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Role Of Physical Activities In Cultivating Social Skills Of Children With Autism Spectrum Disorder: Physical Education Teachers' Perspective, Pakistan

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ABSTRACT

Objective: The study sought to investigate the role of physical activities in the development of social skills in children with Autism Spectrum Disorder regarding physical education teachers' perspective in the department of Special Education, Punjab, Pakistan. Physical activities can help autistic children improve their social skills.
Research Design: This study employed a descriptive study approach using survey method to examine the physical activities experienced by students with Autism Spectrum Disorder from the perspectives of physical education teachers in special schools. Purposive sampling was applied to collect data from different divisions of Punjab. The data were collected through self-designed questionnaire from the special education teachers teaching in different schools of Special Education.
Findings: Numerical analysis revealed that special education teachers, psychologists, and speech therapists identified a wide variety of participation, stereotyped behavior, general behavior and emotional control, social and communicative abilities, and motor capabilities. To improve motor skills, the findings suggested that cooperative learning strategies be used; that psychomotor activities and team games be introduced to reduce stereotyped behavior, improve conduct and emotional control, and foster social and communicative skills; and that tasks and games aimed at developing basic motor skills and coordination abilities be included. Furthermore, there was no significant difference was found in the opinion of physical education teachers' perspective among special education teachers, psychologists, and speech therapists. Moreover, there was no significant difference in the opinion of physical education teachers' perspective among special education teachers, psychologists, and speech therapists. Physical activities can help autistic children their cultivating social skills.
Conclusion: Children with Autism Spectrum exhibit features such as lack of eye contact, facial expressions, language, motor development, cognitive, and learning delays. They also suffer from epilepsy, abnormal sleeping and eating patterns, degrading behavior, uneasiness and worry, and trouble communicating and learning new languages.

Practical Implications: Our findings added to the evidence that physical activities have good impacts on motor and social abilities, which supported the concept that motor and intellectual domains are intimately connected in autistic children.

Keywords: Autism Spectrum Disorder, Physical Education, Teacher's Perspective, Role, Physical Activities, Cultivating Social Skills in Children

Introduction

A handicap is a physical or mental impairment that limits a person's or group's ability to do routine daily tasks. One in every ten children has intellectual impairment, which is characterized by deficiencies in adaptive cognitive processes. Autism is a developmental disorder marked by significant impairments in social interaction and communication that can be caused by both inherited and environmental causes. Parents of autistic children are concerned about their child's social abilities (Bertelli et al., 2016). Physical activity is beneficial to one's overall health and can help autistic children develop their motor abilities, fitness, social skills, physical strength, and knowledge. Tag is a better option for children with ASD than board or card games because of the interaction. To ensure their safety, children should be taught the game's aim and rules. Tag may be improved to make it more engaging for all students. Hide and Seek is a viable alternative for children with ASD, but it may be unpleasant and anxiety-inducing. Basketball is a physical activity/sport/game that is usually played in a noisy, echoing gym. Hopscotch is an advanced physical game that teaches children physical coordination, balance, and cognitive development. Change the regulations of the game and give the players more possibilities to chat and take turns. Autistic children may difficulty with games such as Simon Says, Candy Land, Chutes & Ladders, and Hi-Ho Cherry-O are among the board games available. Candy Land has a plethora of sub-skills that can be challenging for children with impairments such as autism, whereas Chutes and Ladders have a congested board and the tournament is determined by a spinner (Bremer & Lloyd, 2016). Hi-Ho Cherry-O is a game in which participants examine visual signals in the game and concentrate on appropriate social language. Hi-Ho Cherry-O requires players to acquire all ten cherries from their cherry tree. Card games such as Go Fish and Old Maid may be beneficial to autistic children. It is necessary to rely less on language, memory, and perspective. Learning and Memory games have been shown to boost creativity, as well as auditory and visual identification skills (Tu et al., 2021). Card games like War are great for developing a wide range of skills, including visual perception and color recognition; eye-hand coordination and physical dexterity; and an understanding of numerical relationships, form classification, and counting (Mendiburu, 2012). Autistic children can benefit from the Step into Conversation game because it teaches them how to strike up a conversation, select a topic, and participate in a conversation by taking turns talking and answering questions (Dotson et al., 2010). Community gardening helps the Autistic Children in social competence by having your child take care of something and learn responsibility, Team Sports helps the Autistic Children to work together toward a common goal and react properly in winning or losing the game (Chan et al., 2012). A study I performed to investigate the relationship between the evaluation of a child's appropriate attributes and the presence of co-occurring social and behavioral conditions (such as sleep and feeding disorders, obesity, gastrointestinal tract symptoms, seizures, ADHD, anxiety, delayed language skills, delayed motor skills, does not show facial expressions like happy, sad, angry, and so on) that have a negative impact on the child's ability to function and quality of life(Ibrahim et al., 2019).The use of behavioral and other therapies to treat particular skills and symptoms is backed by a growing

body of research (Hofmann et al., 2012). Their results are almost similar to researcher results Children on the autistic spectrum typically struggle to communicate and interact socially (Sosnowy et al., 2019). To improve autistic children's social abilities, we have mentioned a lot of physical activities/Games are performed/play in our study (Sansi et al., 2021). For example, Tag, Hide and Seek, Step into Conversation, Basketball, Simon Says, Hi-Ho Cherry-O, Old Maid, Community Gardening, Team Sports, Hopscotch, Candy Land and Stages Learning Memory Games. Each social skill, conduct and motor skills are defined, and model lessons for teaching them are supplied (Baker et al., 2015). This study is mostly similar with the suggested physical activities and games that are very helpful in improving the social skills of children with ASD (Santos et al., 2021).Children on the autism spectrum benefit greatly from engaging in regular physical activity and exercise to boost their social skills (McCoy et al., 2020). Low motor skills are associated with ASD, and it has been proven that engaging in regular physical exercise might help mitigate some of the challenging behaviors that are common among those with ASD (Chu et al., 2020). But the idea that exercise can help people with autism is controversial (Scott, 2016). Meta-analyses and systematic reviews have found that physical activity helps young children and teens with autism improve their social skills and behavior (Liang et al., 2022). Go Fish requires knowledge of both the fishing concept and vocabulary, whereas Old Maid requires less reliance on language, memory, and perspective. The goal of Old Maid is to dissuade one player from becoming the "Old Maid," which can be beneficial for confident autistic children and teenagers. Visual Memory games, War Games, and Step into Conversation are also effective for confident autistic adolescents and teenagers (Parks & Wager, 2019).Because of its cerebral character, this time-honored children's game may be challenging for autistic children to understand. This game may be difficult for a child with autism spectrum disorder (ASD) because it requires knowledge of the concept of fishing as well as the use of language ("Do you have any 7s?"), memory ("I need a 7 to make a match, I remember Ahsan asked for a 7, so Ahsan might be an excellent person to ask"), and perspective-taking skills (Ahsan asked Shahid for a 7, so Ahsan probably has a 7). A few little adjustments might bring the game closer to reality (Brandell & Varkas, 2001). Old Maid is an autism spectrum disorder (ASD) card game that may be fun for children with learning problems since the rules are not as complex and there is less dependence on language, memory, and perspective. Because the purpose of the game is so simple—to protect one player from becoming the "Old Maid"—playing this game with their friends may be very good for youngsters with autism in terms of social skills development (Grandin, 2011). Players must be familiar with the greater-than-and-less-than-number rules in order to play this time-honored card game. Some adjustments can be made to help children with autism or others who may not have these notions firmly established (Sampson et al., 2012).The "Step into Conversation" card game was created with autistic children in mind. The game provides supervised practice in social skills such as starting a conversation or conversing about a variety of subjects using a deck of cards. Playing the game can assist children in developing their social skills and teaching them to approach talks with an open mind and heart. It teaches children how to properly engage in a conversation, how much to say, and when to shut up, all of which are valuable lessons in self-control and politeness. This form of socialization game gives a framework for discourse, which aids in learning how to cope with a variety of common social circumstances (Meckes et al., 2011). Community gardening teaches children social skills in an unexpected way: through caring for something living. If you want to assist your child develop social skills, encourage them to start a garden and work with others. Participating in this activity outside may aid in children's relaxation and enjoyment (Lawson, 2005). Any organization

defines physical activity as any physiological movement that requires the expenditure of energy. Anything you do for enjoyment, transportation, or work is called "physical exercise." Physical activity, whether moderate or vigorous, is beneficial to one's overall health. Physical activity programs for autistic children can have a significant impact on a variety of outcomes throughout the course of their lives. Motor skill development, fitness for specialized tasks, social skills, physical strength and endurance, and knowledge and understanding acquisition are examples of these (Wendell, 2013). Physical activities, such as tag, are a better choice for children with ASD because they allow them to engage with one another. Children should be taught the game's goal and regulations to protect their safety. Modifications may be made to make tag more enjoyable for all pupils. Playing tag in a gym or enclosed environment, creating a social tale, wearing a distinctive hat, and employing scripted language or a communication board are all examples (Cibrian et al., 2022). Hide and Seek is an age-old game that encourages youngsters to run and hide, which can be problematic for autistic children. To reduce this risk, the game should be modified by playing it inside a house or in a secure yard, examining the surroundings for potential hiding spots, providing the child with a visual aid, creating a communication board, and working on these skills first in therapy or one-on-one with an adult (Clark, 2013). Basketball may be a stressful and anxiety-inducing exercise for autistic youngsters. It is advised to wear ear buds or other noise-cancelling devices to make things simpler. It is also advised to address this before to a game, practice, gym class, or recess when an exceptionally loud noise is likely to occur. Finally, Welch (2012) suggests directly teaching youngsters that sending a ball through the hoop causes loud noises. Hopscotch is a physical game that teaches youngsters physical coordination, balance, and brain development. It can have a variety of beneficial impacts, including the development of the midline, body control, muscle strength, eye-hand coordination, and fine motor control. However, for some autistic children, these talents might be challenging, discouraging them from engaging in sports. Modifications to the game may be made to lessen discontent, such as using different colors to distinguish the spots on the board, concentrating on learning a particular talent at a time, and utilizing the board to reinforce abilities (Tomporowski et al., 2015). Because no one knows what will be said next, Simon Says can be challenging for autistic youngsters to follow. Modifications may be implemented to limit Simon's selections and only pay attention to tasks completed if Simon does not say "Simon Says". This will provide the youngster with ASD a better idea of what is to come (White et al., 2009). Autistic parents are concerned about their child's social abilities, which are usually limited by ineffective social skills programs and a lack of resources. To help young children with Autism Spectrum Disorder (ASD) develop their social skills, a five-step strategy based on video self-modeling is recommended (Wolstencroft et al., 2018). Autism spectrum disorder is distinguished by a lack of social skills, such as initiating and responding to social interactions, keeping eye contact, and displaying interest in others. Only a small number of children receive proper social-communication skills training, which has serious consequences such as low academic achievement, social failure, anxiety, despair, and other negative outcomes. The lack of social skills programs is especially troubling. Autistic children frequently lack the social skills required to function in a group, resulting in social anxiety. When presented with social situations, parents and educators say that their children suffer nervousness. Children with (ASD) frequently avoid social situations, resulting in social competence deficits. Negative interactions, rejection, social isolation, and suicidal ideation can all result from this (Chung, 2019).Community gardening teaches children social skills in an unexpected way: through caring for something living. If you want to assist your child develop social skills, encourage them to start a garden and

work with others. Participating in this activity outside may aid in children's relaxation and enjoyment (Levkoe, 2006). Sporting Events for Groups Team sports can be played by children with their classmates, in a local college league, or just with their friends in the backyard. Team sports provide young people valuable lessons about teamwork and discipline. They also learn how to respond correctly to both positive and bad outcomes, such as when a teammate is hurt or when they score a goal (Woods et al., 2020).ASD is a condition that affects Autism spectrum disorder (ASD) is caused by brain abnormalities and may be genetic. It affects people differently, with some finding it difficult to function without supervision (Heberling et al., 2013). Autism Spectrum disease (ASD) is a developmental disease characterized by social difficulties as well as repetitive or limited hobbies or interests. It can result in abnormalities in learning, mobility, and attention, as well as aberrant facial expressions and voice alterations, among other things (Pasalich et al., 2018).Early signs of autism in children can be detected by parents, and professionals before they reach the age of one. Before the kid starts school, he or she may experience mild functional difficulties in social communication. A lack of flexibility and resilience, overemphasis on a narrow range of themes, sensory hypersensitivity, and hand flapping, swaying, and spinning are examples of restricted interests and repetitive activities. Early detection improves the family's capacity to operate (Elder et al., 2017).Autism is a condition that affects millions of individuals all over the world. It is classified into three subtypes: classic, Pervasive Development Disorder-NOS with Asperger's Syndrome. Genetic issues, using convolex acid or thalidomide while pregnant, having an autistic sibling in the family, and being in their 40s or older when the kid is conceived are all risk factors for autism. Male children are more likely than female youngsters to be diagnosed with autism. Functional challenges, social skill training, language and speech therapy, occupational therapy, parenting approaches, and assistance for kids with special needs are all part of the treatment for Autism Spectrum Disorder (ASD) (Greenberg et al., 2018).The University of Utah and the U.C. Davis MIND Institute conducted a meta-analysis of five studies to better understand what factors contribute to their success. A lack of social skills characterizes autism spectrum disease (ASD). Only a tiny percentage of children in this age range receive appropriate social-communication skills instruction. Poor academic achievement, social failure, and peer rejection may come from the existence of social impairment. Tag and other physical games that require participants to engage with one another may be a better option for children with ASD than board or card games. Physical activity can help with motor skill development, fitness for specialized activities, social skills, physical strength and endurance, and knowledge and comprehension (Shatzer et al., 2014).

Objectives of the study

1. To find the physical activities that will be helpful to enhance the social skills of autistic children.
2. To investigate the role of physical activities in improving the social skills of children with Autism Spectrum Disorder

Questions of the study

1. What is the role of physical activities in improving the social skills of children with Autism Spectrum Disorder**?**
2. What are the physical activities that will be helpful to enhance the social skills of autistic children?

Significance of Research

The significance of this research lies in its contribution to the understanding of the role of physical activities in improving social skills among students with Autism Spectrum Disorder (ASD). The findings of this study have implications for various stakeholders, including schools, teachers, parents, and child rights advocacy groups. For schools and teachers, this research provides valuable

insights and observations about the effects of physical activities on social skill development in children with ASD. It serves as a guide for educators in understanding how physical activities can positively impact social behavior and skills within the school environment. This knowledge can inform the development of strategies and interventions aimed at improving social interactions and inclusivity for students with ASD. Parents of children with ASD can benefit from this research by gaining a deeper understanding of the effects of physical activities on their children's social and academic performance. It empowers parents to recognize the importance of incorporating physical activities into their child's routine and education. They can also use this knowledge to advocate for appropriate support and resources within the community and educational settings. School administrators and physical instructors can utilize the findings of this study to address the issue of social skill deficits on campus. By understanding the impact of physical activities on the social behavior of children with ASD, they can develop comprehensive plans and strategies to foster social skills both within the school environment and in the wider community. This research provides a foundation for implementing targeted interventions that promote social inclusion and create a supportive environment for students with ASD.

Research Methodology

The study population for this research consisted of teachers at Government Special Education Institutions in Punjab who have experience working with children with Autism Spectrum Disorder. The researchers identified a total of 294 institutions and 2,406 instructors in the field of special education in Punjab. While there were 160 special education centers in Punjab, the study specifically focused on physical education teachers who work with children on the autistic spectrum. As stated, there were a total of 19 physical education teachers identified in these centers. To ensure that data was collected from all relevant teachers working with children on the autistic spectrum, the researchers gathered information from all the identified physical education teachers in the special education centers. The sample size of the study was determined using an online sample calculator, and purposive sampling was employed to select the participants. The final sample of the study comprised 332 special education teachers who were actively teaching students with Autism Spectrum Disorder in special education centers. These teachers were chosen to represent the population of interest and provide insights into their perspectives on the role of physical activities in improving social skills in children with ASD.

Instrumentation

The researchers created a questionnaire to investigate instructors' perceptions of physical activities' involvement in developing social skills in children with autism spectrum disorder. The questionnaire was divided into two pieces and four areas, including a preliminary portion describing the respondent's demographics. An expert from the special education department validated the questionnaire with elements such as physical activities, effects, and improvement of social skills by special education instructors in schools being considered.

Pilot testing of the instrument

To determine if the questionnaires deployed were capable of addressing the study questions, pilot experiments were conducted. Initially, a pilot test with 50 individuals was undertaken. The findings depicted 0.87 scores on reliability which assures high reliability of the instrument.

Collection of the Data

The researcher used a quantitative (questionnaire) survey. However, a self-designed survey was used to collect data. The researcher distributed the questionnaire to respondents in groups and individually. Those who could not be reached in person were immediately contacted through telephone. The

data was collected physically and where accessibility was not possible, Google form was used to collect data. With authorization from the school officials, the online questionnaire of the survey questionnaire was produced, and the link was distributed to the teaching staff of children with Autism Spectrum disorder.

Data Analysis

Using SPSS 21, the collected data were tabulated and assessed. The outcomes were obtained using both descriptive and inferential statistics. Frequencies and percentages were computed to demonstrate the demographic items and questions, and the independent sample t-test and one-way analysis of variance were applied in order to highlight the differences in instructors' opinions based on the demographic data.

Demographic Analysis of Sample

Table 01 Frequency Distribution at the Basis of Demographics

Title	Description	Frequency	Percentage
Gender	Male	165	49.7
	Female	167	50.3
Age of Respondents	21-30 Y	182	54.8
	31-40 Y	128	38.6
	41-50 Y	22	6.6
	51-60 Y	0	0
Designation	SSET	227	68.4
	PET	105	31.6
Profession Qualification	Bachelor	81	24.4
	Master	155	46.7
	M. Phil	86	25.9
	PhD	10	3.0
Area of Posting	Rural	146	44.0
	Urban	186	56.0
Division of School	Lahore	18	5.4
	Multan	81	24.4
	Rawalpindi	33	9.9
	Sargodha	18	5.4
	Bahawalpur	111	33.4
	DG Khan	26	7.8
	Faisalabad	23	6.9
	Gujranwala	10	3.0
	Sahiwal	12	3.6
Experience	1-5 Y	188	56.6
	6-10 Y	120	36.1
	11-15 Y	20	6.0
	>15 Y	4	1.2
		332	100

PET (Physical Education Teacher), SSET (Senior School Education Teacher)

Table 02 Independent Sample T-Test on the Basis of Gender

Gender	N	M	SD	df	t	Sig.
Male	165	63.00	13.33	330	.961	0.337
Female	167	64.20	9.254			

*P > .05 Level of Significance

Table 4.02 shows that the empirical data for male (N=165, M=63.00, SD=13.33) and female (N=167, M=64.20, SD=9.254) respondents with t-statistics (t (330) =.961, P>.05) show that there is no significant difference in male and female respondents' opinions about the role of physical activities in improving the social skills of children with Autism Spectrum Disorder.

Table 03 Independent Sample T-Test on the Basis of Designation

Designation	N	M	SD	df	t	Sig.
SSET	227	62.66	12.52	330	2.207	0.028
PET	105	65.63	8.447			

*P < .05 Level of Significance

Table 03 shows empirical data for SSET (N=227, M=62.66, SD=12.52) and PET (N=105, M=65.63, SD=8.447 with t-statistics (t (330) =2.207, P<.05) indicating a significant difference in SSET and PET respondents' opinions about the role of physical activities in improving the social skills of children with Autism Spectrum Disorder.

Table 04 Independent Sample T-Test on the Basis of Area of Posting

Area of Posting	N	M	SD	df	t	Sig.
Rural	146	63.28	12.67	330	.461	0.645
Urban	186	63.86	10.44			

*P > .05 Level of Significance

Table 04 shows that the empirical data for Rural (N=146, M=63.28, SD=12.67) and Urban (N=186, M=63.86, SD=10.44) with t-statistics (t (330) =.461, P>.05) show that there is no significant difference in rural and urban respondents' opinions about the role of physical activities in improving the social skills of children with Autism Spectrum Disorder.

Table 05 One-Way ANOVA on the Basis of Age

Age of Respondents	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1025.412	2	512.706	3.971	.020
Within Groups	42481.684	329	129.124		
Total	43507.096	331			

*P < .05 Level of Significance

Using one-way ANOVA (F (331) = 3.971, P<.05), the empirical data presented in Table 05 for Between Groups (Sum of squares=1025.412, df=2, Mean square=512.706) and Within Groups (Sum of squares=42481.684, df=329, Mean square=129.124) suggest that teachers' perspectives differ significantly on the topic of the role of physical activities.

Table 06 One-Way ANOVA on the Basis of Qualification

Qualification	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	646.004	3	215.335	1.648	.178
Within Groups	42861.093	328	130.674		
Total	43507.096	331			

*P > .05 Level of Significance

Teachers' views on the Role of physical activities do not differ significantly between the Between Groups and Within Groups conditions, as shown by the empirical data in Table 06(Sum of squares=646.004, df=3, Mean square=215.335; Sum of squares=42861.093, df=328; Mean square=130.674) and one-way ANOVA (F (331) = 1.648, P >.05).

Table 07 One-Way ANOVA on the Basis of Experience

Experience	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1608.421	3	536.140	4.197	.006
Within Groups	41898.675	328	127.740		
Total	43507.096	331			

*P < .05 Level of Significance

Table 07 shows that there is a statistically significant difference in teachers' opinions Between Groups (Sum of squares=1608.421, df=3, Mean square=536.140) and Within Groups (Sum of squares=41898.675, df=328, Mean square=127.740) on the topic of the role of physical activities in improving the social skills of children with autism.

Table 08 One-Way ANOVA on the Basis of Division

Division	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3161.949	8	395.244	3.164	.002
Within Groups	40345.147	323	124.908		
Total	43507.096	331			

*P < .05 Level of Significance

The results of the one-way ANOVA (F (331) = 3.164, P <.05) on the empirical data presented in Table 08 reveal a statistically significant split in the perceptions of teachers between the two groups on the topic of the role of physical activities in enhancing the social skills of children with autism.

Table 09 Correlation Analysis between Physical Activities and Social skills of ASD children

Correlation Analysis		**Physical Activities**	**Social skills of ASD children**
Physical Activities	Pearson Correlation	1	.801**
	Sig. (2-tailed)		.000
	N	332	332
Social skills of ASD children	Pearson Correlation	.801**	1
	Sig. (2-tailed)	.000	
	N	332	332

Table 09 describes the correlation between physical Activities and social skills of ASD children. There is a pure linear relation between physical activities vs physical Activities and social skills of ASD children vs social skills of ASD children and vice versa. The correlation between physical activities and social skills of ASD children is positive (.801). This shows that if physical activities increase then social skills of ASD children performance will also increase.

Table 10 Regression Analysis to find out effects of Physical Activities at Social skills of ASD children

Regression Analysis	**R**	**R^2**	**F**	**B**	**β**	**t**	**Sig.**
(Constant)	.801a	.642	592.701	11.817		5.469	.000
Physical Activities				1.361	.801	24.345	.000

Table 10 defines detail of correlation between the physical activities and social skills of ASD children through regression analysis. In this analysis, the dependent variable is the social skills of ASD children and the independent variable is physical activity. R value shows the simple correlation value, which is 0.801, indicating a significant connection between the dependent and independent variables. The R^2number (64.2%) reflects how much of the overall variation in the dependent variable is explained by the independent variable. Here, P =.000, which is smaller than.05, indicating that the regression model predicts the outcome variable with statistical significance. B values help to develop the regression equation which is;Loss of social skills of ASD children= 11.817+ 1.361 (Role of physical activities)

Discussion

The purpose of the research was to learn more about those three aspects of youngsters on the autism spectrum. The first step is to characterize the characteristics of autistic youngsters. The second step was to identify the physical pursuits that are crucial for children with ASD. And thirdly, what function did these physical activities have in helping children with ASD develop better social skills? As a result of exploring attributes of children with autism spectrum disorder. Many of the students in the special education department have been observed by researchers to avoid or fail to maintain eye contact. emotions of happiness, sadness, and anger on its face or don't perform for you by the age of 60, Delays in the development of verbal, motor, cognitive, or

learning abilities; Behavior that is hyperactive, impulsive, or lacking in focus, Disease that causes convulsions, sometimes called epilepsy Changing patterns of sleep and eating, Problems with digestion, strange changes in how you feel emotionally or mentally, Distress, agitation, or unrelenting concern, either an absence of fear or an excess of dread, Fluency delays and articulation issues Continually reuses the same phrase (called echolalia).As a result of exploring the Physical activities that will helpful to enhance the social skills of Autistic children, Researcher identify almost 15 physical activities like Tag, Hide and Seek, Basketball, Hopscotch, Simon Says, Candy Land, Chutes and Ladders (Snakes and Ladders), Hi-Ho Cherry-O, Go Fish, Old Maid, Stages Learning Memory Games, War Game, Step into Conversation, Community Gardening and Team Sports which are helpful to enhance social skills of special education children ASD(Jeste, 2015). As a result of identifying role of Physical activities that will be helpful to enhance the social skills of Autistic children which are Tag improve the agility, balance, coordination, accuracy and precision level of Autistic Children, Hide and Seek minimize Separation Anxiety, Learn Emotional Self-control of Autistic Children, Basketball develop the communication and social skills, like mood and confidence of Autistic Children, Hopscotch improve balance, eye/hand coordination of Autistic Children, Children with autism benefit from playing Simon Says, because it helps them improve their ability to control their impulses, maintain emotional stability, understand social expectations, and communicate effectively, Candy Land help in holding eye contact with others, knowing facial movements, nonverbal motions, waiting and patience of Autistic Children, Snakes and Ladders helps to understand Identify your Goal, Be humble but never give up, Patience, waiting, turn taking, sharing, how to cope with losing, making conversation of Autistic Children, Hi-Ho Cherry-O helps to enhance counting skills, addition and subtraction skills of Autistic Children, Go Fish help in numerals and quantities matching pairs and sorting of Autistic Children, Autistic children can benefit from playing the Old Maid game since it encourages them to think independently, cooperate with others, and develop their strategic and tactical abilities(Colombo-Dougovito & Lee, 2020). Learning and Memory games have been shown to boost creativity, as well as auditory and visual identification skills (Tu et al., 2021). Card games like War are great for developing a wide range of skills, including visual perception and color recognition; eye-hand coordination and physical dexterity; and an understanding of numerical relationships, form classification, and counting (Mendiburu, 2012). Autistic children can benefit from the Step into Conversation game because it teaches them how to strike up a conversation, select a topic, and participate in a conversation by taking turns talking and answering questions (Dotson et al., 2010). Community gardening helps the Autistic Children in social competence by having your child take care of something and learn responsibility, Team Sports helps the Autistic Children to work together toward a common goal and react properly in winning or losing the game(Chan et al., 2012). A study performed to investigate the relationship between the evaluation of a child's appropriate attributes and the presence of co-occurring social and behavioral conditions (such as sleep and feeding disorders, obesity, gastrointestinal tract symptoms, seizures, ADHD, anxiety, delayed language skills, delayed motor skills, does not show facial expressions like happy, sad, angry, and so on) that have a negative impact on the child's ability to function and quality of life(Ibrahim et al 2019).The use of behavioral and other therapies to treat particular skills and symptoms is backed by a growing body of research (Hofmann et al., 2012). Their results are almost similar to researcher results Children on the autistic spectrum typically struggle to communicate and interact socially (Sosnowy et al., 2019). To improve autistic children's social abilities, we have mentioned a lot of physical

activities/Games are performed/play in our study (Sansi et al., 2021). For example, Tag, Hide and Seek, Step into Conversation, Basketball, Simon Says, Hi-Ho Cherry-O, Old Maid, Community Gardening, Team Sports, Hopscotch, Candy Land and Stages Learning Memory Games. Each social skill, conduct and motor skills are defined, and model lessons for teaching them are supplied (Baker et al., 2015). This study is mostly similar with the suggested physical activities and games that are very helpful in improving the social skills of children with ASD (Santos et al., 2021).Children on the autism spectrum benefit greatly from engaging in regular physical activity and exercise to boost their social skills (McCoy et al., 2020). Low motor skills are associated with ASD, and it has been proven that engaging in regular physical exercise might help mitigate some of the challenging behaviors that are common among those with ASD (Chu et al., 2020). But the idea that exercise can help people with autism is controversial (Scott, 2016). Meta-analyses and systematic reviews have found that physical activity helps young children and teens with autism improve their social skills and behavior (Liang et al., 2022).

Conclusion

This study focused on investigating the role of physical activities in the development of social skills in children with Autism Spectrum Disorder (ASD) from the perspective of physical education teachers in the Department of Special Education in Punjab, Pakistan. The research design employed a descriptive study approach using a survey method, and data were collected through a self-designed questionnaire administered to special education teachers in various schools. The findings of the study revealed that physical education teachers, along with psychologists and speech therapists, recognized the importance of physical activities in promoting a range of developmental aspects for children with ASD. These aspects included participation, stereotyped behavior, general behavior and emotional control, social and communicative abilities, and motor capabilities. In summary, the study provides valuable insights into the positive impact of physical activities on the social skill development of children with ASD, as perceived by physical education teachers in the Department of Special Education in Punjab, Pakistan. These findings emphasize the significance of integrating physical activities into the educational curriculum and employing effective teaching strategies to enhance the overall development and well-being of children with ASD. By recognizing the role of physical activities, educators and professionals can contribute to the holistic development of children with ASD, promoting their social integration and improving their quality of life.

Limitations of the study

Sample Size: The study employed purposive sampling, which may limit the generalizability of the findings. The sample size and specific schools involved may not accurately represent the entire population of physical education teachers in the Department of Special Education in Punjab, Pakistan. Therefore, caution should be exercised when applying these findings to other contexts or regions.

Self-Report Bias: The data collected through self-designed questionnaires relied on the subjective responses of the participating physical education teachers. This introduces the possibility of self-report bias, where participants may provide socially desirable responses or may not accurately recall their experiences or observations. Future studies could consider incorporating other methods, such as direct observations or interviews, to gather more objective data.

Lack of Control Group: The study did not include a control group, which limits the ability to make direct comparisons and draw causal conclusions. Without a control group of children with ASD who did not engage in physical activities, it is difficult to establish a clear cause-and-effect relationship between physical activities and the development of social skills in this population.

Recommendations

Longitudinal Studies: Conducting longitudinal studies could provide a more comprehensive understanding of the long-term effects of physical activities on the development of social skills in children with ASD. By following participants over an extended period, researchers can observe changes in social skills and assess the sustainability of the benefits gained from engaging in physical activities.

Randomized Controlled Trials: To establish a causal relationship between physical activities and the development of social skills in children with ASD, future research could employ randomized controlled trials. By randomly assigning participants to intervention and control groups, researchers can more confidently attribute any observed differences in social skill development to the impact of physical activities.

Inclusion of Parent and Child Perspectives: While this study focused on the perspective of physical education teachers, future research could consider incorporating the perspectives of parents and children with ASD. Including the viewpoints of these key stakeholders would provide a more comprehensive understanding of the benefits and challenges associated with physical activities in improving social skills.

Expansion of the Study Scope: This study was limited to the Department of Special Education in Punjab, Pakistan. Future research could consider expanding the scope to include multiple regions or even different countries to explore potential cultural and contextual variations in the role of physical activities in the social skill development of children with ASD.

Addressing these limitations and pursuing further research in these suggested areas can contribute to a more robust understanding of the relationship between physical activities and the development of social skills in children with ASD, ultimately guiding the design and implementation of effective interventions and educational strategies.

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