

# Evaluation of Application of Strategies about Pragmatic Language for Trainers who work at Autism Centers in Baghdad city

تقييم تطبيق استراتيجيات اللغة البراغماتية للمدربين العاملين في مراكز التوحد في مدينة بغداد

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## المستخلص

**الأهداف:** هدفت الدراسة لتقييم مستوى معارف المدربين حول تطبيق الاستراتيجيات اللغة البراغماتية للأطفال الذين يعانون من اضطراب طيف التوحد، ومعرفة العلاقة بين مستوى معارف المدربين حول اللغة البراغماتية وخصائصهم الاجتماعية- الديموغرافية.

**المنهجية:** تم استخدام تصميم ما قبل التجريبي للدراسة الحالية، لمجموعة واحدة من المدربين العاملين في مراكز التوحد الاهلية في مدينة بغداد، البالغ عددهم 47 تم جمع البيانات من تاريخ 8 كانون الثاني 2022 إلى 13 شباط 2022.

استخدمت عينات غير الاحتمالية (العينة الملائمة) في عملية جمع البيانات بتقنية الإدارة الذاتية التي يملأ فيها المدربون استمارة الاستبيان بأنفسهم؛ وتم تحليلها من خلال الإحصاء الوصفي والاستدلالي.

**النتائج:** أظهرت نتائج الدراسة أن معرفة المدربين بالاستراتيجيات المستخدمة لتحسين اللغة البراغماتية كانت عالية في جميع الفقرات ولكن الاعلى كان للفقرة رقم 1 والفقرة 4. وكانت النتيجة حول العلاقة بين خصائصهم الاجتماعية- الديموغرافية ومعرفة المدربين ضعيفة في جميع المتغيرات باستثناء متغير المعلومات حول اللغة مع درجة معنوية عالية (0.001).

**الاستنتاجات:** استنتجت الدراسة ان المدربون العاملون في مراكز التوحد هم من الإناث فقط. هناك علاقة ضعيفة بين معارف المدربين وخصائصهم الاجتماعية - الديموغرافية. باستثناء ذلك، أظهرت النتائج وجود علاقة كبيرة بين معرفة المدرب باللغة البراغماتية ومعلوماته حول اللغة البراغماتية للأطفال المصابين باضطراب طيف التوحد.

**التوصيات:** اوصت الدراسة باستخدام الاستراتيجيات المناسبة لتحسين اللغة البراغماتية للأطفال المشخصين باضطراب طيف التوحد.

**الكلمات المفتاحية:** تقييم، الاستراتيجيات، اللغة البراغماتية، المدربين، اضطراب طيف التوحد.

## Abstract

**Objectives:** To assess the level of trainers' knowledge about the application of strategies and to find out the relationship between trainers' knowledge and their socio-demographic characteristics.

**Methodology:** A pre-experimental design was utilized among one group of 47 trainers working at the private Autism Centers in Baghdad with data collected from January 8<sup>th</sup>, 2022 to February 13<sup>th</sup>, 2022. Using non-probability samples (convenient samples), self-management technology in which trainers fill out the questionnaire form themselves was used in the data collection process; it was analyzed through descriptive and inference statistics.

**Results:** Trainers' knowledge of strategies used to improve pragmatic language was highly significant in all items but the highest was for item no. 1 and 4., and the result about the relationship between socio-demographic characteristics and trainers' knowledge were weak in all variables except the information variable with degree of high significant ( $P=0.001$ ).

**Conclusions:** The study concluded that trainers working for autism centers are only females. There was weak correlation between the trainer's knowledge and socio-demographic characteristics. However, the results showed a significant correlation between the trainer's knowledge of pragmatic language and their information about the pragmatic language for children with Autism.

**Recommendations:** Using appropriate strategies to improve pragmatic language for children with ASD is crucial.

**Keywords:** assessment, strategies, pragmatic language, trainers, autism spectrum disorder.

## Introduction

Pragmatic language is an element of social communication and contains a different set of skills, which in turn helps the individual ability to socialize with others while taking into account the social signals used in the conversation<sup>(1, 2)</sup>. The first year of child life early signs of autism spectrum disorder (ASD) appear, it is a critical period for toddler age, the parent with this age have concerning about the development of speech and language delayed, especially milestones including deficiency babbling or use very slight babbling, this will let them to look for referral and clinical examinations for their child<sup>(3,4)</sup>.

As a fact, 50% of children with autism spectrum disorder (ASD) not developed or show a delay in expressive language, and almost thirty percent do not accomplish verbal utterance to complete their social communication. but, sometimes produce meaningless speech described by pronominal reversals, echolalia, and stereotype, young children with ASD show boundless variability in language learning, sometimes often toddler age appear delay in talking first ward in comparison with their peer's typical development. In addition, children with ASD are unable to interpret or understand mysterious language because they lack the ability or have difficulty using relevant background knowledge; the language abilities of children vary from one child to another, some of them are characterized by silence to fluency of talking<sup>(5,6)</sup>.

The core features of autism spectrum disorder (ASD) defining by impairments in language and communication, this led to deficit in social interaction. Also, children with autism spectrum disorder have pragmatics language impairments or disorder and this will lead to disrupted in communication for them, speakers' children ASD, Information about pragmatic language.

Using the pre-experimental design of the current study, for one group of 47 trainers working at the private Autism Centers in Baghdad, data was collected from January 8/2022 to February 13 /2022. Non-probability samples (convenient samples), self-

with ASD have highly prevalent deficit in pragmatic skill<sup>(7)</sup>.

Recognize the type of ASD should be considered the first step, related to increase the number of children who diagnosis with ASD, for this reason that will help teachers or trainers and other stake- holders to prepare teaching-learning strategies, thus will assist the children to develop and finally be able to lead a successful life<sup>(8)</sup>.

Many studies try to use strategies to improve pragmatic language in children with ASD for instance, speech-language intervention system involve. Picture Exchange Communication System (PECS): Used for teaching functional speech to children with ASD and connected intellectual disorders<sup>(9)</sup>. Augmentative Alternative Communication (AAC): is a system used to assist children with ASD to improve their communication skill which involve strategies like sign language<sup>(10)</sup>; Applied Behaviour Analysis (ABA): to improve the conversation skill of children with ASD by using pragmatic language interventions which are based on the principles<sup>(11)</sup>; Parent-Child Interaction Therapy (PCIT): a unique evidence-based training program, this therapy considers first phase of treatment to engaging parent to improve language development for their young children with ASD<sup>(12)</sup>. Psychodrama: a method used to activate the language in autistic children and to enhancing social cognitive ability by using theater and dolls<sup>(13)</sup>. Study aimed to assess the level of trainers' knowledge about the application of strategies for pragmatic language for children with autism spectrum disorder. Also, to find out relationships between trainers' knowledge and their demographic characteristics that include age, gender, level of education, marital status, years of working in autism center, number of training courses in caring for children with

## Methodology

management technology in which trainers fill out the questionnaire form themselves was used in the data collection process; it was analyzed through descriptive and inference statistics. The Study Instruments: A questionnaire has been created to accomplish

objectives of the study; the questionnaire is divided into two axes. Axis I; This part contains demographic information of trainers took part in the research which consists of (7) items including: age, gender, level of education, marital status, years of working in autism center, number of training courses in caring for autistic children, information about pragmatic language. Axis II related trainers' knowledge; This axis includes two domains: the first one It consists of (5) items concerned with the trainers' information about Learning strategies for improving pragmatic language. Rating and scoring; Likert scoring scale are used, of three categories responding, such that (Don't know, not sure, and I know), which are given by integer numbers (0, 1, and 2) respectively.

Validity of the study to make the instruments more valid, it was introduced to a panel of (12) experts from various fields who assessed the clarity and adequacy of its items. Reliability of the study: Cronbach's Alpha was used to determine the accuracy of the questionnaire

(0.886). [L: Low (0.00 – 0.66)]; [M: Moderate (0.67-1.33)]; [H: High (1.34-2)]. Data collection: were obtained through face-to-face interview techniques as a method. Trainers was asked to complete a self-administered questionnaire, after taking the initial consent from them to participate in the study. Descriptive and inferential statistics were used to analyze the results of the study under the application of the statistical package (SPSS) ver. (18.0). Frequencies, and Percentages for socio- demographic; weighted arithmetic mean (MS), stander deviation (SD), Relative Sufficiency (RS%), for trainers' knowledge; ANCOVA to find relation ship. Ethical considerations: After the study has been accepted by the Council of the University of Baghdad's College of Nursing· Permission to collect the sample was also obtained from Ministry of Labor and Social Affairs commission of persons with Disabilities and special needs care\Directorate of Social Special needs, for private autism centers in Baghdad city.

## Results

**Table (1): Distribution of the Sample by their Socio-demographic Characteristics with Comparisons Significant**

| Pointer (SDCv.)           | Classes                   | Number | %     | M±SD       |
|---------------------------|---------------------------|--------|-------|------------|
| <b>Gender</b>             | Male                      | 0      | 0     |            |
|                           | Female                    | 47     | 100.0 |            |
|                           | Total                     | 47     | 100.0 |            |
| <b>Age Groups</b>         | Less than 25              | 10     | 21.3  | 32.91±8.60 |
|                           | 25- Under 35 years of age | 19     | 40.4  |            |
|                           | 35- Under 45 years of age | 12     | 25.6  |            |
|                           | 45- Under 55 years of age | 5      | 10.6  |            |
|                           | 55 years and older        | 1      | 2.1   |            |
|                           | Total                     | 47     | 100.0 |            |
| <b>Level of education</b> |                           |        |       |            |
|                           | Primary school            | 0      | 0     |            |
|                           | Secondary school          | 5      | 10.6  |            |

|  |                             |    |       |  |
|--|-----------------------------|----|-------|--|
|  | Institute                   | 17 | 36.2  |  |
|  | college graduated or higher | 25 | 53.2  |  |
|  | Total                       | 47 | 100.0 |  |
| <b>Marital status</b>  | Unmarried                   | 20 | 42.6  |  |
|  | Married                     | 20 | 42.6  |  |
|  | Divorced                    | 5  | 10.6  |  |
|  | Widowed/ er                 | 2  | 4.2   |  |
|  | Total                       | 47 | 100.0 |  |
| <b>Number of years of work in autism center</b>                    | 5 or less                   | 26 | 55.3  |  |
|  | 6 –less than 10yr.          | 6  | 12.8  |  |
|  | 10 – less than 15yr         | 13 | 27.7  |  |
|  | 15 – less than 20yr         | 1  | 2.1   |  |
|  | 20 or more                  | 1  | 2.1   |  |
|  | Total                       | 47 | 100.0 |  |
| <b>Number of training courses in the care of autistic children</b> | Non 0                       | 8  | 17.0  |  |
|  | 1- 3                        | 24 | 51.1  |  |
|  | 4-6                         | 2  | 4.3   |  |
|  | 7-9                         | 5  | 10.6  |  |
|  | 10 or more                  | 8  | 17.0  |  |
|  | Total                       | 47 | 100.0 |  |
| <b>Do you have information about pragmatic language?</b>           | Yes                         | 26 | 55.3  |  |
|  | No                          | 21 | 44.7  |  |
|  | Total                       | 47 | 100.0 |  |
| <b>what are the sources of learning about pragmatic language</b>   | magazine                    | 1  | 3.8   |  |
|  | Books                       | 4  | 15.4  |  |
|  | Courses                     | 10 | 38.5  |  |
|  | Internet                    | 11 | 42.3  |  |
|  | Total                       | 26 | 100.0 |  |

**HS: Highly Sig. at  $P < 0.01$ ; Testing based on F Frequencies, and %Percentages**

Table (1) shows the gender has vast majority for female, their percentage is 47(100%). Also, there is a diversity in the age of the trainers and the category (25- Under 35 years of age) was the highest percentage (40.4). Additionally, the educational level is diverse the highest category was (college graduated or higher) with percentage (53.2). Moreover, marital status shows equally and highest percentage in two categories was (unmarried, married) for percentage (42.6). However, number of years of work in autism center show high percentage was (55.3) for category (5 or less). In addition, number of training courses in the care of autistic children was high percentage in category was (1 – 3) for percentage (51.1). Additionally, information about pragmatic language according to their answer yes or no, it is close to the results, yes (55.3), (44.7) for no. As well as, that found varying percentage of sources of learning where the Internet (42.3) is more a source of learning than the other sources lowest was (3.8) for magazine.

**Table (2): Descriptive Statistics of the Studied Subjects According the Knowledge of Trainers about Application of Learning Strategies to Improve Pragmatic Language**

| Item  | MS   | SD    | RS%  | Ass |
|---|------|-------|------|-----|
| 1-One way to activate the use of language in autistic children are social which are to describe social attitudes in a narrative style appropriate to the needs and abilities of the child                                   | 1.62 | 0.709 | 81   | H   |
| 2-One way to activate the use of language in autistic children are Psych (meaning theater and dolls) and the Psych drama method contributes to enhancing socialcognitive ability.   | 1.51 | 0.748 | 75.5 | H   |
| 3-One way to activate the use of language in autistic children are to sch skill regulation, which is based on regularly teaching children social ski training them.   | 1.55 | 0.717 | 77.5 | H   |
| 4-One way to activate language use in autistic children are to train cogn images by displaying information using images to display a series of behaviours   | 1.74 | 0.488 | 87   | H   |
| 5-One way to activate language use in autistic children are by-teaching, depends on teaching the goals allocated to the individual in normal cont and calls for interaction between adults and children in a normal environ | 1.55 | 0.717 | 77.5 | H   |

HS: Highly Sig. at P<0.01; weighted arithmetic mean (MS), stander deviation (SD), Relative Sufficiency (RS%), H 1.34-2, M 0.67-1.33 L,0-0.66

The table (2) shows highly Significant for using images to display a series of behaviours with MS (1.74), and lower degree for Psych drama method with MS (1.51).

**Table (3): Relationships (ANCOVA) Concerning Trainers Knowledge about Pragmatic Language for Children with Autism Spectrum Disorder and Socio-demographic characteristics.**

| Source  | Type III Sum of |    | Mean Squ  |        |
|---|-----------------|----|-----------|--------|
| Corrected Model   | 11339.438a      | 24 | 472.477   | 2.741  |
| Intercept   | 13154.955       | 1  | 13154.955 | 76.317 |
| Age   | 1190.918        | 3  | 396.973   | 2.303  |
| Level of education  | 457.156         | 2  | 228.578   | 1.326  |
| Marital status  | 898.638         | 2  | 449.319   | 2.607  |
| Years of working in autism center                           | 1520.400        | 4  | 380.100   | 2.205  |
| Number of training courses in the care of autistic children | 1994.553        | 10 | 199.455   | 1.157  |
| Information about pragmatic language                        | 2398.126        | 1  | 2398.126  | 13.913 |
| Error   | 3792.179        | 22 | 172.372   |        |
| Total   | 176270.000      | 47 |           |        |
| Corrected Total   | 15131.617       | 46 |           |        |

a. R Squared = .749 (Adjusted R Squared = .476), df= degree of freedom Statistical hypothesis based on Analysis of variance (ANCOVA).

Table (3) results shows relationships between Socio-demographic characteristics (SDCv.) and trainers' knowledge were weak in all variable except the information variable with degree of significant (.001).



## Discussion

The finding of table 1, shows that participants were female only works in autism centers and this means that the centers prefer this category. This finding was supported by a study conducted in Pennsylvania that found the educators who participants were only females<sup>(14)</sup>. The trainers age, most of them was in classes (25- under 35 years of age). A study conduct in Iraq have similar result of participant age was mean (68.8) from 25 to 34years<sup>(15)</sup>. level of education was the highest for classes (college graduated or higher). This result similar with study conducted in Spain, they mentioned that the highest score for bachelor's or equivalent was 89.8<sup>(16)</sup>. marital status was equal result for unmarried and married with high percent, there are no studies that have indicated this variable. number of years of work in autism center was highest in (5 years or less), a study conducted in Malaysia about analysis of teachers' knowledge and training: their implication of teaching children with autism, their experience as a teacher with ASD with a percent (49.1) from one to five year this result similar to our result<sup>(17)</sup>. Furthermore, the number of training courses in the care of autistic children was (1-3). In Iraq a study for physicians, junior doctors, and medical college students about their knowledge, attitudes, and practices for autism, their finding about have taken a course on ASD was (45.0)significant percent<sup>(15)</sup>. While, information about pragmatic language, the results of study for the answer are close. There is no study support this.

## Recommendation

The result of table 2, there was no study refers to this subject. Conversely, there are studies support each high significant items of this table and also, these studies focus on which strategies appropriate or effective for children with ASD. highly significant for using images to display a series of behaviours. On the other hand, a comprehensive study in Pakistan conducted, have support recent study, it aimed to identifying the speech and linguistic procedures used by specialists for autistic children, and the result found different strategies used to improve speech and

language in all centers but more focused on PECS (9). Also, This result supported by finding or report that this strategies has a slight effect social cognitive ability for children with ASD<sup>(18)</sup>.

The result of table3 shows relationships between socio-demographic characteristics and trainers' knowledge were weak in all variable except the information variable with degree of significant school. While, a study conducts, about the impact of a program for teachers and their knowledge of the special pictorial narration for autistic children, show similarity in correlation result no significant between teacher knowledge about autism and their qualifications (0.204) and (0.244) for their experience by<sup>(19)</sup>. On the contrary, a study conducted had opposite result that was showed correlation between teacher's knowledge and their years of experience with autism<sup>(20)</sup>.

- 1.Trainers working for autism centers are only females and majority of their age was range from (25- Under 35 years).
2. There was no significant or weak correlation between the trainer's knowledge and socio-demographic characteristics except, the results showed a significant correlation between the trainer's knowledge of pragmatic language and their information about the pragmatic language for children with ASD.
3. Recommend to using appropriate strategies to improve pragmatic language for children with ASD.

## Conclusions

The study concluded that trainers working for autism centers are only females. There was weak correlation between the trainer's knowledge and socio-demographic characteristics. However, the results showed a significant correlation between the trainer's knowledge of pragmatic language and their information about the pragmatic language for children with Autism.

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