planning, action, observation, and reflection). The study participants were two students of grade II ASD (ages 9 and 10 years old (M = 9.5) at the Extraordinary School "X". The instruments used in the study were the results of side-rolling learning tests, student participation observation guidelines, teacher performance observation guidelines, and documentation of the learning process. Data analysis uses three stages and is accompanied by the calculation of success indicators. The results of a cycle I score have shown an increase in ability but have not been able to reach KKM. The next step is to take action on cycle II. The results of score in cycle II increased, from 2 both students who received learning treatment with a floortime approach. Therefore this approach can be used to improve side-rolling learning outcomes in ASD students' adaptive physical education learning. The contribution of this research is that the teacher or reader can adapt the design of ASD learning.

Key words: adaptive physical education, autism spectrum disorder, floortime approach, student.

Introduction

People with disabilities have the same right to education (Burhaein, 2020b; Burhaein, Demirci, et al., 2021; Moriña, 2017; P. Purwanto, Lumintuarso, et al., 2021). Children can follow learning like normal children, some children are unable to follow, namely those who have intelligence below average. The condition of deaf children who have physical limitations greatly affects their learning outcomes (Burhaein, 2017a; Burhaein, Ibrahim, et al., 2020; Sedlak et al., 2010), especially in the field of adaptive physical education rolled sideways (Burhaein, 2017b, 2020a, 2021). They are very difficult in doing activities related to their physical even though the activities carried out have been adjusted to their conditions.

In addition, the low student learning outcomes in adaptive education are due to the learning process dominated by traditional learning (Francisko & Puspitawati, 2013; Hakim et al., 2018; Phytanza & Burhaein, 2020). In this traditional learning, the classroom atmosphere tends to be teacher-centered learning so that students become passive. In this case, students are not taught learning strategies that can understand how to learn, think, and motivate themselves. This problem is often found in classroom teaching and learning activities (Burhaein, Demirci, et al., 2021; Garrett & Shortall, 2002; Phytanza, Burhaein, & Pavlovic, 2021). Then it is necessary to apply learning strategies that can help students in

understanding learning materials.

Interesting learning activities should be able to involve students in every activity and teachers can encourage students in learning so that students become more active to be able to discover something from what they learn. The K13 curriculum requires that learning essentially not only study concepts, theories and facts but also applications in everyday life (Burhaein, Phytanza, et al., 2020; Nurdyansyah & Fahyuni, 2016; Putra et al., 2021). Thus the learning material is not only composed of simple things memorized and understood but also composed of complex materials that require analysis, application, and synthesis. For this reason, teachers must be wise in determining the right approach so that the learning process can take place following the expected objectives (Ardian et al., 2019; Musfiqon & Nurdyansyah, 2015; Phytanza et al., 2018).

There are many types of disabilities, one of which is child Autism Spectrum Disorders (ASD). ASD children have differences from other types of disabilities, although some characteristics have similarities in certain disabilities. According to DSM-V (American Psychiatric Association, 2013; Demirci & Phytanza, 2021; Pramantik, 2021) broadly the characteristics of children ASD are described as follows:

- 1) Persistent deficits in social communication and social interaction in certain contexts that occur today or psychological history.

- 2) Limited and recurrent patterns of behavior, interests, or activities, that occur currently or psychologically history.
- 3) Symptoms should exist in the early developmental period (but may not fully manifest until social demands exceed limited capacity, or maybe masked by strategies learned later in life).
- 4) Symptoms cause clinically significant impairments in social function, work, or other important areas.
- 5) This disorder is not better explained by intellectual disability (intellectual development disorder) or delay in global development. Intellectual disability and ASD often occur simultaneously. To make a diagnosis of ASD comorbidities and intellectual disabilities, social communication must be below that expected for the general level of development.

Seeing special characteristics in ASD children will affect the learning aspect of adaptive physical education (APE) in schools. APE learning in ASD children is certainly different from learning in general (Burhaein, Tarigan, Budiana, Hendrayana, Phytanza, Demirci, et al., 2021; Mumpuniarti et al., 2021; P. Purwanto, Nopembri, et al., 2021). APE given to ASD children is certainly programmed with different conditions compared to other types of disabilities. APE learning in ASD children pays attention to three things, namely assessment, activity selection, and instructional and management techniques (Burhaein, Tarigan, Budiana, Hendrayana, Phytanza, Demirci, et al., 2021; P. Purwanto, Nopembri, et al., 2021; Winnick & Porretta, 2017).

The first is **assessment**. When starting an assessment, it's important to start with an activity that your child understands and is capable of and then move on to more difficult tasks. It is also important to understand the qualities that hinder or improve performance. This approach enables early success and better compliance during the assessment. The second is the **choice of activity**. When choosing activities for ASD children, the most important consideration is the needs and interests of learners and their families. In addition, the functional value of the activity must be taken into account. Activities that have a high chance of success for ASD children are generally more individual, such as swimming, running, and bowling. However, no one should assume that children with ASD cannot participate and enjoy team sports. The third is **instructional and management techniques**. Teachers need to build relationships with students, develop trust, convey information clearly and concisely, and provide reinforcement and feedback to help shape appropriate motor and social behavior. Specific strategies that are proven to help in teaching and managing students.

Based on initial observations (introductions) on the extraordinary school "X" especially class II (two) on ASD disabilities in adaptive physical education subjects rolled sideways spelled out as follows 1) factors that affect the low learning outcomes of students are the presentation of material that is not

interesting, 2) material seems monotonous i.e. teacher-centered learning, 3) lack of teacher attention to students such as lack of guidance, and 4) direction to students, lack of appreciation for students such as reward and punishment.

Based on the problems that have been raised above, efforts are needed to solve them. The existence of appropriate learning strategies can help students with ASD types to improve student learning outcomes in the field of adaptive education (Burhaein, Tarigan, et al., 2020; Phytanza & Burhaein, 2019; Purnomo et al., 2019; Verschuren et al., 2012). The learning strategy is Floortime.

Floortime, literally translated as 'time on the floor' or interactive play, is an interactive approach based on the strength of relationships and family structure; and uses systematic relationships to help children through the stages of emotional development (Wieder & Greenspan, 2003). The main principle of Floortime is to try to take advantage of every opportunity that arises to interact in a way tailored to the stage of emotional development. Interaction is expected to start from the child's initiative, the child is considered a leader and we follow their interests. Based on the urgency of this research, the following research question raises "Can the Floortime Approach Improve Learning Outcomes Side-rolling Exercises for Students with Autism Spectrum Disorders?".

Methods

Research Method

The approach used in this research is quantitative, while the type of research used is class action research (PTK) (Burhaein et al., 2022; Kothari, 2004; S. Purwanto & Burhaein, 2021). Class action research is conducted in collaboration. Collaborative research, which performs the actions of teachers or researchers, and who act as observers are collaborators. This research uses the research design of the Kemmis & McTaggart action research model (Kemmis & McTaggart, 2005).

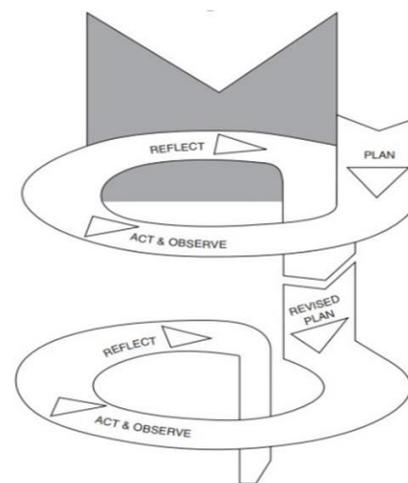


Figure 1. The Action Research Spiral (Kemmis & McTaggart, 2005).

Participants

The subject of the study is the individual who will be subjected to action (Demirci & Phytanza, 2021; Fraenkel et al., 2012; Pramantik, 2021). The research subjects in this study were grade II ASD students of the Outstanding School "X". The number of subjects in class II is 2 (two) students in one class. Ages 9 and 10 (M = 9.5). Here are the characteristics of the two students:

1. The subject was a child with an ASD disability type. Anak ASD dibuktikan dengan tes psikologis dan sesuai dengan karakteristik pada DSM-V.
2. Subjects have low learning outcomes especially on the ability to roll sideways in adaptive tailoring learning.
3. There is one male subject (age = 9 years) and 1 female subject (age = 10 years).
4. Participants are still not able to be in a good sitting position.

Researchers should condition participants by paying attention to syntax or general guidelines in the floortime approach. (Greenspan & Wieder, 2009; Mumpuniarti et al., 2021; S. Purwanto & Burhaein, 2021), among others:

- 1) Find a time where you are sure there will be no interruptions for 20-30 minutes with him. How often sessions are done depends largely on the child's needs and the parents' 'busyness', but ideally 8-10 times a day.
- 2) Try to always be relaxed and patient, unhurried and looking confident. If you feel impatient, unsure, unsettled, worried, etc., then the child will immediately feel it and become unsettled as well.
- 3) Empathize with the child's emotional tone, show him/reveal it so that he feels understood and will make a good relationship with him.
- 4) Be wary of your feelings as it will greatly affect the interaction.

Table 1. Side-Rolling Exercises test instrument grid.

Indicator	Sub Indicator	No Item (Problem)
Side-Rolling Exercises	a. Supine body position	1
	b. The body position	2 – 3
	c. Hand position	4 – 5
	d. Position of the foot	6-7
	e. Head position	8-9
	f. Prone position	10

Note: value (3) = without assistance; value (2) = with verbal assistance ; value (1) = with verbal and physical assistance ; and value (0) = unable to move. Score = $\frac{\sum score}{10} \times 100\%$.

The categorization of achievement achievements according to (Purwanto, 2012), in Table 2:

Table 2. Categories of Achievement Assessment of Learning Outcomes Side-Rolling Exercises.

.Mastery level	Value of letters	Predicate
86 – 100 %	A	Very good
76 – 85 %	B	Good
60 – 75 %	C	Medium
55 – 59 %	D	Low
≤ 54 %	E	Very Low

For example, when being upset becomes too demanding, if depressive and unhappy makes the child unenthusiastic, etc.

- 5) Monitor your tone of voice and gestures, try as much as possible 'passionate, joyful, playful, supportive so that it can arouse the child's interest to play with you.
- 6) Follow your child and develop interactions as long as possible. Think all of his behavior is meaningful and is an opportunity to develop two-way communication.
- 7) Interacting according to the level of emotional development he achieves, but also encourages him to enter the next stage of development, interacting in a range that changes, depending on the circumstances, actions, and reactions of the child.
- 8) Whatever the child wants to do should be allowed, as far as it does not violate the basic rules of not hitting, damaging, hurting. If he does aggressive things because he is overwhelmed, calm him down with the Systematic Instruction (SI) method with a firm but still calming attitude.

Instruments

The instruments used in the study were side-rolling learning outcome tests, student participation observation guidelines, teacher performance observation guidelines, and documentation of the learning process (Fraenkel et al., 2012). The instrument has been corrected by two experts in gymnastics learning in children with disabilities. The instrument to be used will be described as follows:

The test learning outcomes of Side-Rolling Exercises The ability rolls sideways with a floortime approach in the adaptive learning of grade II ASD students at the "X" Outstanding School. The test is done before the action (pretest) and after the action (posttest). The grid test instruments of side-roll learning outcomes in 1st grade ASD students using the floortime approach are as follows:

Observation Guide for Student Participation

Observation of student participation is done using observation guidelines. The observation guidelines contain aspects that will be assessed.

Researchers just fill the score range according to the conditions by giving a tick. The following is a guide to observing the participation of ASD children.

Table 3. Guidelines for Observation of ASD Student Observations.

Variable	Indicator	Item no
Student participation	Read the prayer with a good attitude	1
	Noting the material explanation of the teacher.	2
	Following the instructions.	3
	Simulate sideways movement	4

Source: Data Primer

Based on the score obtained by the child, the criteria for observing the participation of deaf children can be made into 5 score ranges, in Table 4 .

Table 4. Category for Student Participation.

Score	Percentage	Category
51 - 60	85 % - 100 %	Very good
41-50	68, 3 % - 83, 3 %	Good
31-40	51, 67 % - 66, 67 %	Medium
21-30	35 % - 50 %	Low
10-20	16, 67 % - 33.3 %	Very Low

Source: Data Primer

Teacher Performance Observation Guide

Table 5. Teacher Performance observation guide in the Side-Rolling Exercises with a Floortime Approach.

No	Activity	Implementation		Information
		Yes	No	
Preliminary Activities				
1	Conditioning students and checking student attendance			
2	Deliver the topic to be discussed			
3	Deliver learning objectives			
Core Activities				
4	The teacher explains the bolster material to the side			
5	The teacher gives an example of a side-rolling motion			
6	The teacher gives a briefing while the students make a side-rolling motion			
7	The teacher gives praise to students who follow the learning well			
8	The teacher gives punishment to students who do not participate in learning well			
Closing Activity				
9	The teacher allows students to ask incomprehensible questions.			
10	The teacher announces the results of the points obtained by students and closes the learning process by praying			
TOTAL				

Source: Data Primer

Data Collection Technique

Research is conducted in 2 cycles, while each cycle has four components. These components are planning, action, observation, and reflection (Kemmis & McTaggart, 2005). The stages of implementation are as follows:

1. *The planning phase*, this stage begins with the initial planning, materials, learning scenarios, and preparation of the Learning Implementation Plan (RPP). Activities carried out include: 1) make pretest problems by the material to be taught; 2) determine the material and theme; 3) Set up media; 4) Establish basic competencies and establish indicators based on basic competencies;

- 5) Prepare guidelines observing student activities in the form of checklists.
2. *The implementation phase* is the application of planning that has been prepared. The action is done twice in each cycle. At this stage, the researcher is assisted by collaborators who act as observers. Implementation measures refer to the RPP that has been created. The implementation plan is as follows: 1) **Initial activities**, condition students to start learning, open lessons by praying and greeting with a warm attitude; 2) **Core activities**, teaching side roll activities include preparation of hand position, sitting position, foot position, and head position, and 3) **Final activities**, calling back previously learned

materials and checking students' understanding of learning materials.

The implementation of each meeting in one cycle is 60 minutes, assuming the first 10 minutes for the initial activity, 40 minutes for the core activity, and the next 10 minutes for the final or closing activity. The teacher gives a post-test question at the end of the cycle in the form of a simple side roll. It is expected that students' abilities can increase in doing side-rolling.

3. *Observation phase*, observation is done to observe the ability to roll to the side of the ASD child. Observations are made using observation instruments. The data revealed is the ability of children in doing side roll movements.
4. *The reflection phase* is a discussion activity between researchers and collaborators. Reflection is done to assess the success of the actions that have been done. If the result of the action is declared successful then the action will be stopped. But if the results of the action have not reached the goal, then the action is carried out in the second cycle. Things that are done at this stage are: 1) Discuss the results of the application of Floortime to improve side-rolling learning outcomes in adaptive learning of grade I ASD students. This is obtained from the results of sideways activity ability tests and observation. 2) Create a plan of next action, by the results of reflection.

Statistical analysis

The following are the data analysis steps in this study which were adapted from (Kemmis & McTaggart, 2005):

1. **The first step** is the reduction of data according to the focus of the problem. At this stage, researchers grouped the data according to the problem, data in the form of data tests of the ability of ASD child side bolts. Child observation data, teacher performance observation data. Then the data is grouped based on qualitative and quantitative data.
2. Quantitative data is obtained based on test data

(post and pre-action). Qualitative data is based on observational data. Documentation data is used to describe the conduct of research and support data obtained through observation.

3. Implementation in **the second step** in the form of describing the data obtained so that it is more meaningful. The data in this study is described and analyzed in the form of observational data. This observational data is analyzed and described to describe side-roll activities in adaptive tailoring learning with a floortime approach and related to teacher performance and student participation in ASD.

In this stage, researchers calculate quantitative data in the form of an increased percentage of ability to roll sideways obtained through pre-action tests and post-action tests. The increase in learning outcomes is calculated by the formula: Increase = (post-action score - pre-action score) x 100%.

4. **The third stage** is to conclude. The inference is done by testing hypotheses based on the description of research and discussion. Successful decision-making or failure of action taken based on hypotheses concerning success criteria.

This research is declared to meet the success criteria if there is an increase in learning outcomes rolling sideways on adaptive tailoring learning with a floortime approach in grade II ASD students. If learning outcomes roll sideways on adaptive tailoring learning with the ASD child's Floortime approach can reach 75%. This criterion is obtained based on the Minimum Completion Criteria (KKM) of physical education, sports, and health (PJOK) subjects that have been determined in advance. At that time the granting of action was stopped by the researchers. The results of learning to roll aside on adaptive tailoring learning with the floortime approach of ASD children are then assessed according to category. Here are the rating categories according to (Burhaein, Tarigan, Budiana, Hendrayana, Phytanza, Lourenço, et al., 2021; Nanda et al., 2021; Phytanza et al., 15 C.E.).

Table 6. Criteria for Mastery of Material.

Mastery Level (%)	Category
86-100	Very good
76-85	Good
60-75	Medium
55-59	Low
≤ 54	Very low

Results

Improving Learning Outcomes to Side-Rolling Exercises with the Floortime Approach in Cycle-I

Based on post-cycle I test results, students' ability to roll sideways on adaptive physical learning Based on

post-cycle I test results, Side-Rolling Exercises on adaptive physical education improved compared to tests conducted on pre-action tests. More details can be seen in table 7.

Table 7. Pre-Action & Post-Phase I.

No	Subject	Pre-Action Test		Post-Phase I		Enhancement
		Score	Achievement	Score	Achievement	
1	"D"	13	43.33%	18	60.00%	16.67%
2	"R"	15	50.00%	20	66.67%	16.67%
Average			46.67%		63.34%	16.67%

The above results are then presented in visual form through the pre-action results graph & Post-Cycle I.

For more details related to the appearance of the presentation of data, it can be seen in the graph in figure 2.

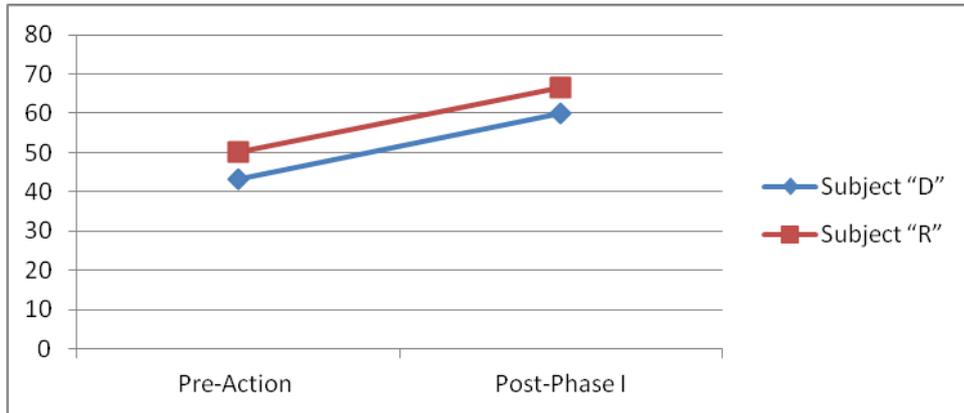


Figure 2. The outcome of the Side-Rolling Exercises Achievement in Pre-Action and Post-Action I.

Improving Outcomes to Side-Rolling Exercises with the Floortime Approach in Cycle-II

Based on the results of data collection at the post-cycle stage-I obtained an average of both participants by 63.34%. Then at the stage-I cycle, the average of both participants was 85.00%. At this stage, there has been an increase in learning outcomes with an

average of 16.67. Results in cycle II showed that both students had achieved learning outcomes according to the percentage of KKM of 75%. This means that the student's learning outcome score has reached the specified standard of learning completion. The results of the score can be seen in table 8 and figure 2.

Table 8. Post- Phase I & II.

No	Subject	Post-Phase I		Post-Phase II		Enhancement
		Score	Achievement	Score	Achievement	
1	"D"	18	60.00%	26	86.67	26.67%
2	"R"	20	66.67%	25	83.33	16.67%
Average			63.34%		85.00%	21.67%

The above results are then presented in visual form through the Post-Cycle I & II results graph. For more

details related to the appearance of the presentation of data, it can be seen in the graph in figure 3.

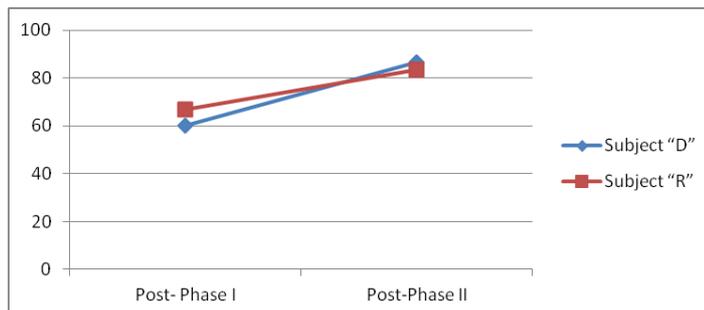


Figure 3. The Outcome of the Side-Rolling Exercises Achievement in Post-Action I and Post-Action II.

Improving Learning Outcomes to Side-Rolling Exercises with the Floortime Approach in Cycle-I & Cycle II

Side-Rolling abilities of ASD students improve from cycle I to cycle II. This can be proven by the improvement experienced by students in sideways learning, namely behavioral changes in Side-Rolling learning and changes in learning outcomes. Behavioral changes in learning can be seen from the activeness of students in the following learning.

Students who initially lack confidence become more confident when moving elsewhere by rolling sideways. Students also show a positive response when teachers encourage students by giving praise and motivation. Increased changes in the learning outcomes of grade II students with ASD disabilities were indicated by Side-Rolling scores at the end of the cycle. The percentage of ability scores rolls to the side of grade II ASD students, on pre-action tests, after cycle I actions, and after cycle II actions are presented in table 9.

Table 9. Pre-Action, Phase I, & Phase 2.

No	Subject	Pre-Action		Phase I		Phase II	
		Score	Achievement	Score	Achievement	Score	Achievement
1	"D"	13	43.33%	18	60.00%	26	86.67
2	"R"	15	50.00%	20	66.67%	25	83.33
Average			46.67		63.34%		85.00%

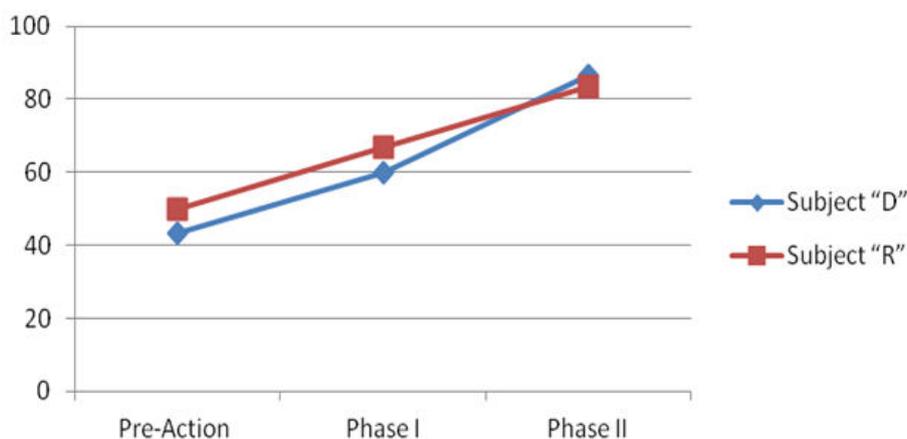


Figure 4. The outcome of the Side-Rolling Exercises Achievement in Pre-Action, Post-Phase I, and Post-Phase.

The results in table 9 above are then presented in visual form through pre-action, post-cycle I, and post-cycle II result in charts.

For more details related to the appearance of the presentation of data, it can be seen in the graph in figure 4.

Improvements in side-roll learning outcomes in grade II students' adaptive learning increased from pre-action tests, post-cycle I tests, and post-cycle II tests. The "D" at the time of the pre-action test reached 43.33% rising to 60.00% in post-action I and increasing again to 86.67% in post-action II. "R" earned an achievement score of 50.00% in pre-action, increased to 66.67% in pre-action I, and increased again in pre-action II to 83.33%. The results of the floortime approach test obtained by the above students showed the student's ability in terms of side rolls experienced a satisfactory improvement.

Discussion

The application of the floortime approach in improving the learning process, especially in

adaptive physical education subjects and other subjects in general.

Children with autism more often experience stress and tension in social situations that trigger anxiety (Burhaein et al., 2022; Pusponegoro et al., 2016; Winnick & Porretta, 2017). As a result, children with autism need more time to adapt or adjust. In addition to experiencing a period in social competence, they also have sensory problems.

Hypersensitive conditions in autistic children are part of the sensory malfunction of integration or inability to process information from the outside through the senses (Jannah et al., 2021; Phytanza, Burhaein, Lourenço, et al., 2021; Sulistianoro & Setyawan, 2021). Malfunctions occur within the central nervous system. So he's processing information that's different from ours. Hypersensitive to the sounds, the rays, the crowd, which makes their world uncomfortable.

When the body becomes over warm (hotter), the child will become aggressive and irritable. Autistic children tend to rage more easily because they cannot convey what their body feels.

Individuals with ASD often experience interference in the registration process. They sometimes misrepresent and differentiate, so the response that appears is very excessive. On the other hand, they sometimes ignore, so often they do not respond to the input received.

The part in the brain, the limbic system, regulates the input registration system and is then forwarded to the next process (orientation, interpretation, organization, and execution) (Irawan & Limanto, 2021; Phytanza & Burhaein, 2019; Widodo & Najibuzzamzam, 2021). If there is a disturbance in this limbic system, the registration process will be disrupted. Sensory Integration dysfunction is the brain's inability to process information received from sensory devices efficiently, hypersensitive children will seek less stimulation and hypersensitive children will seek more stimulation (Azizah & Sudarto, 2021; Phandinata et al., 2017; Widiyono & Mudiono, 2021). Difficulty processing incoming sensory inputs or overreactions to a stimulus are some of the hallmarks of sensory integration disorders.

If sensory inputs function inappropriately, one will interpret the world differently. This misperception will lead to various behavioral and developmental disorders. Sensory itself translates as a process of how the brain receives and processes a person's experiences into real life (Phandinata et al., 2017; Williams et al., 2009). The problems faced by autistic children include sensory hypotensive. Sensory hypersensitive is a condition in which the stimulation received by the Central Nervous System (CNS) should be sufficient but is considered excessive. So that children tend to refuse or protect themselves. Another problem is sensory hypersensitive. Conditions where the stimulation received by CNS should be sufficient but felt less. Children tend to look for stimulation. The child appears active and always moving.

Sensory integration theory describes how the brain receives and processes sensory stimuli or inputs from the environment around us and from within our bodies. If a child can process sensory inputs properly, he or she will behave adaptively. However, if a child is unable to process sensory input properly, then the behavior that arises is that the child will respond excessively to an input that is not harmful or the child ignores the incoming input (maladaptive behavior). Floortime for autistic children is play therapy with a sensory integration approach. Playing in the form of floortime is very interesting, light and fun, so it is highly expected by students. The friendly, warm, communicative, sympathetic, "motherly" or "attractive" teacher factor is very beneficial for creating a learning situation conducive to an autistic child. With Floortime, we want to enter the child's world, follow his direction by appreciating himself as an individual, along with the child inviting himself to enter into the world of sharing with us, and out of

his world (Azizah & Sudarto, 2021; Irawan & Prayoto, 2021; Phandinata et al., 2017). The purpose of implementing floortime, among others, encourages the emergence of attention and familiarity, two-way communication, encourages the expression and use of feelings and ideas, and logical erosion (Wieder & Greenspan, 2003). Floortime will help children who have academic problems and behavioral disorders, such as emotional control difficulties, psychiatric disorders such as anxiety and depression, and a diverse spectrum of autism. The selection of the floortime approach allows children to play with teachers interactively according to the student's ideas because unmastered play skills can be a trigger for the emergence of frustration that can later be realized in various aggressive actions.

Teaching a variety of skills that children need in everyday life will not only suppress their feelings of frustration but will also suppress the tendency to attack. The floortime method is emphasized spontaneity and a pleasant atmosphere (Metzler, 2017; Scharoun et al., 2017). In its implementation, it creates continuous interaction and communication. The floortime method is a way of building interactions based on children's interests in a fun way to connect emotions, behaviors, and words without coercion, children have an active role in their development. The floortime method aims to help children develop their emotional, cognitive, motor, language, and social skills. With floortime can develop all the potential of children, namely: Sensory involving seven sensory systems, motor skills both gross and smooth, non-verbal, verbal, expressive, receptive communication. Emotional and social: accepted, loved, appreciated, confident, empathetic, cooperation. Creativity is composing, drawing with elements of imagination and stories. Cognition, problem-solving, logical thinking. Develop emotional closeness between the teacher and the child. As well as developing a healthy mental character. The child feels and engages with the input around him (sensory enriched).

The function of the therapist/teacher is as a facilitator and the child who determines the direction/desire. This principle distinguishes sensory integration therapy from the behaviorist therapy (ABA) approach (Schunk, 2014). The data obtained showed a significant decrease in aggressive behavior after using the floortime method. This is evidenced by the results of this study found that Side-Rolling Exercises Achievement in Pre-Action, Post-Cycle I, and Post-Cycle II has increased in each cycle.

The results of this study are supported by previous research on floortime and aggressiveness as has been done before by Riska Wijaya and StellaTirta (2018) with the findings that there is a positive and significant influence between the provision of play activities to decrease the aggressive level of

ASD students. Then the results of the case study (Phandinata et al., 2017) showed results that the Floortime method was proven to be able to improve two-way communication aimed significantly at students with Autism Spectrum Disorder.

Conclusion

The application of the floortime approach in improving the learning process, especially in adaptive physical education subjects and other subjects in general. It also affects the ability to topple ASD students of grade II Outstanding School "X" which is also increasing. This study was conducted in two cycles. The results of a cycle I score have shown an increase in ability but have not been able to reach KKM. The next step is to take action on cycle II.

The results of score in cycle II increased, from 2 both students who received learning treatment with a floortime approach.

Therefore this approach can be used to improve side-rolling learning outcomes in ASD students' adaptive physical education learning. The contribution of this research is that the teacher or reader can adapt the design of ASD learning. Children with a basic time approach to adaptive physical education in this study.

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Conflict of Interest

All authors state that there is no conflict of interest in this study.

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