The Effectiveness Of A Group Motor Training Program In Improving Social Communication Among Children On The Autism Spectrum - An Experimental Study At The Childhood Dreams Academy, Al-Mughayir Province

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Abstract:

The current study aimed to identifyOn effectivenessA group motor training program to improve communicationSocial atChildren on the autism spectrum at the Childhood Dreams Academy at Al-Mughair State University during the 2020/2023 academic season.

To verify this, we relied on the quasi-experimental approach with a one-group design, applying pre- and post-measurement. On a sample of 7 children who were chosen intentionally, we used the following tools in our study: A social communication skills questionnaire prepared byThe two students, observation, the interview, the training program, and after statistical treatment of the study's hypotheses, we reached the following results:

−   The group motor training program is effective in improving social communication among children on the autism spectrum.

−   There are statistically significant differences at the significance level of 0.05 between the pre- and post-measurement scores in favor of the post-measurement in improving social communication skills due to the training program.

− YA high effect size was found for the group motor training program on improving social communication among children on the autism spectrum.

Keywords: Training program, social communication, autism spectrum, group movement.

1-The problem of the study:

Groups of people with special needs face many, many pressures and accumulated problems that require treatment, intervention, or training, either through drug treatment or through psychological and counseling sessions. They are individuals with whom we share many common characteristics, and they, like all individuals, need to communicate with the environment surrounding them. Caring for disabled people with special needs is one of the important problems facing societies, as no society is devoid of a significant percentage of its members, including those who face life and are afflicted with one or more types of disability that reduce their ability to carry out their roles in a society based on An acceptable face compared to ordinary people, and they face many difficulties and more obstacles that prevent them from practicing their lives and activities normally. These obstacles must include requirements and needs that must be met, some of which are a burden on the family, some of which fall on the responsibility of society, and others on the state with its various institutions. Among these categories we find the category of children on the autism spectrum.

The latter is considered a complex developmental disorder that affects children in the first years of their lives, hindering their social, verbal, and non-verbal communication. The World Health Organization defines it as a developmental disorder that appears in the first three years of a child's life and leads to a deficit in linguistic achievement, play, and social communication. (Rakza, 2018, p. 13)

Social communication is considered one of the skills that a person needs in his daily life in order to exchange ideas, interact, ask for help and cooperate, as Suleiman Rajab defines it (social communication skills that appear in the life skills that accompany the child, and which he needs to perform and acquire effectively and efficiently in all situations. Related to social interactions, whether with colleagues, family, or those around them, so that it is considered a building block for building the personality at the present time and in the future, in order to be a positive person).

As Jamal Al-Khatib and Mona Al-Hadidi define it as (it is a process of interaction that occurs between people and its primary goal is the exchange of ideas and information and the expression of desires and requirements. Communication does not take place except through a recipient of the information and a sender of it, and communication may be verbal communication or non-verbal communication through images, Sign language, gestures, written language, or any other method (Hassan Hanan, 2021, d p.)

A lack of social communication leads to a loss of social relationships and an inability to imitate behaviour, especially good ones.

Improving the social communication skills of an autistic child helps him get out of the isolation in which he lives, and in the future it contributes to the development of his social adaptation, which reduces the burden on the child and the family. Children with autism spectrum disorder are characterized by weakness in social interaction, which is one of the important and main characteristics that agree with all definitions of it. In addition to their agreement on the deficit in communication, lack of attention, stereotypical behavior, and restricted interests, many studies have emphasized the importance of training programs provided to the autistic child, which help improve his condition in the future and help those around him. Because communication is

considered a pivotal behavior in the life of the autistic child, many studies have targeted By preparing training programs to develop social skills among children on the autism spectrum, as a study.(Saleh Khashkhosh,2019).

Sports training programs are also considered a method for self-development and balance and a means of strengthening social interaction. It also provides the disabled individual with a social life subject to organization and guidance, characterized by constructive and successful social situations and interactions. Sports skills and movements help to acquire physical and motor fitness and enable him to communicate and interact with other individuals, whether in his family. Or in his external environment, through which he is able to express his desires and inclinations and interact and communicate with his peers.

Based on the above, we conducted this study in order to reveal the role of the group training program in improving social communication among children on the autism spectrum, and therefore we can ask the question:atthe nextH:

−   Is the group motor training program effective in improving social communication skills among children on the autism spectrum?

−   Are there differences in the average scores of children with autism spectrum disorder before and after applying the training program in favor of their scores on the posttest?

−   What is the size of the effect of the group motor training program in improving the social communication skill of children on the autism spectrum?

2- Study hypotheses:

General hypothesis

−   The group motor training program is effective in improving the social communication skills of children on the autism spectrum.

Partial hypotheses:

1-   There are differences in the average scores of children with autism spectrum disorder before and after applying the training program in favor of their scores on the post-test.

2-   We expect a high effect size for the group motor training program in improving social communication skills among children on the autism spectrum.

3-The importance of the study:

 This study is an enrichment of the educational literature related to the importance of communication in general and social communication in particular among children with autism spectrum disorder and its role from a social standpoint.

It also contributesIn finding a solution to some of the social communication problems that most children with autism spectrum disorder suffer from.AndhelpalsoEducators and specialists determine the basic skills for a child to acquire communication, which is considered the foundation of verbal communication.

4- Objectives of the study:

- Preparing a training program to improve social communication among children on the autism spectrum.
- Detecting the differences between pre- and post-application in social communication
- Revealing the magnitude of the effect of the group motor training program on improving social communication skills among children on the autism spectrum.

5-Procedural concepts of variables for the study:

The current study included several concepts: They are defined and controlled procedurallyAs follows:

5-1-The child with autism spectrum: It is every child under the age of nine who has been diagnosed by a specialist according to the criteria of the Diagnostic Statistical Manual for Psychiatric and Mental Illnesses and through the evaluation form approved by the Childhood Dreams Academy at the University of.

5-2-Group motor training programme: It is a set of group motor activities applied at the Childhood Dreams Academy at the Al-Mughir State University Department, which were developed in an organized and controlled manner in light of scientific and methodological foundations with the aim of developing communication skills, which were applied to the members of the study sample through several sessions.

5-3-Social communication: It is the total score obtained by an autistic spectrum child on the social communication skills form prepared by the two students.

Field aspect of the study:

1-Study curriculum:

This study relies on the quasi-experimental approach with a one-group design with a pre-test and a post-test, in which the researcher observes or measures the behavior of the subjects before and after applying the experimental treatment, and thus measures the change and modification that occurs or is issued to the dependent variable.

2-The exploratory study:

2-1-Procedures of the exploratory study:

After we chose the subject of the study entitled "The effectiveness of a group motor training program in improving social communication for children on the autism spectrum," and after the field of study was chosen: Ahlam Childhood Academy at Al-Mughair State University.

We obtained permission from the administration of the Faculty of Social Sciences at the University of Martyr Hima Lakhdar in order to facilitate entry to the Childhood Dreams Academy, Al-Mughayir

State University. We went to the academy, where we met the director and she received us with open arms. We told her the reason for the visit: that we are preparing a master's thesis entitled "A group motor training program in improving... "Social communication among children on the autism spectrum," as some documents provided us with the aim of starting the subject, such as the technical card of the academy, the bylaws, the approved evaluation form, the educational program for children on the autism spectrum, the motor rehabilitation program, and the number present within the autism regiment at an average of 12 children. We also met some nannies in order to identify the difficulties. Communicative communication for children. Accordingly, we selected the sample and proceeded to implement the exploratory and then the basic study.

2-2- Objectives of the studyreconnaissance:
- examiningOn the group motor training program applied at the academy.
- Identify activities that develop social communication.
- Verifying the validity of the measurement tool according to psychometric characteristics Metric (honesty and persestence).
- Determine the basic study sample according to the specified conditions.

2-3- Exploratory study sample:
The exploratory study was conducted on (7) children with autism spectrum disorder in the age group (4-9) years, and they were intentionally selected from among the children of the Childhood Dreams Academy to care for people with special needs at the Al-Mughair State University Department.

Table No. (01The survey sample members explain:

Sex	Male	Females	the total
the number	6	1	7

We note that most of the children are male, except for one female.
2-4-Results of the exploratory study:
The exploratory study achieved its objectives and enabled us to:
-Determine the basic study sample according to certain conditions, which we will discuss later.
-Ensure the validity and reliability of the measurement tool that will be detailed in the study tools component.

3-Basic study:
After completing the exploratory study, which achieved most of its objectives, especially with regard to testing the validity of the social communication skills form built by the two students, as the tool enjoyed the characteristics of SICO. A high metric of validity and reliability. We proceeded with the basic study in all its steps.

3-1-The basic study sample and how to choose it:

The sample size for the basic study was (7) children with autism spectrum, consisting of (6) males and (1) female. This selection was in fact identical to the sample size of the exploratory study because the academy does not There are only this number, and they were chosen intentionally according to the following conditions:

- To be diagnosed with autism spectrum disorder according to the diagnostic criteria set by (DSM5) by Childhood Dreams Academy.
- The child must not have an accompanying disability.
- The sample children must be regular attendees of the center.
No movement problems.
- The sample should be between 5 and 9 years old.

Table no(02): Shows the basic study sample: by gender and age

Sex	Age				the total	percentage
	5 years	6 years	7 years	9 years		
Males	02	02	01	01	06	85.71
Females	01	00	00	00	01	14.19
the total	03	02	01	01	07	100%

We note from the table that the study sample was mostly male, with a percentage of 85.71The percentage of females reached 14.19%.

4- Data collection tools in the current study:

4-1-The interview: It was divided into two parts:

4-1-1-Initial interview: In order to collect information about the academy, we interviewed the director in order to view a technical card for the academy (Appendix No01), Children's evaluation form (Appendix No02), the institution and follow-up cards (Appendix No03), as well as obtaining the educational program applied to the autism group, and the group motor program applied at the academy.

4-1-2-The second interview: It was conducted with educators due to their interaction with the sample to identify the most important characteristics of the sample, as well as the rate of response to the activities and ways to deal with some difficulties during the activities. Identifying activities that serve social communication skills (Table No. 4)

4-2: Note: In order to identify methods for applying activities through observation, we noticed that the activities applied were at the level of the children and provided the necessary means for all activities, as well as the extent to which the children interacted with the activities and competed for them, and the ability of the educators to control the groups by virtue of the degree of disability

of the academy's children was somewhat average. All activities are implemented according to the established program.

In order to achieve the research objectives we used The following tools to measure the study variable:

4-3-Social communication skills form prepared by the two students: In order to test the effectiveness of a group motor training program implemented at the Childhood Dreams Academy, we designed a social communication form to measure the extent of change that occurred in the study sample after applying the social communication skills form, which was prepared by the two female students, including 18 positive items (1, 2, 4, 5, 6, 7, 8, 10, 12, 13, 16, 17, 19, 20, 21, 22, 23, 24) It consists of 25 items: to measure

As for the negative items, they are (7) (3, 9, 11, 14, 15, 18, 25), and there are (3) alternatives. (Often, sometimes, rarely) for each item. We observe and then choose the appropriate position for each case. When correcting the scale, the child is given a score of (3) often on the positive items, a score of (2) sometimes, a score of (1) rarely, and on the negative items a score of (1) often and a score of (1). (2) Sometimes and (3) Rarely. (Appendix No**04)**

After calculating the psychological characteristics Metrics for the tool During the exploratory study, we reached the following results:

− **Calculating the stability of the form:**

Reliability using Cronbach's alpha method:
The Cronbach's alpha coefficient is considered one of the most important measures of the internal consistency of the test. The reliability coefficient of the social communication skills questionnaire for autistic children was calculated using the Cronbach's alpha internal consistency method, and the following table shows:

the sample	Number of items	Cronbach's alpha
7	25	0.738

From the above results, it is clear that the Cronbach's alpha reliability coefficient is equal to (0.73) and that the questionnaire has high reliability.

− **Calculating the validity of the form:**

Self-honesty: In order to calculate the self-validity of the questionnaire, one can resort to calculating the square root of the reliability of 0.738 to obtain 0.85, and thus the questionnaire has high validity and accordingly.

It can be relied upon and applied to the sample members in the current study.

5-Description of the group motor training program: implemented at the Childhood Dreams Academy in the Lamgir State University Department
What is the nature of this program?

The group motor training program is a group program applied at the Childhood Dreams Academy among a sample of children with special needs (mental disability, autism, Down syndrome, language disorders, learning difficulties) as it is presented in a group of movement activities in the field of motor rehabilitation and social communication.

An educational and training program for social communication skills through many sessions, classes, and objectives to provide a child with communicative behaviors as well as rehabilitative movement.

Due to their experience in the field and the children's needs for some skills, they wanted to develop a group motor training program that is in line with the abilities of the children who work with them on a daily basis except Friday and Saturday, based on the theoretical heritage and some books and models prepared for motor activities for the disabled and based on behavioral and educational theories.

To whom is it directed?
The program is offered to children aged between 4-9 years who have been diagnosed with special needs (Autistic children) and they are required to have a problem with social communication skills. Children also acquire auditory perception and visual communication skills.

How long?
The group motor training program includes (38) sessions distributed throughout the school year with (3) classes per week.

How to?
The program is presented in groups and individually, due to the nature of the session, its purpose, and the content of the activity applied in it.

Who does the training?
The training is conducted by educators and a motor rehabilitation trainer. He trains and teaches children with special needs, including autistic children.

Importance of the program:
The importance of the program lies in:
3- Developing visual and auditory communication, as well as social communication, for children with special needs, which represents an important basis for establishing a relationship with others.
4- Developing the child's ability to adapt to the group.
5- It highlights groups of children with special needs that need training programs to improve their abilities to interact and communicate with others.
6- Providing therapeutic rehabilitation services: which consists of using movements to release energy, entertain and modifyBehaviorallyT.

7- Providing social services: improving children's ability to communicate socially, interact and understand instructions within the group.

The general goal of the program:
8- The group motor program aims to develop communication, group participation, organization, and training in the concept of role-playing, waiting, and competition at work.

Procedural objectives of the program:
The general goal of the program was divided into 2 partial goals, where children are trained on the goals according to their importance and the children's needs for them in a way that makes the training reflect positively on the child to achieve the general goal. The program goals are as follows:
9- Developing social communication: which means the child's purposeful participation with his peers and educators during motor activities and interacting with them so that his behavior matches the behavior of others. This includes: participating in games and taking an interest in them with other people's children and waiting for their turn while playing.
10- Recognizing tasks and instructions: meaning that the child understands directions while performing motor activity, respects the rules of activities and the group, and listens to instructions forbidding and requesting, as well as competition, participation, and the spirit of the group.

Techniques used in the training program:
The techniques used in the applied program fall within the behavioral and educational techniques, which include the following:
ReinforcementWhat is meant by it is any action that leads to an increase in the occurrence of a certain behavior or its recurrence based on the fact that a person tends to repeat the behavior that brings him positive results or saves him from negative results. (Al-Khatib, 1993, p. 37)
Social reinforcers It appears through smiling, head nods, physical contact, showing feelings of love and affection, hugging, kissing, approving using words that indicate it or movements such as clapping. (Nasr, 2002, p. 30)
Encouragement or guidance Prodding is one of the educational techniques that helps the child perform the correct response, so that the child becomes more determined to try to perform the response himself. Prodding includes physical assistance, assistance with signs and gestures, imitation prompting, assistance by approximating the position of the object, and verbal prompting. (Salama, 2011, p. 2010)
Imitation or modeling Imitation methods are used when the trainer performs a certain skill, and the child is expected to imitate him or her performance. The child can be taught to imitate through a series of tasks and steps. Once the child becomes able to imitate, he is able to train on some skills by imitating another person who harms these skills, whether they are Verbal or motor. **(Muhammad, 2005, p. 207)**

Applicable program content:

The program contains a group of (38) classes. These classes aim to achieve the partial objectives of the program. The program content is as follows.

Table no(03): Explains a group movement program implemented at the Childhood Dreams Academy (initial image):

Techniques used	Duration of activity	The goal of the activity	Activity
tradition Strengthen	10 minutes	Trying to control	Jumping from a high place
tradition Strengthen Kissing	10 minutes	Accuracy training in getting rid of jump scares and focusing attention	Jumping from a high place in the middle of a ring
tradition Strengthen	15 minutes	Feeling the feet and trying to use them together	Jump with both legs together in the middle of the rings in a straight line
Modeling Strengthen Kissing help tradition	15 minutes	Bug imitation communication training Listen well and pay attention	Jumping with both legs in random circles, following a jam movement
Modeling Strengthen	15 minutes	Motor stability, prolonging attention and concentration	Walking on a marked path
Modeling	30 minutes	Training to jump correctly, visual-motor synergy	Jumping over hurdles 10 cm between one barrier and the other
Modeling Strengthen help	10 minutes	Coordination and maintaining balance	Jumping on the barriers between the barrier and the other ring
Imitation, help Kissing Modeling	10 minutes	Coordination and maintaining balance	Walking on chairs
help Modeling tradition	15 minutes	Fixing the colors theft and accuracy in performing the work	Remove the ball from the board and place it according to the colors in the basket
tradition Strengthen help	30 minutes	Identify machines and destinations correctly	Trace the path by placing your hands and feet according to the direction

tradition Strengthen	30 minutes	Discharging kinetic stability energy	Training to push a fixed object until the point of competition is reached
Strengthen Help, modeling	30 minutes	Training to understand more than one activity	Crawling under the tables and then arranging a group of cups in a straight line on top of them
Help, imitation modeling, kissing	30 minutes	Unloading energy and having fun, increasing the concentration period	Spin on the chairs and then sit down when the music stops
Promote, assist, model	45 minutes	Training on the concept of competition, highlighting the effort expended in the activity	Pulling a rope from two sides while respecting the barrier in the middle
Strengthen Kissing	15 minutes	Competition, observation accuracy, focus, motor-visual synergy	Collect the largest number of hanging balls in a specified record time
tradition help Modeling	15 minutes	the focus	Walking in circles and competing And bring it to repression
Modeling Strengthen Kissing	10 minutes	entertainment	Lift the chairs from the floor whoever arrives first to sit on the chair
tradition Strengthen help	15 minutes	Work on body balance	Crawling on a board Entering the rings competes until you reach the end of the board
tradition Modeling Strengthen help	45 minutes	Feeling the legs focus when trying to lift the ball out of the water	Take the balls out of a basin of water with your feet and put them in a basket
tradition help Modeling Strengthen	30 minutes	Training on the blowing process Breathing correction	Blowing on the ball over the tables, delivering it, and then shooting it into a basket
Modeling tradition Boost help	30 minutes	Prolonging the duration of focus and attention	Jumping inside the wheels while keeping the ball, delivering it, and

			And leave it at the right time	then shooting it into the basket
Modeling help tradition	15 minutes	Training in auditory focus directions.	Training on Spatial orienting during blindfolding
tradition Strengthen	15 minutes	Kinetic stability releases body control energy	Jumping on the saddle all the way to the arrival point by competing
Modeling tradition help	30 minutes	Motor stability, attention, concentration, and color recognition	Walk on the floor maze and name the color you are walking on
tradition Strengthen	30 minutes	Bug training for executing commands more than once	Training to follow and adhere to a pattern and model of walking, jumping, running, and standing
help Strengthen	30 minutes	Kinetic stability	Walk on wooden boxes steadily
Modeling tradition Strengthen	10 minutes	Focus and attention	Competitive basketball shooting
Modeling Strengthen	45 minutes	Attention and focus	Throwing the ball from the educator to one child to another child and catching it
tradition Strengthen	15 minutes	Attention and concentration while walking with steady steps	Walking steadily, carrying a cup of water or a bag of sand
Modeling Strengthen	15 minutes	Kinetic stability	Slide the rings into a tight rope at the top
tradition Modeling Enhance kissing	30 minutes	Accuracy in focus	Shoot with the ball tied with a rubber rope and hit the boxes and knock them down
help tradition Strengthen	45 minutes	Optical tracking Kinetic stability Control and balance	Controlling the transfer of balls using a cylindrical shape from one place to another
tradition	30 minutes	Complete body control	Walking inside the boxes

Modeling Strengthen			
Modeling Strengthen Kissing	45 minutes	Executing more than one command. Motor stability	Collecting balls while jumping in the sack
Strengthen Kissing	15 minutes	entertainment	Draw training all the way to the point of competitive arrival
Modeling Strengthen tradition	15 minutes	Speed training and competition at work	Lift the chairs from the floor from the first to the last to sit on the chair
tradition Strengthen	30 minutes	Fixing colors Stimulate visual memory	Shoot the ball into the basket according to color
tradition Strengthen	30 minutes	Kinetic stability	Walking on the board in a straight direction

After the interview procedures and review of the implemented program in its initial form that was presented previously, we carried out, with the help of educators, the activities that serve social communication, and we dispensed with the rest of the other activities that are not useful in this study. Then we proceeded to implement these activities, as this program was applied over a period of 11 sessions at a rate of 3 sessions per week. The duration of each session ranged from 30 minutes to 45 minutes. Strategies and techniques were followed to help complete the activity, such as reinforcement, imitation, and development.yRepeat and repeat.

Table no(04): Illustrating the group motor program for improving social communication among children on the autism spectrum (final image)

Activity	The goal of the activity	Activity description	Duration of activity	Tools used	Techniques used
Jump with both legs together between the rings randomly and follow the jam movement	Training in imitation and communication Listen well and pay attention.	The rings are placed randomly. The teacher jumps first, followed by the children	45 minutes	Rings	Imitation, modeling, kissing reinforcement and assistance
Walk on chairs and jump in a ring	Coordination, balance and communication	Sequentially walk on chairs and	30 minutes	Chairs and ring	Kissing help modeling

		then jump into a ring with both legs.			
Jump on the rings and barriers and call the child by name	Training in jumping, developing visual-motor synergy and auditory communication	The child's attempt to successfully pass the barriers and jump directly onto the random rings	30 minutes	Cones, sticks and rings	Auxiliary modeling kissing, imitation
Spin on the chairs and then sit down when the music plays	Releasing energy, having fun, and increasing the duration of concentration and communication	Place the chairs in a circular shape and the children move around them, and when the music stops, they sit on the chair opposite them	45 minutes	Chairs music	Modeling, helping, prompting
He crawled under the tables and then arranged the glasses on top of them	More comprehension training Increase the duration of communication	Each table contains a set of cups. The child crawls under the table, arranges the cups on top of it, and then continues crawling to the end	30 minutes	Tables Cups	modeling, assisting, imitating, Strengthen.
Throw the ball from the educator to	Attention, focus and eye contact	The educator throws the ball, calling	30 minutes	ball	Modeling, enhancing, prioritizing

one child to another and catch it		the child by name, catches it, and then directs it to his colleague			
Shoot the ball into the basket according to color	Fixing colors Stimulate visual memory and auditory communication	Place three different colored baskets and place a group of balls from the same basket The child throws the ball into the appropriate basket	30 minutes	Colored balls and baskets of the same color as the balls	Modeling Strengthen urge
Tracking and imitation training using a walking, jumping, running, and standing pattern	Training in executing more than one command at a time, developing audio-visual communication	Place paper stickers with hands and feet or one leg, and the educator applies the application and the child tries to repeat the activity	30 minutes	Paper stickers Two hands and two legs	Modeling tradition Strengthen help
Blow on the ball over tables and deliver it to the basket competitively	Training on blowing and correcting breathing communication Optical tracking	The nanny blows on the ball straight until it reaches the basket Then return the child To blow on the ball with	30 minutes	ball table Basket	Modeling Strengthen Urge and help

		the help of the nanny			
Shoot the ball On target	Entertainment and visual focus	Hang the basket in a high place The child was asked to throw the ball and focus on the target	30 minutes	Basket Colorful balls	tradition Strengthen
Pulling and pulling a rope from two sides while respecting the barrier in the middle	Training on the concept of competition, highlighting the effort expended in the activity	The educator divides the children Divide into two groups, and each group is asked to pull the rope competitively	45 minutes	Rope, barrier	Strengthen help Induction

Program sessions:
Session1:15-03-2023
Activity title: Jump with both legs together between the rings randomly and follow the jam movement
timeSession: 45 minute
TimeTakes: 30 minutes
Objective of the session: Training in imitation and communication, good listening, attention, and waiting for the turn.
Activity procedures: The rings are placed randomly. The educator first jumps several times, then the child jumps by imitation. One after the other, he repeats the activity until the child masters the correct method of jumping, while providing him with appropriate reinforcement each time, such as kissing, stroking the head, and encouragement.

Used equipments: Rings
Techniques used: Imitation, modeling, kissing reinforcement and assistance.
Session 2:03-16-2023
Activity title: Walk on chairs and jump in a ring
Session time:30 minutes
The time taken: 30 minutes

Objective of the session: Coordination, balance and communication

Activity procedures: One child is conscious of the activity walking in a sequence on chairs and then jumping into a ring with both legs.

The rest of the children try to revive the activity with the help of the nanny with warning, urging, and reinforcement

Used equipments: Chairs and ring

Techniques used: Modeling, helping, kissing.

Session 3:03-19-2023

Activity title: Jump on the rings and barriers and call the child by name

Activity Duration:30 minutes

How long it takes:30 minutes

Objective of the activity: Training in jumping, developing visual-motor synergy and auditory communication

Activity procedures: The educator crosses the barriers on foot and then jumps in the rings. The children imitate the activity by the child hearing his name and following the instructions

After the child reaches the educator, he kisses him

Used equipments: Cones, sticks and rings

Techniques used: Auxiliary modeling kissing, imitation.

Session 4:03-21-2023

Session title: Spin on the chairs and then sit down when the music stops

Session duration:45 D

How long it takes:30 D

Objective of the session: Releasing energy, having fun, and increasing the duration of concentration, communication, and competition

Session procedures:

Place the chairs in a circular shape and the children spin around them

The educator puts on music and rotates with a number of children around the chairs. When the music stops, each child calls his name in order to sit on the chair opposite him, and the one who is left without a chair leaves the group.

He removes a chair each time until only one chair remains.

He restarts the music and the children try to move around the chairs without assistance. If the music stops, he sits down and so on until he remains in a group of two.

Used equipments: Chairs and music

Techniques used: Modeling, helping, prompting

Session 5:03-23-2023

Activity title: He crawled under the tables and then arranged the glasses on top of them

Activity Duration:30 minutes
Time taken:30 minutes
Objective of the activity: Training to comprehend more and increase the duration of communication
Activity procedures: Each table contains a set of cups. The child crawls under the table, arranges the cups on top of it, and then continues crawling to the end.
The educator helps the child to get under the table, then calls him by name to crawl under it, then helps him arrange the cups in a specific way, then continues crawling under the next table until the end of the tables.

Used equipments: Tables and cups
Techniques used: Modeling,event
Session 6:04-09-2023
Session title: Throw the ball from the educator to one child to another child and catch it
Session duration: 30 minutes
Time taken: 35 minutes
Objective of the session: Attention, focus and eye contact
Session procedures: The educator throws the ball to each child individually and then returns the ball to the child in order to understand the activity.
Then the educator throws the ball to the child and calls him by name. Catching the ball redirects it to a colleague and then returns to the educator. The educator here also accepts the child if he catches the ball for the first time, then smiles and says (Bravo).

Used equipments: Medium sized ball
Techniques used: Modeling, enhancing, kissing, smiling.
Session 7:04-11-2023
Activity title: Shoot the ball into a basket according to color
Activity duration: 30 minutes
Time taken: 28 minutes
Objective of the activity: Fixing colors, stimulating visual memory and auditory communication
Activity procedures:
The educator places three different colored baskets and places a group of balls of the same color as the basket in front of the child
Then he throws each ball into the basket appropriate to its color, then calls the child and asks him to carry the green ball in the green basket, the yellow ball in her basket, and the orange ball in her basket until he completes the balls.
Tools used: Balls of different colors and baskets of the same color as the balls.
Techniques used: Modeling, help and prompting.
Session8:04-13-2023

Activity Title: Tracking and imitation training using a walking, jumping, running, and standing pattern.

Activity duration: 30 minutes

Time taken: 20 minutes

Objective of the activity:

Training in executing more than one command at a time, developing audio-visual communication

Activity procedures: The educator places paper stickers on the floor with hands, legs, or one leg. The educator applies the activity and the child tries to trace the stickers, and at the end the children clap for him.

Tools used: Paper stickers for hands and feet

Techniques used: Modeling, imitating, reinforcing, aiding, urging.

Session 9: 04-16-2023

Activity title: Blow on the ball over tables and deliver it to the basket competitively

Activity duration: 30 minutes

Duration it takes: 30 minutes

Objective of the activity: Training on blowing, correcting breathing, and visual tracking communication

Activity procedures:

The nanny blows on the ball straight until it reaches the basket and then helps the child

Blow on the ball, hold it in place, and continue blowing until the ball reaches the basket.

Provides social reinforcements such as smiling and stroking the head.

Used equipments: Basketball table tennis

Techniques used: Modeling reinforcement help inducement

Session 10: 04-18-2023

Activity title: Aim at the target

Activity Duration: 30 minutes

How long it takes: 30 minutes

Objective of the activity: Entertainment, visual focus

Activity procedures: A large basket is hung on the wall, as it is suitable for the height of the children. Then the educator throws the ball into the basket several times, then asks the child to throw the ball into a basket, where he directs the focus on the target (the basket). The child repeats the activity several times until he is able to insert the ball into the target.

Used equipments: Basket and balls

Techniques used: Imitate, reinforce, aid, induce

Session 11: 04-20-2023

Activity title: Pulling and pulling a rope from two sides while respecting the barrier in the middle

Activity duration: 45 minutes

Duration: 40 minutes

490 | Khalifa Kadouri   The Effectiveness Of A Group Motor Training Program In Improving Social Communication Among Children On The Autism Spectrum - An Experimental Study At The Childhood Dreams Academy, Al-Mughayir Province

Objective of the activity: Training on the concept of competition, highlighting the effort expended in the activity

Activity procedures:
The educator divides the children into two groups equally and asks each group to pull the rope to it in a competitive manner. He also works to help them tighten the rope and pull.

Tools used: Rope, barrier

Techniques used: Promote, assist, encourage

6-Statistical methods:
The statistical program was used ((spss) in order to apply the following statistical methods:
1- Cronbach's alpha to calculate the reliability of the scale
2- a testTest
3- Calculating the effect: It is one of the methods of scientific statistics.

7- Limitations of the study:
The limitations of the study are as follows:

Spatial boundaries:
The study was conducted at the Childhood Dreams Academy to care for people with special needs at the Lamgir State University Department. This center includes 5 groups of people with special needs (mental disability, learning difficulties, language and speech disorders, Down syndrome, and children on the autism spectrum). The center has a group of specialists who supervise the evaluation of cases. Diagnose them and develop appropriate programs for them.

The Academy also relies on a group of educational and training programs, each according to his disability and need. It is also managed by the administrative staff, including a director, a secretary, and an intervention team consisting of a psychologist, a speech therapist, a special education specialist, a motor rehabilitation specialist, and educators.

Time limits:
The program was implemented over a period of time from 03-15-2023 to20-04-2023, 3 sessions per week, with activity duration varying from 45 Minutes to 15 minute.

1- Presentation and analysis of the results of the general hypothesis:
The general hypothesis results are presented by presenting the results of the partial hypotheses
Presentation and analysis of the results of the first partial hypothesis: which states that there are statistically significant differences in the children's scores before and after applying the program in favor of their scores in the post-test.
To verify this hypothesis, we used a t-test to find out the differences

Table no(05)It explains the differences between the pre and post measurements among sample members:

the test	SMA	standard deviation	the sample	(T) Calculated	Degree of freedom	Indicative value	Significance level
Tribal	41.8571	6.41427	7	8.061	6	0.00	0.05
Al-Baadi	54.7143	7.47695	7				

From the table it is clear that the arithmetic mean in the pre-test was 41.8571, which is less than the mean in the post-test, which was 54.7143, and the standard deviation in the pre-test was 6.41427, which is less than the standard deviation in the post-test, which was 7.47695.

The calculated T value was 8.061 and the significance value was 0.00, which is a value smaller than 0.05. Therefore, there are differences between the two measurements in favor of the post measurement.

Presentation of the results of the second hypothesis:

We expect a high effect size for the group motor training program in improving social communication among children on the autism spectrum.

To verify the validity of this hypothesis, we used the effect size law according to the following equation:

$$D = \frac{T}{\sqrt{N}}$$

Table No. (6) shows the magnitude of the effect of the group motor training program on social communication skills:

the level	Calculated T value	The value of the square root of the sample	Effect size value	Impact level
Knowledge level	8.061	2.64	3.05	very big

We notice from the table that the calculated t value was 8.061 and that the square root of the sample was 2.64. After applying the law described above, we obtained an effect size value of 3.05, which indicates that the level of effect of the group motor training program was high in improving social communication skills among children on the autism spectrum. .

2- Interpreting the results of the hypotheses:

2-1-Interpretation of the results of the general hypothesis:

The general hypothesis stated that the group motor training program is effective in improving social communication among children on the spectrumAutism.

It was clear from the results presented previously that there are clear and fundamental differences between the pre- and post-measurement in favor of the post-measurement.

It can also be said, in light of the results presented, that the training program has brought about a positive change with regard to improving social communication among children on the autism spectrum. It was also shown that the size of the effectD is greater than 0.8, which means that the group motor training program is effective in improving social communication in children on the autism spectrum.

This result is attributed to the program's ability to develop social communication skills among the sample members, as the program included clear and easy sessions suitable for autistic children, their mental abilities, and their motor skills. The program itself also aims to improve social communication, and the motor training program is characterized by simplicity and lack of The complexity of its activities as well as its techniques, as it provides appropriate reinforcement, and the training carried out by the two students, the movement specialist, and the educators in applying and executing the program made its ability to improve the social communication skills of children on the autism spectrum good and acceptable, as this result agreed with a study (Sheikh Theeb, 2004). The results of which showed that communication, social, and independence skills developed at good rates for all children in the study, and that there was a positive impact of the program in improving the achievement of autistic children. And the study of Ezz El-Din Shoshani and Labneh Zaarour (2019), the results of which confirm that the program is effective in developing turn-waiting skills and respect for the classroom. And the study of Mahdi Osama and Fayed Fares (2020), the results of which revealed that adapted sports activity has a major role in developing social communication among autistic children from the point of view of educators.

The study (Kawthar, 2012) also confirms the importance of communication skills for an autistic child and its impact on social interaction, as communication skills are considered a system method that allows autistic individuals to achieve their desire and obtain their appropriate needs without resorting to behavioral problems. To make communication functional without request, choice and observation, there must be Attention and communication skills. (Kishk, 2008, p. 69)

As mentioned (2000.213.al. (Lacksctt,et.) Autistic children need the ability to communicate with others in order to express their needs and desires and participate in social interactions. Of course, verbal speech is highly desirable, but what is more important is the ability to communicate appropriately. (Ibid., 2008, p. 81)

It also emphasizes the lack of interest in training autistic children on words and phrases, but rather urging and encouraging them to use alternative methods to adapt autistic children and enable them, with applicable methods, to use and request desired activities, object, and make appropriate choices. These strategies include sign language, communication with pictures, and means of electronic communication, signs and movements.

Therefore, it can be said that the training programs provided to children with autism open the way for them to communicate with others, and this positively affects their gains. The program presented for the current study contributed to improving the social communication skills of children with autism spectrum disorder throughout all program sessions, and this would reduce the burden of dealing with parents and educators.

2-2-Interpretation of the first partial hypothesis:

By presenting and analyzing the results of the first partial hypothesis, we say that there are statistically significant differences at the significance level of 0.05 between the pre- and post-measurements in improving social communication in favor of the post-measurement due to the training program.

Using a t-test for differences, we concluded that there are statistically significant differences between the results of the pre- and post-measurement at the significance level of 0.05 in favor of the post-measurement, and this is what agreed with the study of Magdy Fathi Ghazal. (2007), and the study of Zainab Muhammad Ali Irfan (2018), and Saleh Khashkhush's study (2019), and a study by Lamis Hamdi (2013), on the presence of differences between the pre- and post-measurement in favor of the post-measurement in social communication skills due to the training program.

Saleh Khashkhosh's study was conducted **(2019, 2018)** entitled The effectiveness of a proposed training program to develop social skills among a sample of autistic children.

It was concluded that training has an effective role in developing these social skills. Therefore, paying attention to training and developing social communication skills is extremely important..

For this reason, attention to training and developing communication skills is one of the basic services and necessary assistance that can be provided to this group of autistic children. The current study agrees with what all previous studies have proven that there are differences in social skills in general and social communication skills in particular for children with the autism spectrum, through Paying attention to developing these skills through the application of training programs.

As he points out ((Wiss 1976) indicated that group play activities are the most appropriate methods for modifying the social behavior of autistic children in particular and disabled children in general, because they are based on social interaction through group work, positive participation, and an organized attitude that is based on modifying socially undesirable behavior.

Referring to what we said about the importance of training programs, which is represented in helping to change the individual's behavior and attitudes in a positive way, and also contributes to achieving results related to human relations represented by developing methods of social interaction between individuals. This is proven by the results of our current study.

2-3- Interpretation and discussion of the results of the second hypothesis:

Through the presentation and analysis of the results of the second hypothesis, it became clear that the size of the program's effect was very high, and on its basis we say that the second partial hypothesis has been achieved, as it is recommended to use scientific significance indicators to judge the importance of the results by calculating the amount of the effect size, as the effect size indicates the amount of the relationship. Among the variables present in the study. Most studies focus on statistical treatment and neglect scientific treatment, and this is what was focused on in this study because of its great importance

Statistical significance, whatever it may be, does not confirm the extent of the differences or the effect of the independent variable on the dependent variable, which is called the scientific significance of the results.

Ezzat Abdel Hamid Hassan points out (2011), indicate that the effectiveness of any program can be judged in light of the size of the effect. If the size of the effect is large, then the program is effective. If the size of the effect is small, then the effectiveness of the program is weak. **(Kamel, 2020, p. 4)**

Through scientific treatment, we found a high effect size for the program, which indicates that this program, especially with regard to the dimension of social communication skills, was prepared by highly qualified specialists and educators with constant and good guidance in its application to the sample members. Many studies also indicated Field research has focused on the importance of training programs in improving social communication skills, including this program, which confirmed to us its effectiveness and the size of its impact was very high.

As far as we knowNaOur current study is considered one of the few studiesDrWhich emphasized the size of the impact of training programs in improving the social skills of children on the autism spectrum.

3-General conclusion of the study:

The current study emerged from previous studies and field observations that showed that social communication among autistic children is a problem that autistic children suffer from to varying degrees, from this standpoint.The study aimed to identify the effectiveness of the group motor training program in improving social communication among autistic children. An experimental study on a sample of autistic children at the Childhood Dreams Academy in the Al-Mughayir State University Department. The main study sample was (7) children with autism spectrum for the purpose of studying the differences between the children's scores on a skills questionnaire. Social communication prepared by two studentsThe current study started from hypotheses or tentative answers as follows:

1- The group motor training program is effective in improving social communication in children on the autism spectrum.

2- There are statistically significant differences at the significance level of 0.05 between the pre- and post-measurement scores in favor of the post-measurement in improving social communication skills due to the training program.

3- We expect a high effect size for the group motor training program in improving social communication skills among children on the autism spectrum.

After the process of statistical and scientific processing, we arrived at the following results:

-The group motor training program is effective in improving social communication among children on the autism spectrum.

-There are statistically significant differences at the significance level of 0.05 between the pre- and post-measurement scores in favor of the post-measurement in improving social communication skills due to the training program.

-There is a high effect size of the group motor training program on improving social communication among children on the autism spectrum.

Through the results achieved, which are the result of long effortseemWith a problem that is considered very important, which is the effectiveness of the group motor training program in improving social communication skills among children on the autism spectrum. Therefore, in this regard, the two students propose to conduct more research in order to help children achieve communication with the outside world, increase interaction with their peers and with their parents, and to realize themselves and meet their needs. Their needs and desires, through conducting some topics and studies that we consider may be important, including, but not limited to:

1.   Conducting a study on the effectiveness of a group training program in developing independence and non-verbal skills among children on the spectrumAutism.

2.   The role of motor and sports activities in developing social and communication skills among children on the autism spectrum.

3.   The effectiveness of a cognitive-behavioral training program in alleviating introversion in children on the autism spectrum.

4.   The effectiveness of a therapeutic training program to alleviate social isolation in autistic children.

- **Recommendations:**

Through the results obtained in our study and dealing with children on the autism spectrum and identifying the most important problems and obstacles that...They face itThe following recommendations can be made:

−   Training children with autism spectrum to communicate in order to meet their needs.

−   The need to educate parents of autistic children about early intervention in order for their children to improve (socially, psychologically, and educationally).

−   Emphasis on the use of behavior-enhancing techniques in training children in general and children with autism spectrum in particular

−   It is necessary to modify training and therapeutic programs to suit children's abilities and skills to achieve the goals desired for them.

−   Involving the family in implementing the established programs in order to achieve communication between them.

−   Developing training programs that help improve social skills, especially social communication skills for children on the autism spectrum.

−   Urging families to communicate with centers that care for children on the autism spectrum.

−   Mandatory for families to provide honest data and assessments of their children in order to provide appropriate intervention.

−   Intensifying training sessions with children to ensure early improvement.

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