PalArch's Journal of Archaeology of Egypt / Egyptology

PARTICIPATION OF AUTISTIC CHILDREN IN EXTRACURRICULAR ACTIVITIES AND DEVELOPMENT OF SOCIABILITY SKILLS

Fayza Ibrahim Abdullah Ahmed

Prince Sattam bin Abdul-Aziz University, Special Education Department, College of

Education, Al Kharj, Saudi Arabia

E-mail: dr_fayza@hotmail.com

Fayza Ibrahim Abdullah Ahmed*. Participation Of Autistic Children In Extracurricular Activities And Development Of Sociability Skills--Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(4), 2400-2418. ISSN 1567-214x

Keywords: Autistic Children; Sociability Skills; Extracurricular Activities; Participation, Social competence.

ABSTRACT

The development of social skills has been a special focus on autistic children's growth so this study examined the relationship between Participation in Extracurricular Activities and the development of Sociability Skills in Autistic Children. The study sample consisted of (n=200) autistic children in the primary stage in Riyadh city. a questionnaire to estimate participation of autistic children in extracurricular activities and Sociability Skills scale was used, the study applied a descriptive approach. The study results indicated that there was a statistically significant correlation at the level of significance (0.01) between the participation of autistic children in extracurricular activities and development of sociability skills, There were no statistically significant differences between mean scores of sample individuals according to gender (male, female) in all domains and overall score on Sociability skills scale and a questionnaire estimating participation of autistic children in extracurricular activities, and there were statistically significant differences between the average scores of the sample individuals according to participation in extracurricular activities (low, high) at a significance level (0.05) in both domains of sociability skills scale (social interaction, tasks performance) and overall score on the sociability skills scale in favor of whom obtained high scores in participation in extracurricular activities. Future research on the quality of involvement is necessary to further understand what specific aspects of activities facilitate social development

INTRODUCTION

Participation in a variety of activities is essential for the growth and development of autistic children, and it is directly related to health, well-being, quality of life, and social interaction (Bohnert et al. 2019).

Extracurricular activities are of importance in the educational and psychological process, in terms of formation and development of children's personality and the satisfaction of their needs and attitudes by the strategy of the desired educational goals (2020)Studies confirm (Fang et al., 2020; Zilli et al., 2020) there was a positive relationship between participation in extracurricular activities and sociability, learning, academic achievement, and the achievement of many desired educational goals. and there was a positive effect of the entertaining program on the sociability skills of autistic children (Hassani et al., 2020; Howells et al., 2020; Ibrahim, 2020)

study (Yamada et al., 2020)examined the effectiveness of a program for developing sociability skills in reducing the level of hyperactivity among a group of autistic children, A study (Mpella et al., 2019) emphasized knowledge of the role of extracurricular theatre activities in emotional and social development, The study(Logan et al., 2017)dealt with the effectiveness of a proposed training program to perform some varied activities on developing social communication skills for autistic children.

The study (Lucas & James, 2018; Płatos & Wojaczek, 2018) also dealt with extracurricular activities and its relationship to some psychological disorders among autistic students in special classes attached to regular schools, where participation in extracurricular activities helps autistic students to get to know themselves, satisfy their different needs and show their emotions.

The researchers generally considered that children with autism have difficulties generalizing acquired skills through new contexts where Successful generalization is essential for the intervention to have benefits in everyday life outside of the original learning environment. (Hulme et al., 2020), Social skills are of great importance in the daily lives of individuals with special needs, especially children with autism, as they are necessary for all situations of their daily life (Carruthers et al., 2020)

Several studies indicate a lack of skills utilizing sociability skills in children with autism spectrum disorders where They understand, assimilate and maintain better knowledge with virtual support, however(Lorenzo et al., 2019) The study (Brooks, 2013) confirms that poor sociability skills lead to difficulty in understanding and explaining behavior, and their weakness may lead to

obstacles in the way of an individual's compatibility with others.

Many skills deficiencies impact autistic children's social functioning. Due to the limited efficacy of the social skills programs for these children, new strategies for the development of social skills should be explored. (Kim et al., 2020), Research suggests that extracurricular activity participation positively influences adolescent development, however little is known about the benefits of activity participation for Autistic Children (Qualls & Corbett, 2017; Shattuck et al., 2011; Tabernero & Calvo, 2020; Xia & LeTendre, 2020)

The problem of autistic children is not confined to the field of education but extends to the social field, which is an important basis for their interaction with those around them (Memari et al., 2015), and this interaction is reflected in the ability of these children to carry out the tasks of daily life and practice the activities required in society(Zuki & Rahman, 2016), And since public schools especially mainstreaming schools, are the main source of children's acquisition of basic skills (2020) Its role extends to teaching them how to adapt to different situations inside and outside the school, as varied results of studies on the effectiveness of extracurricular activities at the level of proper consensus for children.(Ochs & Solomon, 2010),Studies also indicate that children with autism spectrum disorder differ from typically developing peers in activity participation outside of school.(Chang et al., 2019; Kim & Song, 2017; Wishart et al., 2007)

the social, and leisure activity participation of children with autism spectrum disorder (ASD), and their typically developing peers between the ages of 5 and 17(Xia & LeTendre, 2020). Social activities those in which the child engaged informally with peers, such as playing at a friend's house. Entertaining activities were formally organized structured activities such as sports, dancing lessons, and music lessons other than that Leisure activities were passive activities such as watching television or going for walks. (Memari et al., 2015) (Bella & Evaggelinou, 2018; Georgena, 2017)

The study(Wong et al., 2020) indicated that the participation of autistic students in extracurricular activities is ineffective at the level of their consensus.

The results of other studies indicated the effectiveness of the participation of autistic students in extracurricular activities with increasing the network of social relations with friends and strengthening friendly relations between them in the inclusion community(Matthews et al., 2020; Villasenor et al., 2018), the problem of the current study have emerged from lack of consensus of previous studies results

Therefore, the current study attempt to identify the relationship between participation in extracurricular activities and the development of sociability skills for elementary school children with autism spectrum disorder at the age of (6-12) years in the primary inclusion schools in Riyadh- Saudi Arabia. Based on the above, The main question of this study, Does participation in extracurricular activities affect the development of social skills in children with autism?

METHODOLOGY AND PROCEDURES

Method: The descriptive survey was adopted to identify the relationship of autistic children participating in extracurricular activities and sociability skills in primary inclusion schools in Riyadh city - Kingdom of Saudi Arabia. According to variables related to the degree of some Sociability Skills and calculating the degree of their connection with each other, with a comparison between students with high scores and their peers with low scores in participation in extracurricular activities and sociability skills degree they have.

The descriptive approach was appropriate for collecting, classifying, and tabulating data and facts to obtain significant conclusions and reach generalizations regarding the research under study.

The study sample: the study sample was selected from children with autism spectrum disorder from inclusion classes in general education schools from the primary stage of the first semester of the year 2019/2020 in Riyadh city. and the sample consisted of (200) child, a sample was chosen as follows: (100) child are from Males, (100) child are from females, and their IQ coefficients ranged Between (55-80) degrees with an average (65.16), a standard deviation (6.97), and their age was between (6-12) years with an average of (9) years, and a standard deviation (2.06) They were intentionally chosen, and implementation was by teachers of autistic children.

Study Tools: The researcher used the following tools in the study:

- 2.3.1- A questionnaire estimating the participation of autistic children in extracurricular activities (researcher's preparation)
- 2.3.2- Sociability Skills Scale. (researcher's preparation)

The following is a list of these tools: -

2.3.1-A questionnaire estimating the participation of autistic children in extracurricular activities

The researcher used a questionnaire to reach the study objectives and answer questions as a tool for collecting data from the study sample. The following procedures were adopted for building the study tool.

2.3.1. Building a Study Tool:

To design and build a questionnaire estimating the participation of autistic children in extracurricular activities by observing teachers to children actual participation

To design and build for preparing the initial form the researcher followed the following steps:

- Reviewing the special education literature and related to previous studies.
- prepared an exploratory study on a sample of (200) child of autistic children to benefit from it in determining teachers 'views about the participation of autistic children in extracurricular activities
 - the questionnaire was developed in its initial form consisting of (16) items.

To verify the validity of the questionnaire, the following was carried out:

A questionnaire validity: The apparent validity was calculated by presenting the questionnaire in its initial form to (10) professors specialized in the field, for reviewing it in terms of clarity and suitability for the evaluation of the participation of children with autism in extracurricular activities and after making revisions and additions according to professors' opinions and directions. The number of statements of the questionnaire has reached (20), including (5) negative statements numbers (3, 4, 8, 16, 17), and the rest of the statements are positive, and the answer to the questionnaire is through three options (yes, sometimes, no) whose scores are in case Positive statement is as follows (3, 2, 1) and in case of negative expressions, their degrees are as follows (1, 2, 3). The internal consistency was calculated by applying the questionnaire to 120

children with autism at the primary stage, and the correlation coefficients were calculated Between the degree of each statement and the total score of the questionnaire after deleting the degree of a statement, all correlation coefficients between the degree of each statement and the total score of the activity participation questionnaire were significance at the level of (0.01).

A-Validity and reliability coefficients were calculated to estimate the participation of autistic children in extracurricular activities by this method.

Discriminatory validity was used. It is one of the most important methods used to demonstrate the validity of the questionnaire and it is based on calculating the significance of differences between the mean scores of individuals with high scores on the questionnaire estimating the participation of autistic children in extracurricular activities and the average scores of individuals with low scores on the same questionnaire.

Also, when these differences become clear statistical significance, this indicates the validity of the questionnaire:

Table (1): the significance of the differences between the mean scores of sample individuals and the total score of the questionnaire estimating participation of autistic children in extracurricular activities according to the degree (who got low scores - others who got high scores) (n = 120)

Total marks	Low-s	core	High- scores		TValue	Sig
	The	lower	The top quadrant			
Questionnaire	quadra	ınt				
	Mea Standard		Mean	Standard		
	n deviation			deviation	36.201*	0.01
Participation	31.0	2.470	54.46	2.417	*	
Of Autistic	0					
Children In						
Extracurricul						
ar Activities						

(*) significance at level of (0.05) (**) significance at level of (0.01)

There are statistically significant differences between mean scores of individuals with low scores and the mean scores of individuals with high scores

and total score of the questionnaire estimating participation of autistic children in extracurricular activities

B - The reliability of the questionnaire was calculated by the alpha-Cronbach method and split-half Method. The alpha-Cronbach equation depends on the variances of the test questions and requires the test items to measure only one feature. In the split-half Method, the researcher tries to measure the correlation coefficient of the total degree after dividing his paragraphs into two parts (two equal parts if the number of domain items is even - unequal if the number of domain items is odd) and then enter the correlation coefficient in the correction equation for the split-half Method of Spearman-Brown. Reliability by split-half Method (0.875), coefficient of stability using Cronbach alpha (0.901), number of statements (20)

The value of the alpha coefficient is high, as is the value of the reliability coefficient by the split-half method, which makes us confident in the reliability of the questionnaire.

Method of application: The teacher fills out the questionnaire by observing the child for two months where the highest score is (60) and the lowest score is (20) a high score indicates positive participation in activities, and a low score indicates a lack of participation or a low degree of participation and negativity. 2.3.2- Sociability Skills Scale. (Researcher's Preparation)

To design and build a Scale assessing Sociability Skills for autistic children by teachers observing actual participation of children.

To design and build for preparing the initial form the researcher followed the following steps:

- 1 Reviewing the special education literature and related to previous studies.
- 2 -The social communication skills that autistic children are supposed to demonstrate in classroom situations have been developed in two domains:
- A) grouping of social communication skills related to the field of interpersonal skills (social interaction). This grouping measures the student's ability to interact and deal with others, and it consists of skills related to accepting power, coping with conflicts, attracting the attention of others, conducting conversations, planned and unplanned play, positive attitudes towards others, and his property from others property.
- B) grouping of social communication skills related to tasks performance This grouping measure social communication skills related to how children perform various tasks such as directing and answering questions, attentive behavior, conducting the discussion in the classroom, completing work, following directions, group activities, independent work, task focus (perseverance on the task), and performance in the presence of others, And work efficiency.
- Sociability skills were used as two domains clarifying the social communication skills of autistic children within the classroom.

- 1 Then he posed a set of questions about the problems that the autistic child suffers from, which are important for autistic children teachers in mainstreaming schools
- 2- The opinions of teachers that illustrate social communication skills were collected, and then the items that define the domain of the social communication skills scale were identified through two domains, namely (social interaction skills skills related to tasks performance) for autistic children
- 3- The scale was presented in its initial form to autistic children teachers, and they agreed on its statement in terms of its importance by (95%)
- 4- The scale was evaluated by (15) professors specialized in the field of special education and psychology, and the scale has been modified in the comments of the arbitrators to become (60) statement, where the first domain starts from (1-30) and the second domain starts from (31-60)
- 5 Validity of the scale the validity of the scale was determined by specialized arbitrators in special education and psychology, and the percentage of agreement (88.5%)

The validity of the scale was verified as follows:

- 6- Steps to legalize the sociability skills scale: The researcher implemented the processes of legalizing sociability skills on (120) autistic children, and the validity and reliability coefficients were calculated for the sociability skills scale by the following methods:
- A Validity of the scale: To verify the validity of the scale, discriminatory validity, and Construct validity was used.
- 1- Discriminatory validity:

It is one of the most important methods used to demonstrate the validity of the scale and it is based on calculating the significance of differences between averages scores of individuals with high scores on the scale of sociability skills and averages scores of children with low scores on the same scale when these differences become clear statistical significance, this indicates the validity of the scale, then she calculated the differences for each domain and calculated the differences to the scale as a whole as follows:

Table (2) the significance of the differences between the mean scores of the sample individuals on the domains of sociability skills scale according to the degree (low degree, high degree) (N = 120)

Dimensions	Low-sce	ore	High- scores		TValue	Sig
	The lower quadrant		The top quadrant			
	Mean	Standard	Mean	Standard		
	deviation			deviation		
social	79.52	15.213	129.16	14.913	11.651*	0.01
interaction					*	
Related to	81.12 18.283		126.00	18.180	8.703**	0.01
tasks						
performance						

A total score	160.64	18.218	255.16	16.191	19.390*	0.01
for the					*	
Sociability						
Skills scale						

(*) significance level of (0.05) (**) significance level of (0.01)

Table (2) It is clear that there are statistically significant differences between the mean scores of individuals with low scores and the mean scores of individuals with high scores on the domains and the overall score of sociability skills scale.

And through the differences in each domain separately and in the overall scores of individuals on the scale as a whole, it becomes clear from that the validity of the scale.

B - Scale reliability: To calculate the scale reliability, the Cronbach alpha method and split-half Method were used. The Cronbach alpha equation depends on the variances of the test questions, and it requires that the test items measure only one feature. Therefore, the researcher calculated the reliability coefficient for each domain separately.

Table (3): Values of reliability coefficients by the alpha - Cronbach method and the split-half Method (n = 120)

Dimensions	The number	Stability	Stability	
	of phrases	coefficient -	coefficient-	
		Cronbach alpha	half	
			segmentation	
Social Interaction	30	0.726	0.663	
Related To Tasks	30	0.798	0.765	
Performance				
Total Score For	60	0.882	0.851	
Sociability Skills				
Scale				

Table (3) shows all the values of the alpha coefficients are high, as well as the values

of the reliability coefficients by the split-half method, which makes us confident in the reliability of the scale.

7- The scale consists in its final form of (60) statement divided into two domains, the first domain (30) statement from (1,30), the second domain (30) statement, from (31,60), to be answered by choosing one of five responses (always and severe -always - sometimes - Rarely- did not), To analyze the data and to answer the scale questions, Likert scale quintet was used to evaluate answers according to following degrees (5) always and severe, (4)always,(3)sometimes,(2)Rarely (1) did not and the total score on the scale ranges between (60 - 300) degrees, where the total score for each domain of the scale is from 30,150 degrees, a higher score means an increase in the child's

social skills rate and vice versa It is true where the rate of social skills decreases the lower its score on the scale, where the score (150) and above was considered a high level (the increase in the social skills rate) and the highest score is (300) and the lowest score indicates a lack of social communication skills. it is clear from the above the reliability and validity of each domain of the scale in the context of the overall degree of the scale, which confirms the reliability of the scale.

RESULTS AND DISCUSSION

The results of the first question: Q1: Is there a statistically significant correlation between scores of the sample individuals on the scale of sociability skills and the scores of the sample individuals on the questionnaire estimating participation of autistic children in extracurricular activities? To verify the validity of this question, the Pearson correlation coefficient was used between the scores of the study sample on the sociability skills scale and their scores on the questionnaire estimating the participation of autistic children in extracurricular activities.

Table (4) shows the values of the correlation coefficients between the scores of the sample individuals on the two scales.

Table (4): Correlation coefficients between the scores of the sample members on the scale of sociability skills and their scores on the questionnaire estimating the participation of autistic children in extracurricular activities (n = 200)

Domains	A total score of the questionnaire	Signifi
	estimating children with autism in	cance
	extracurricular activities	level
social interaction	0.206*	0.05
Related to tasks	0.249*	0.05
performance		
A total score for the	0.333**	0.01
Sociability Skills		
scale		

(*) Statistically significant at the level of (0.05) (**) the significance level of (0.01).

It is clear from Table (4) that:

- there is a statistically significant correlation relationship at the level of significance (0.05) between the degrees of the study sample on the total score of the questionnaire estimating the participation of autistic children in extracurricular activities and social interaction domain on the sociability skills scale.
- There is a statistically significant correlation relationship at the level of significance (0.05) between the scores of the study sample on the total score of the questionnaire estimating the participation of autistic children in an extracurricular activity and tasks performance domain on sociability skills scale.

- There is a statistically significant correlation relationship at the level of significance (0.01) between the degrees of the study sample on the overall score of the questionnaire estimating the participation of autistic children in extracurricular activities and the overall score of sociability skills scale.

The results of the second question: Q2: Are there statistically significant differences between the mean scores of sample individuals on the domains of sociability skills scale according to gender (males - females)?

To verify the validity of this question, the researcher used the T-test for independent groups, and the following table shows that.

Table (5) The significance of the differences between the mean scores of the sample individuals on the domains of the sociability skills scale according to gender (male-female)

Dimension	Males		Females	Females		Sig
S	(N = 100)		(N = 100)))		
	Mean Standard		Mean	Standard		
		deviation		deviation		
social	99.74	29.755	103.66	25.506	-0.707	Not d
interaction						
Related to	106.38	30.980	101.50	23.745	0.884	Not d
tasks						
performan						
ce						
A total	206.12	38.211	205.16	37.544	0.127	Not d
score for						
the						
Sociability						
Skills scale						

(*) significance level of (0.05) (**) significance level of (0.01)

- It is clear from the previous table that there are no statistically significant differences between the mean scores of the sample individuals according to gender (males - females) in all domains and the overall score on the sociability skills scale.

Figure (1) illustrates the differences between the scores of the sample individuals according to gender (male-female) on the dimensions of the social skills scale.

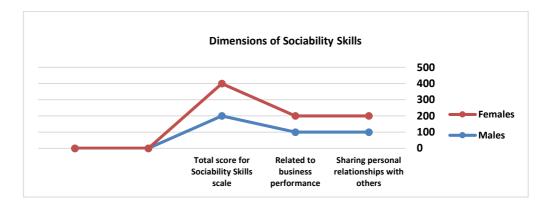


Figure (1): The differences between the average scores of the sample individuals on the domains of the sociability skills scale according to gender (male-female)

Results Q3: Are there statistically significant differences between the mean scores of sample individuals on the questionnaire estimating participation of autistic children in extracurricular activities according to gender (male-female)? To verify the validity of this question, a "T-test" was used for independent groups, and the following table explains that.

Table (6): the significance of the differences between the mean scores of the sample individuals on the questionnaire estimating participation of autistic children in extracurricular activities according to gender (males - females)

Questionnaire		Males (N = 100)		Females (N = 100)		T Valu	Sig
		n d	deviatio		Standa rd deviatio n	e	
Participation autistic children extracurricular activities	of in	42.3	9.372	42.08	9.733	0.14 7	Not d

(*) Statistically significant at a level of (0.05)(**) significance level of (0.01) It is clear from the previous table that there are no statistically significant differences between the mean scores of the sample individuals according to gender (males - females) and the overall score on the questionnaire estimating participation of autistic children in extracurricular activities

Figure (2) shows the differences between the scores of the sample individuals according to gender (male-female) on the questionnaire estimating participation of autistic children in extracurricular activities.

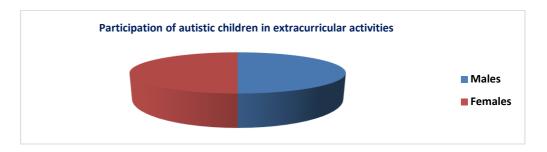


Figure (2): The differences between the mean scores of the sample individuals on the questionnaire estimating participation of autistic children in extracurricular activities according to gender (male-female)

Results Q4: Are there statistically significant differences between the mean scores of the sample individuals on the domains of sociability skills scale according to participation in extracurricular activities (low - high)?

To verify the validity of the question, a "T-test" was used for independent groups, and the following table explains that.

Table (7) The significance of the differences between the mean scores of the sample individuals on the domains of the sociability skills scale according to participation in extracurricular activities (low - high)

Dimensions	Low		High		TValue	Sig
Sociability	(N=42)		(N=62)			
Skills scale	Mean	Standard	Mean	Standard		
		deviation		deviation		
Social	105.41	25.118	115.0	24.808	-2.393	0.05
interaction			3			
Related to	99.41	27.774	115.9	25.592	-2.257	0.05
tasks			7			
performance						
A total score	204.82	43.421	231.0	50.4	-4.65	0.05
for the			0			
Sociability						
Skills scale						

(*) Statistically significant at a level of (0.05) (**) significance level of (0.01) It is clear from the previous table that there are statistically significant differences between the average scores of the sample individuals according to participation in extra-curricular activities (low - high) at a level of significance (0.05) in both domains of sociability skills scale (social interaction skills, tasks performance skills) and overall score on the sociability skills scale in favor of whom obtained high scores in participation in extracurricular activities.

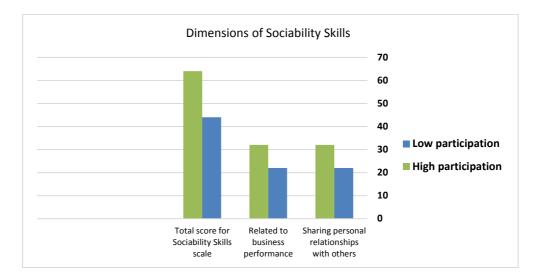


Figure (3): The differences between the mean scores of the sample individuals on the domains of the sociability skills scale according to participation in extracurricular activities (low - high)

DISCUSSION

The main objective of this research was to investigate the relationship between extracurricular activity participation and the development of sociability skills. Where the results of the first question confirm the existence of a statistically significant correlation relationship at 0.05 level between the study sample scores on the overall score of the questionnaire estimating participation of autistic children in extracurricular activities and social interaction domain on sociability skills scale And the existence of a statistically significant correlation relationship at the level of significance (0.05) between the study sample scores on the total score for the questionnaire estimating participation of autistic children in extracurricular and tasks performance domain on the scale of sociability skills, and existence of a statistically significant correlation relationship at the level of significance (0,01) between the study sample individuals scores on the overall score of the questionnaire estimating participation of autistic children in extracurricular activities and the overall score of sociability skills, which indicates the relationship of extracurricular activities to the development of sociability skills on social interaction domain and tasks performance domain at all levels. This question is consistent with the results of a study (D'Amico & Lalonde, 2017; Koegel et al., 2005) that dealt with the effectiveness of extracurricular activities in developing the skills of autistic children with their ordinary peers and increasing their connection with their society through various trips and activities, As well as a study(Valverde-Esteve et al., 2020) that dealt with social responsibility. Some of them differ, some of them dealt with the extent of participation in student activities, and their relationship to some variables, a study (Raqqad, 2018)The role of extracurricular activities in the development of social skills Students with disabilities, from the point of view of their teachers in the province of Amman, and to examine the differences between the means of teaching teachers and the contribution of extracurricular activities to the development of social skills

Such as a study (Kent et al., 2020; Mpella et al., 2019) (Bohnert et al., 2019)which indicated that sociability skills and social competence are related to each other, and a study(Sreckovic et al., 2017) (Cakir & Korkmaz, 2019)confirmed that extracurricular activities are of benefit to children with autism spectrum disorder as they help in acquiring social communication skills. The results of the second question indicate that there are no statistically significant differences between the mean scores of the sample individuals according to gender (males, females) in all domains and overall score on the sociability skills scale, which indicates that there is no difference between male and female autistic children in the domains related to tasks performance and social interaction as values of differences between the mean scores of the sample individuals indicate the equality in their social communication skills, a study (Diener et al., 2016) confirmed this result on the absence of significant differences between male and female autistic children and the importance of learning environment supported with normal peers.

the results of the third question confirm that there are no statistically significant differences between the mean scores of the sample individuals according to gender (male-female) on the total score of the questionnaire estimating participation of autistic children in extracurricular activities, which indicates no difference between male and female autistic children in participating in extracurricular activities. Also, the mean scores of the sample individuals indicate equal participation in their extracurricular activities, and this is consistent with the results of the study (Ali, 2019) There were no differences between male and female autistic children in participating in extracurricular activities.

The results of the fourth question indicate that there are statistically significant differences between the mean scores of the sample individuals according to participation in extra-curricular activities (low - high) at a level of significance (0.05) in both domains of sociability skills scale (social interaction skills, tasks performance skills) and overall score on the sociability skills scale in favor of whom obtained high scores in participation in extracurricular activities, and this result is consistent with the study (Ashbaugh et al., 2017; Yamada et al., 2020)that extracurricular activities are of benefit to children with autism spectrum disorder as it helps in acquiring social communication skills as it gives them the opportunity to interact with others, The growth of relationships, friendship and a sense of pleasure, and increases the effectiveness of sharing with other colleagues, which reduces the feeling of isolation and reduces the emergence of some psychological disorders such as anxiety, depression, and psychological loneliness. and the effectiveness of activities increases with the increase in the degree of participation, The results of studies indicate the effectiveness of the participation of autistic children in extracurricular activities in increasing the network of social relations with friends and strengthening friendly relations between children in the inclusion community (Ellingsen et al., 2017; Sekhri, 2019) which contributes to increasing their social interaction(Yamada et al., 2020) (Mpella et al., 2019)

It is clear from the above that the effectiveness of extracurricular activities in reducing psychological disorders means the more increasing the participation of autistic children in extracurricular activities the less of psychological disorders level they have.

CONCLUSION

The results of the current study confirmed the existence correlational between the participation of autistic children in extracurricular activities and the development of sociability skills, So extracurricular activities should be diversified and enriched to encourage children in participation, because participation is of importance to children, and help them acquire many necessary life skills and social skills. And participation allows children to interact with others, and the degree of skills related to the performance of tasks increases, and the more diverse activities, the more children participate. Finally, the study result could be taken into consideration to raise the level of extracurricular activities to be an effective educational and entertaining tool for autistic children.

RECOMMENDATIONS

Based on the results of the study, the researcher recommends the following:

- 1 Increasing the number of suitable extracurricular activities for autistic children provides the opportunity to acquire positive behaviors from their peers through the process of imitation and simulation.
- 2. Linking extracurricular activities with classroom activities (academic curricular) as autistic children learn through play and interactive topics better than abstract learning.
- 3. The use of extracurricular activities such as the use of social stories, theater, role-playing, etc., in teaching autistic children as extracurricular activities have an effective impact on training in normal behavior and social communication
- 4. Providing teachers of autistic children who are on duty with basic and necessary information (articles- studies programs) about the most important and best extracurricular activities for autistic children
- 5 A guide of extracurricular activities must be prepared in the context of the characteristics, needs, capabilities, and readiness of autistic children, where researcher observed dependence of teachers and supervisors of activities on the general education guide.
- 6. Holding training courses for male and female teachers to train in organizing and managing extracurricular activities.

Funding: This study received no specific financial support.

Competing Interests: The author declares that he has no competing interests. Acknowledgment: author contributed to the conception and design of the study

https://orcid.org/0000-0002-2463-6498

REFERENCES

Ali, F. (2019). Effectiveness of Extra-Curricular Activities Program to Improve the Social Interaction in Children with Autism Spectrum Disorder. *Journal of Special Education and Rehabilitation*, *37*(6504), 1-22.

- Bella, M., & Evaggelinou, C. (2018). Theatrical play and social skills development: teachers' perspectives on educating autistic students. *Cypriot Journal of Educational Sciences*, *13*(3), 408-421.
- Bohnert, A., Lieb, R., & Arola, N. (2019). More than leisure: Organized activity participation and socio-emotional adjustment among adolescents with autism spectrum disorder. *Journal of autism and developmental disorders*, 49(7), 2637-2652.
- Brooks, B. A. (2013). Extracurricular activities and the development of social skills in children with intellectual and learning disabilities.
- Cakir, R., & Korkmaz, O. (2019). The effectiveness of augmented reality environments on individuals with special education needs. *Education and Information Technologies*, 24(2), 1631-1659.
- Carruthers, S., Pickles, A., Slonims, V., Howlin, P., & Charman, T. (2020). Beyond intervention into daily life: A systematic review of generalisation following social communication interventions for young children with autism. *Autism Research*, 13(4), 506-522.
- Chang, Y.-C., Chen, C.-H., Huang, P.-C., & Lin, L.-Y. (2019). Understanding the characteristics of friendship quality, activity participation, and emotional well-being in Taiwanese adolescents with autism spectrum disorder. *Scandinavian Journal of Occupational Therapy*, 26(6), 452-462.
- D'Amico, M., & Lalonde, C. (2017). The effectiveness of art therapy for teaching social skills to children with autism spectrum disorder. *Art Therapy*, *34*(4), 176-182.
- Diener, M. L., Wright, C. A., Dunn, L., Wright, S. D., Anderson, L. L., & Smith, K. N. (2016). A creative 3D design programme: Building on interests and social engagement for students with autism spectrum disorder (ASD). *International Journal of Disability, Development and Education*, 63(2), 181-200.
- Fang, C.-J., Weinberg, S., & Patten, K. (2020). A comparison of the participation levels of Taiwanese children with autism spectrum disorders in inclusive vs. segregated settings. *International Journal of Inclusive Education*, 1-14.
- Georgena, R. (2017). Exploring leisure, hobbies and special interests: The constructive role of special interests for children with ASD. In *Different Childhoods* (pp. 8-24). Routledge.
- Hassani, F., Shahrbanian, S., Shahidi, S. H., & Sheikh, M. (2020). Playing games can improve physical performance in children with autism. *International Journal of Developmental Disabilities*, 1-8.
- Howells, K., Sivaratnam, C., Lindor, E., Hyde, C., McGillivray, J., Whitehouse, A., & Rinehart, N. (2020). Can participation in a community organized football program improve social, behavioural functioning and communication in children with autism spectrum disorder? A pilot study. *Journal of autism and developmental disorders*, 1-14.
- Hulme, C., Snowling, M. J., West, G., Lervåg, A., & Melby-Lervåg, M. (2020). Children's language skills can be improved: Lessons from psychological science for educational policy. *Current Directions in Psychological Science*, 29(4), 372-377.

- Ibrahim, A. M. S. (2020). A Recreational Games Program for Decreasing Post-Traumatic Stress Disorder in Mothers of Autistic Children. International Journal of Sports Science and Arts, 16(016), 121-137.
- Kent, C., Cordier, R., Joosten, A., Wilkes-Gillan, S., Bundy, A., & Speyer, R. (2020). A systematic review and meta-analysis of interventions to improve play skills in children with Autism Spectrum Disorder. Review Journal of Autism and Developmental Disorders, 7(1), 91-118.
- Kim, E.-I., & Song, S.-H. (2017). The Effect of a Chorus Program for Children in a Local Child Center on Character, Social Skills, Problematic Behavior, and Attention Deficit ADHD. *Journal of the Korea Academia-Industrial cooperation Society*, 18(12), 310-320.
- Kim, S.-K., McKay, D., Ehrenreich-May, J., Wood, J., & Storch, E. A. (2020). Assessing treatment efficacy by examining relationships between age groups of children with autism spectrum disorder and clinical anxiety symptoms: Prediction by correspondence analysis. *Journal of affective disorders*, 265, 645-650.
- Koegel, R. L., Werner, G. A., Vismara, L. A., & Koegel, L. K. (2005). The effectiveness of contextually supported play date interactions between children with autism and typically developing peers. *Research and Practice for Persons with Severe Disabilities*, 30(2), 93-102.
- Logan, K., Iacono, T., & Trembath, D. (2017). A systematic review of research into aided AAC to increase social-communication functions in children with autism spectrum disorder. *Augmentative and Alternative Communication*, 33(1), 51-64.
- Lorenzo, G., Gómez-Puerta, M., Arráez-Vera, G., & Lorenzo-Lledó, A. (2019). Preliminary study of augmented reality as an instrument for improvement of social skills in children with autism spectrum disorder. *Education and Information Technologies*, 24(1), 181-204.
- Lucas, R., & James, A. I. (2018). An evaluation of specialist mentoring for university students with autism spectrum disorders and mental health conditions. *Journal of autism and developmental disorders*, 48(3), 694-707.
- Matthews, E. E., Brown, T., & Stagnitti, K. (2020). Relationship Between Sensory Processing and Perceptions of and Participation in Play and Leisure Activities Among Typically Developing Children: An Exploratory Study. *Annals of International Occupational Therapy*.
- Memari, A. H., Panahi, N., Ranjbar, E., Moshayedi, P., Shafiei, M., Kordi, R., & Ziaee, V. (2015). Children with autism spectrum disorder and patterns of participation in daily physical and play activities. *Neurology research international*, 2015.
- Mpella, M., Evaggelinou, C., Koidou, E., & Tsigilis, N. (2019). The Effects of a Theatrical Play Programme on Social Skills Development for Young Children with Autism Spectrum Disorders. *International Journal of Special Education*, 33(4), 828-845.

- Ochs, E., & Solomon, O. (2010). Autistic sociality. *Ethos*, 38(1), 69-92.
- Płatos, M., & Wojaczek, K. (2018). Broadening the scope of peer-mediated intervention for individuals with autism spectrum disorders. *Journal of autism and developmental disorders*, 48(3), 747-750.
- Qualls, L. R., & Corbett, B. A. (2017). Examining the relationship between social communication on the ADOS and real-world reciprocal social communication in children with ASD. *Research in autism spectrum disorders*, 33, 1-9.
- Raqqad, H. K. S. A.-. (2018). impact of extra-curricular activities in developing social skills Students with disabilities the perspective of their teachers in Amman, *Humanities Sciences*, 39(4), 130-147.
- Shattuck, P. T., Orsmond, G. I., Wagner, M., & Cooper, B. P. (2011). Participation in social activities among adolescents with an autism spectrum disorder. *PloS one*, 6(11), e27176.
- Sreckovic, M. A., Hume, K., & Able, H. (2017). Examining the efficacy of peer network interventions on the social interactions of high school students with autism spectrum disorder. *Journal of autism and developmental disorders*, 47(8), 2556-2574.
- Tabernero, R., & Calvo, V. (2020). Children with autism and picture books: extending the reading experiences of autistic learners of primary age. *Literacy*, 54(1), 11-17.
- Valverde-Esteve, T., Chiva-Bartoll, O., Salvador-García, C., & Maravé-Vivas, M. (2020). Effect of a Service-Learning Program on the Active Lifestyle of Children with Autism Spectrum Disorder: A Pilot Study. *Sustainability*, *12*(11), 4354.
- Villasenor, R. F., Smith, S. L., & Jewell, V. D. (2018). A systematic review of sound-based intervention programs to improve participation in education for children with sensory processing and integration challenges. *Journal of Occupational Therapy, Schools, & Early Intervention*, 11(2), 172-191.
- Wishart, J., Willis, D., Cebula, K., & Pitcairn, T. (2007). Collaborative learning: comparison of outcomes for typically developing children and children with intellectual disabilities. *American Journal on Mental Retardation*, 112(5), 361-374.
- Wong, J., Cohn, E. S., Coster, W. J., & Orsmond, G. I. (2020). "Success Doesn't Happen in a Traditional Way": Experiences of school personnel who provide employment preparation for youth with autism spectrum disorder. *Research in autism spectrum disorders*, 77, 101631.
- Xia, Y., & LeTendre, G. (2020). Robots for Future Classrooms: A Cross-Cultural Validation Study of "Negative Attitudes Toward Robots Scale" in the US Context. *International Journal of Social Robotics*, 1-12.
- Yamada, T., Miura, Y., Oi, M., Akatsuka, N., Tanaka, K., Tsukidate, N., Yamamoto, T., Okuno, H., Nakanishi, M., & Taniike, M. (2020). Examining the Treatment Efficacy of PEERS in Japan: Improving Social Skills Among Adolescents with Autism Spectrum Disorder. *Journal of autism and developmental disorders*, 50(3), 976-997.
- Zilli, C., Parsons, S., & Kovshoff, H. (2020). Keys to engagement: A case study exploring the participation of autistic pupils in educational decision-

making at school. *British Journal of Educational Psychology*, 90(3), 770-789.

Zuki, N. H. M., & Rahman, N. (2016). Challenges Malaysian teachers face in the inclusion of autistic students in the normal classroom. *Journal of Education and Social Sciences*, *4*, 33-41.