

## Distinctive Communicative Characteristics of Children With Autism spectrum Disorder in the United Arab Emirates

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### Abstract

The current study aimed to assess the level of communication skills of children with autism spectrum disorder in the United Arab Emirates. The sample included 103 cases of children with autism spectrum disorder (69 males and 34 females) enrolled in government and private special education centers in the United Arab Emirates. To achieve the aim of the study, the researcher constructed a scales of the communication skills, and the validity and reliability of them were verified. In order to answer the questions of the study, the descriptive survey methodology was used, and the means, standard deviations, and one-way analysis of variance were used in data processing and reaching results. The results indicated low levels of communication skills for children with autism spectrum disorder on the scales used by the study. The study recommended the necessity of including communication skills in treatment programs.

**Key words:** Communication skills; Children with Autism Spectrum Disorder; The United Arab Emirates.

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### INTRODUCTION

Autism spectrum disorder (ASD) is a genetic neurodevelopmental disorder characterized by persistent deficits in communication and social interaction,

repetitive behaviors, and restricted or limited activities. Symptoms of this disorder appear in early childhood (APA, 2022). Autism spectrum disorder appears in all races and social and economic levels. It is four times more common among boys than among girls. The Center for Disease Control and Prevention (CDC, 2022) estimates that about 1 in 36 children in the United States have been diagnosed with autism spectrum disorder. Despite the phenotypic heterogeneity of autism spectrum disorder (ASD), children with this disorder show a general and significant weakness in the developmental requirements necessary to interact with the surrounding environment. Interaction is an essential element in acquiring other necessary social, communication and adaptive skills. To achieve developmental demands and daily functional needs (Lidstone & Mostofsky, 2021).

The nature of the characteristics that characterize children with autism spectrum disorder limits opportunities to interact with the requirements of the environmental context surrounding the child. For example, children with autism spectrum disorder show deficits during communication and social interaction, and practicing repetitive behaviors. This type of challenge leads to limitations in their participation in playing, imitating other children, or trying to discover other things during interaction (Al-Smadi & El-Zraigat, 2016; AlShawabkah & El-Zraigat, 2021).

Children with autism spectrum disorder are often socially isolated and seem to live in a private world due to limited communication and interaction with others. Perhaps one of the most prominent things that people with autism spectrum disorder suffer from is difficulty developing language skills and understanding what others say to them. These difficulties are not limited only to spoken language, as they also have problems in non-verbal communication, such as understanding hand movements, eye contact, and facial expressions. Regarding the communication skills and use of language for this category

of individuals, some of them are described as verbal while others are described as non-speaking (National Institute on Deafness and Other Communication Disorders, 2023).

Communication difficulties among people with autism spectrum disorder include challenges in expressing ideas appropriately and being understood by others. And not understanding physical gestures, as children with autism are often unable to give meaning to what they say through gestures, such as pointing to something or using facial expressions, and the inability to use the right type of speech at the right time, in addition to difficulties in understanding the metaphorical meaning of communication (Rudy, 2023). In addition to weak conversational abilities, stereotyped and repetitive language, inappropriate use of pronouns, difficulties in playing and imitating, and difficulty in generalizing (Lofland, 2014).

The study Silveira-Zaldivar, Özerk and Özerk, (2021) showed that individuals with autism spectrum disorder suffer from a basic deficit in social skills. Despite this, they struggle to achieve social competence even if they do not find support and effective interventions. To enhance social skills. McAuliffe and colleagues McAuliffe, Zhao, Pillai, Ament, Adamek, Caffo, Mostofsky and Ewen (2020) confirmed that modeling learning influences both cumulative gesture performance and autism severity, an indicator of learning relevant to motor skills and core features of autism spectrum disorder. Berger and Ingersoll's (2015) study showed that the rate of engagement in imitation recognition behaviors was positively related to the length of the period of episodic imitation in children with autism spectrum disorder. The results also indicated a link between the ability to imitate and the severity of symptoms of autism spectrum disorder and language. Reichow, Salamack, Paul, Volkmar and Klin (2008) emphasized the difficulties that individuals with autism spectrum disorder face in the adaptive use of language for communication.

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## STUDY PROBLEM AND QUESTIONS

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Children with autism spectrum disorder display a wide range of symptoms, which vary according to severity. Children with autism spectrum disorder suffer from difficulties in communication and social interaction, repetitive behaviors, and restricted interests. In addition, this category of children often has different ways of learning, moving, or paying attention. For people with autism spectrum disorder, these characteristics can make life very difficult and pose various challenges (Centers for disease control and prevention (CDC), 2022).

In order to determine the nature of the special needs of this group of children in the field of communication, and with the aim of providing the best appropriate educational programs for them, a comprehensive assessment must be conducted designed to determine these needs, and then

based on its results in developing appropriate programs. Accurate evaluation is a prerequisite for developing and designing purposeful programs and curricula. To develop the skills of children with autism spectrum disorder (Persicke, Bishop, Coffman, Najdowski, Tarbox, Chi, Dixon, Granpeesheh, Adams, Jang, Ranick, Clair, Kenzer, Sharaf & Deering, 2014). Thus, assessing the current level of performance in communication provides baseline data, which in turn helps determine the types of support and basic services that the child needs (NYC, 2022).

Studies have indicated that children with autism spectrum disorder display a wide range of behavioral traits that require therapeutic intervention (Stevens, Dixon, Novack, Granpeesheh, Smith & Linstead, 2019). The study of Reichow, Salamack, Paul, Volkmar and Klin (2008) pointed out the difficulties faced by children with autism spectrum disorder in using language to communicate.

The study sought to answer the following main question:

- Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the level of children's communication skills among these children?
- Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the level of children's communication skills for these children due to the effect of the center variable?

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## OBJECTIVES OF THE STUDY

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The current study aimed to:

- Evaluate and describe the current level of performance in communication skills for children with autism spectrum disorder in the United Arab Emirates in light of international standards.
- Providing special recommendations in light of the evaluation results for children with autism spectrum disorder.

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## OPERATIONAL DEFINITIONS OF STUDY TERMS

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• **Children with autism spectrum disorder:** They are those children diagnosed with autism spectrum disorder, and they receive special services according to their needs in specialized centers in the United Arab Emirates.

• **Communication skills:** It is the total score that the children with autism spectrum disorder participating in the study obtain on the communication skills scale set that the researcher developed for this purpose.

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## METHODOLOGY

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Participants:

The sample included (103) cases of people with autism

spectrum disorder enrolled in governmental and private special education centers in the United Arab Emirates. The cooperating centers included Al Ghaith Center for Training and Rehabilitation, Himma Clinic, and Al Hanan Center for Rehabilitation of People of Determination. Teachers of children with autism spectrum disorder in these centers evaluated the cases targeted for the study by applying the communication skills scale that the researcher built in his study.

## COMMUNICATION SKILLS SCALE

This scale measures the dimensions of receptive language and expressive language. It has been constructed by referring to relevant literature such as:

- (Bellini, 2006).
- (Kasari, Brady, Lord, and Tager-Flusberg, 2013).
- (Tager-Flusberg, and Kasari, 2013).
- (Brian, Zwaigenbaum, and Ip, 2019).
- (The British Columbia Ministry of Health Planning, 2003).
- (The Irish Society For Autism, 2014).
- (American Psychiatric Association (APA), 2022).
- (Erin Lamblez, 2017).

The scale consisted of 44 items distributed along the following dimensions:

- Communication skills in the group.
- Non-verbal communication skills.
- Conversation skills.
- Regulation and emotional communication.

**Indicators of construct validity in terms of the item's correlation with the dimension of the communication skills scale.**

In order to extract the significance of the construct validity indicators in terms of the item's correlation with the dimension of the scale, correlation coefficients were extracted for each item between the total score, and between each item and its connection to the field to which it belongs, and between the fields to each other and the total score, in an exploratory sample consisting of (30) participants. From outside the study sample. The

correlation coefficients of the items with the tool as a whole ranged between (0.65-0.91) and with the field (0.74-0.97), and the following table shows this.

### Reliability of the communication skills scale

To ensure the reliability of the study tool; Verification was carried out using the test-retest method by applying the scale, and re-applying it after two weeks to a group of (30) participants who were outside the study sample, and then the Pearson correlation coefficient was calculated between their estimates on the two occasions and ranged between 0.80-0.88.

The reliability coefficient was also calculated using the internal consistency method according to the Cronbach alpha equation and ranged between 0.79-0.84.

## STUDY METHODOLOGY

The descriptive survey method was adopted in this study, and it included the variables of the standards used in collecting data, and the variable of the center in which the child attends. Arithmetic means, standard deviations, and one-way analysis of variance were also used to answer the study questions.

## THE RESULTS

This part of the study presents the results and is organized according to:

**Results of the question 1: Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the level of communication skills for children with autism spectrum disorder in the United Arab Emirates depending on the variable of the center in which the child joins?**

To answer this question, the arithmetic means and standard deviations were extracted for the level of communication skills for children with autism spectrum disorder in the United Arab Emirates, according to the variable of the center in which the child attends. The table below explains this.

**Table 1**  
**Arithmetic means and standard deviations for the level of communication skills for children with autism spectrum disorder in the United Arab Emirates according to the variable of the center the child attends**

| Centers  |     | Communication skills in the group | Non-verbal communication skills | Conversation skills. | Regulation and emotional communication. | Communication skills scale |
|--|-----|-----------------------------------|---------------------------------|----------------------|---|----------------------------|
| Al Ghaith Center for Training and Rehabilitation | M   | 2.09                              | 2.17                            | 1.66                 | 1.81                                    | 1.88                       |
|  | S.D | 0.740                             | 0.870                           | 0.755                | 0.709                                   | 0.689                      |
| Hemma Clinic                                     | M   | 1.90                              | 2.16                            | 1.51                 | 1.80                                    | 1.79                       |
|  | S.D | 0.765                             | 0.780                           | 0.685                | 0.735                                   | 0.661                      |
| Al Hanan Center for Rehabilitation               | M   | 1.95                              | 2.09                            | 1.55                 | 1.74                                    | 1.78                       |
|  | S.D | 0.765                             | 0.775                           | 0.630                | 0.669                                   | 0.632                      |

Table 1 shows an apparent difference in the arithmetic means and standard deviations for the level of

communication skills for children with autism spectrum disorder in the United Arab Emirates. Due to the different

categories of the position variable that the child joins.

The one-way multiple variance analysis of the effect of the center the child attends on the areas of children's communication skills also indicated that there are no statistically significant differences ( $\alpha = 0.05$ ) attributable to the effect of the center the child attends in all areas.

**Results of the question 2: Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the level of children's communication skills for these children due to the effect of the center variable?**

To demonstrate the significance of the statistical differences between the arithmetic averages: A one-way analysis of variance for the tool as a whole was used in Table 2.

**Table 2**  
**One-way analysis of variance of the effect of the center the child attends on the level of communication skills for children with autism spectrum disorder in the United Arab Emirates**

| Source of variance | Sum of square | Freedom degree | M. of square | F     | Sig.  | Size effect |
|--------------------|---------------|----------------|--------------|-------|-------|-------------|
| Centers            | 0.171         | 2              | 0.085        | 0.203 | 0.817 | 0.004       |
| Error              | 42.116        | 100            | 0.421        |       |       |             |
| Total              | 42.286        | 102            |              |       |       |             |

It is clear from Table 2 that there are no statistically significant differences ( $\alpha = 0.05$ ) due to the effect of the center in which the child attends, as the P value reached 0.203 and the statistical significance reached 0.817.

## STUDY LIMITATIONS AND DELIMITATIONS

The limits were represented by the characteristics of the study sample, the time of its application, and the place where it was conducted, which was the United Arab Emirates. Its results were also challenged by what the content of the scale used by the study measures; It is also determined by the accuracy of the response on the scales used by the study.

## DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The results indicated that there was an apparent non-statistically significant difference in the arithmetic averages of the level of communication skills among these children. Perhaps the explanation for this result is that they face clear difficulties in communication skills, which are largely evident through social interaction. These difficulties are a major feature of autism disorder.

The study conducted an evaluation measurement on a group of children, where the evaluation targeted communication skills, non-verbal communication skills, conversation skills, organization, and emotional

communication. All of these skills are challenging for this type of child. Despite the presence of continuous therapeutic interventions, the improvement in performance depends on the type of intervention to which the child is exposed, the amount of support he receives, and the nature of the interactions in which the child participates.

Communication skills are an essential feature of human interaction. It is also one of the most important criteria by which persons with autism spectrum disorder are diagnosed, as these persons show a clear inability to use these skills in social contexts and interactive situations that require the usage of these skills. Therefore, any evaluation of persons with autism spectrum disorder requires diagnosing the deficit in these skills and clarifying how this deficit appears and its degree of severity. Depending on the deficit in communication skills, the targeted skills and the type of training required are determined.

This result is consistent with the results of the study of Dixon, Tarbox, Najdowski, Wilke and Granpeesheh (2011), where the study of Heimann, Nordqvist, Strid, Connant and Tjus (2016) showed a low level of gesture imitation among children with autism spectrum disorder, and the results confirmed The presence of imitation difficulties that these children may face.

It also agreed with the results of a study conducted by Dalton and his colleagues, Dalton, Crais and Velleman (2017), where the study targeted the relationship between the ability of joint attention and the motor imitation skill of children with autism spectrum disorder, and non-verbal ones.

It also agreed with the study studied by McAuliffe and his colleagues McAuliffe, Zhao, Pillai, Ament, Adamek, Caffo, Mostofsky & Ewen (2020), which demonstrated the difficulties that children with autism spectrum disorder suffer from imitation.

It is noteworthy that the results of this study can be generalized within the framework of its limitations and delimitations. Based on the results, the researcher recommends the following:

- The necessity of conducting a comprehensive assessment of people with autism spectrum disorder in the field of communication skills that affect their performance in their daily life.
- Reconsider evaluation procedures for people with autism spectrum disorder; To include the characteristics set by international standards in the comprehensive evaluation of this category of children.
- Developing programs that meet the needs in communication skills for people with autism spectrum disorder.

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