

The Positive Impact of the ABLLS-R Model for Communication on Children with ASD at Al-Sibtain Academy for Autism and Developmental Disorders

*Sahar Hammoudi Kadam,
University of Kerbala, College of Education for Human
Sciences, Department of English language,
sahar.h@s.uokerbala.edu.iq*

*Asst. Prof. Nidaa Hussain Fahmi Al-Khazraji (Ph.D),
University of Kerbala, College of Education for Human
Sciences, Department of English,
nida.fehmy@uokerbala.edu.iq*

DOI: <https://doi.org/10.31973/zvb5ct98>

ABSTRACT:

This study explores aspects of communication in autistic children at Al-Sibtain Academy for Autism and Developmental Disorders. The main objective was to investigate whether the program and training methods of the academy positively impact the language development and communication skills of children enrolled in the program.

To address this objective, a hypothesis was formulated: the program and training methods would significantly enhance language development in the attending children. A quantitative approach was employed, utilizing House's SCDS scale for analysis. The research design encompasses gathering numerical data through surveys, which is later subjected to statistical analysis. The findings indicate that the intervention had the greatest impact on children who engaged in daily activities tailored to their specific needs and commenced the program at an earlier age. This highlights the crucial role of early intervention and consistent therapy in promoting language development.

In conclusion, this study underscores the effectiveness of Al-Sibtain Academy's program and training methods in fostering language development among autistic children. The results emphasize the significance of early intervention and sustained therapeutic efforts in maximizing positive outcomes.

Keywords: ABLLS-R assessment, autism spectrum disorders (ASD), Social Communication Disorders Scale, Sociolinguistics.

1. INTRODUCTION

The development of language and communication is crucial for cognitive, social, and global understanding. The process of sending information in various ways is referred to as communication (Heflin & Alaimo, 2007). For children with autism spectrum disorders, communication, socialization, and effective behaviour development are crucial (Rapin & Tuchman, 2008). A complicated neuro-developmental infection known as autism spectrum disorder (ASD) impacts social interaction, playful behaviour, repetitive behaviour, and motor abilities. It appears in infancy and the early years of life and causes delays in a number of important developmental domains.

In addition to limiting or constricting behaviours, interests, or hobbies, the Diagnostic and Statistical Manual of Mental Disorders describes these disorders as having trouble communicating in social situations. It is necessary to utilize the sociolinguistic approach to autism in order to comprehend the language and social development of autistic children. Researchers can develop successful results and effective treatments to help autistic kids overcome these obstacles (American Psychiatric Association, 2013). Accordingly, 25% of 12- to 18-month-old children with ASD utilize single words; some abruptly stop talking, and others progressively regress and lose speech. (Kurita:1985).

According to Partington (2010), any child with ASD may struggle with all aspects of communication, including language development. He claims that the Assessment of Basic Language and Learning Skills-Revised (ABLLS-R) is a tool for assessing, planning programs, and keeping track of the concepts and skills essential for the development of fundamental language and communication, as well as the abilities required to foster learning in the key academic, adaptive, and motor domains.

Language and speech development depend significantly on social development processes throughout the first year of life; thus, it's essential to address social communication impairments as soon as possible to encourage the best possible language and speech development (Aldred et al., 2004).

Additionally, social communication skills in kids with ASD have been proven to be improved by therapies including social skills training and parent-mediated interventions. To assist their development in this area, however, cautious attention is required. In order to provide children with ASD with the appropriate therapies, parents, educators, and clinicians must be aware of their unique communication needs. Interventions should be customized to each child's unique requirements (American Psychiatric Association, 2013).

2. LITERATURE REVIEW

2.1. Sociolinguistics

Languages have traditionally been primarily utilized for everyday communication, regardless of the fact that their nature and purpose vary. Similarly, in every language, many variations are found because language and society are strongly interlinked. Language helps humans develop their cognitive skills in different aspects (Bell, 1976).

Moreover, language acquisition has been shown to have long-term effects on brain structure, specifically in areas such as the hippocampus, which plays a crucial role in memory retention (Lövdén et al., 2012). The integration of language learning into education has been linked to enhanced cognitive skills, particularly in problem-solving and critical thinking (Grosjean, 2010). As such, the benefits of language acquisition extend beyond basic communication skills.

Sociolinguistics refers to the investigation of how language and society are interconnected, especially with regard to language use and social response. Scholars have offered various definitions of sociolinguistics. Bell (1976) characterizes it as a subset of anthropological linguistics that analyzes the relationship between language and culture, with particular attention to language use in different social contexts. Hudson (1996) conceptualizes sociolinguistics as the study of language-social factor relationships, such as age, gender, ethnicity, and class.

Trudgill (2000) emphasizes the broad scope of sociolinguistics as encompassing all aspects of society that impact the use of language, including cultural expectations and norms. He highlights the role of context, stating that sociolinguistics investigates the effect of socio-cultural environments on language use.

Similarly, Dijk (2009) also stresses the importance of context in sociolinguistics, which he defines as the study of language in relation to its socio-cultural context. Moreover, Wardhaugh (2010) links sociolinguistics to the investigation of stylistic and social variation of language. These definitions highlight the multidimensional nature of sociolinguistics, which examines language in relation to a diverse array of social constructs.

2. 1 Language and Autism Spectrum Disorder (ASD)

Language comprehension in children is affected by autism. The majority of ASD children comprehend fewer words than typically developing children their age, and many of them have relative language impairments in receptive rather than expressive speech (Luyster et al., 2016).

ASD is a neurological disorder causing significant impairments in communication, social interaction, and restricted interests and behaviours. Individuals often exhibit repetitive behaviours and rigid routines (Hus, 2021). Autism children often struggle with social communication, affecting social skills, verbal and nonverbal abilities, and forming friendships. This leads to isolation and difficulty forming relationships (Matson & Kozlowski, 2011). American Psychological Association defines communication disorders as verbal and non-verbal, with verbal disorders consisting of phonological, syntactic, and pragmatic issues, while non-verbal disorders involve body language and facial expressions (Baron-Cohen, et al., 1985).

2.1.1 Verbal Communication Disorders

Human communication involves linguistic, cognitive, and motor skills to convey meanings through language. These skills enable individuals to express their thoughts, emotions, and ideas effectively. There are various conditions that can affect verbal communication abilities. Expressive language disorder involves difficulties in expressing oneself through spoken language.

Individuals with expressive language disorder may struggle with forming sentences, using appropriate vocabulary and grammar, and organizing their thoughts coherently when speaking. However, the broader context of verbal communication is speech sound disorders.

These disorders affect the production of speech sounds. They include conditions such as articulation disorders (difficulty producing specific speech sounds) and phonological disorders (difficulties with sound patterns and rules). Childhood Apraxia of Speech (CAS) is a motor speech disorder where the brain has difficulty planning and coordinating the movements necessary for clear and accurate speech. Individuals with CAS may have difficulty with speech sound production, rhythm, and fluency (Wambaugh, et al., 2006).

2.1.1. 1. Phonological Language Impairment

Phonology is the branch of linguistics that investigates the patterns and organization of sounds in language, playing a crucial role in speech production and pronunciation. It encompasses the acquisition of auditory word discrimination skills, comprehension of pronunciation rules, analysis of phonemes (individual speech sounds), and the study of how language sounds change over time (Goldstein, 2011). During early childhood, as children develop cognitively, they begin to produce speech sounds that mirror the linguistic environment they are exposed to.

As they progress in their language development, they not only associate meanings with these speech sounds but also construct a shared system of communication known as a language. Through their ongoing processing, comprehension, and acquisition of this code system, it becomes functional and enables effective communication with others (Owens, 2005).

Language and communication are intertwined processes that involve understanding and effectively conveying messages. Receptive language skills begin to develop in children between six to twelve months of age, enabling them to comprehend spoken words and gestures. On the other hand, expressive or communicative language emerges around 12 to 18 months, allowing children to actively communicate their needs, desires, and thoughts through gestures, sounds, and eventually words (Tager-Flusberg et al., 2009).

Phonological processing encompasses various cognitive activities related to the structures of language sounds, which involve metacognitive abilities and phonological awareness. Additionally, phonological memory plays a role in temporary information recall and rapid naming skills (Baron-Cohen et al., 1985).

Research focusing on speech sound disorders in children with Autism Spectrum Disorder (ASD) has brought attention to the importance of assessing phonological and articulatory skills. However, the exact nature, characteristics, and severity of these challenges in ASD remain unclear (Rapin, 2003). Moreover, children with ASD may experience difficulties in phonological processing that extend to areas such as syntax and semantics (Tager-Flusberg, 2001).

Phonological difficulties are not limited to ASD but can also be observed in children with general language impairments. These challenges may manifest as temporary issues with articulation and writing, indicating potential isolated phonological impairments (Whitehouse & Bishop, 2008). However, it is important to note that research on atypical prosody (patterns of rhythm, intonation, and stress in speech) in individuals with ASD is limited due to the variability and challenges associated with communication and social assessment (Peppé, 2009).

2.1.1.2 Morphosyntax Language Impairment

Syntactic analysis studies sentence structure and formation in a language, focusing on grammatical structure and combining words into larger units like sentences. Syntactic categories include nouns, verbs, and other speech components. A branch of linguistics known as morphosyntax focuses on the rules and principles governing word construction and meaning generation, two processes that are crucial for language learning, processing, and production (Baker, 2015).

According to Tager-Flusberg (2006), an investigation analyzing tense morphology in children with ASD aged 5 to 15 identified issues with morphological elements, particularly non-word repetition. Low-verbal-competence children with ASD frequently exhibit linguistic difficulties and struggle with tense inflections. Disorders of morphosyntax are more prevalent in problems with general language use, regardless of intellectual disabilities. Some errors may stem from social issues and speech understanding (Ganz et al. 2018).

2.1.1.3. Pragmatic Language Impairment

Pragmatics studies how language is used in social contexts for communication. It focuses on information structure encoding (Edward, 2008). Communication abilities, including verbal and nonverbal, play a crucial role in structuring information. Normal children effectively use pragmatics, while those with special needs struggle with it due to a pragmatic disorder (Adams & Bishop, 1989). Pragmatic dysfunction is present in autism, schizophrenia, traumatic brain injury, and right-hemisphere impairment (Cumming, 2011). Pragmatic impairment affects language understanding, impairs social connections, and causes social anxiety (Goodwin & Fein, 2012). The modular view describes cognition and language as distinct entities, with language organization involving phonological, syntactic, semantic, and pragmatic components (Vigliocco, 2018).

As a result of pragmatic impairment, ASD individuals display linguistic symptoms like echolalia, pedantic speech, and misreading metaphorical language. Echolalia is more common and lasting in ASD children, as they struggle with verbal interactions and repeat words to understand meaning (Williams et al., 2008). The study focuses on autism children with limited verbal language, highlighting challenges in social situations and freedom of expression.

2.2. Non-Verbal Communication

Non-verbal communication refers to the transmission of messages or information without the use of spoken or written words. It involves conveying meaning through facial expressions, body language, gestures, eye contact, posture, tone of voice, touch, and other non-linguistic cues (Robert et al., 2004). Non-verbal communication may present unique challenges for children with ASD. Individuals with ASD may experience difficulties in understanding and using non-verbal cues effectively, which can impact their social interactions and communication skills. Children with ASD may have difficulty establishing and maintaining eye contact during interactions. They may struggle to interpret the social significance of eye contact and may prefer to focus on objects or engage in repetitive behaviours instead (Tantam et al., 1993).

ASD children might exhibit atypical or less expressive facial expressions. Their ability to convey and interpret emotions through facial expressions may be impaired, making it challenging for others to understand their emotional state. Some children with ASD may display atypical body language or limited use of gestures. They may have difficulty using appropriate hand movements, pointing, or other non-verbal cues to communicate or express their needs. They may struggle with interpreting and understanding non-verbal cues from others, such as facial expressions, tone of voice, and body language. This difficulty can impact their ability to infer others' intentions, emotions, or social cues during interactions (Peterson, 2002).

It is important to note that while some children with ASD may face challenges in non-verbal communication, others may exhibit strengths in specific areas, such as visual processing or attention to detail. Individual differences in communication abilities and needs should be considered when supporting children with ASD in developing their non-verbal communication skills. Social skills training, visual supports, and augmentative and alternative communication systems can be helpful in improving non-verbal communication abilities in children with ASD (ibid.).

2.3 Assessment

To facilitate effective communication in children with ASD, it is vital to administer skill assessments and provide trainers with suitable activities (Guldborg, 2010). Implementing evidence-based practices is essential when working with children with ASD. Practitioners can enhance their abilities through ongoing professional development and collaborative efforts, ultimately leading to improved outcomes for both children and their families (Goldstein, 2011).

2.3.1 ABLLS-R Program

The Assessment of Basic Language and Learning Skills-Revised (ABLLS-R) program was created by Dr. James W. Partington (2010), a behaviour analyst and researcher specializing in autism and developmental disabilities. Dr. Partington has published many books and papers related to the ABLLS-R, including the assessment tool and curriculum guide.

ABLLS-R is a widely used tool and curriculum guide designed to assess and teach various skills to individuals with autism spectrum disorders (ASD) or other developmental disabilities (ibid.).

The ABLLS-R function is to identify language and other critical skills that need improvement so that a child can learn more from real-world encounters (Partington, 2010). Here are some key features and aspects of the ABLLS-R program:

- a) Purpose: The ABLLS-R serves as both an assessment tool and a curriculum guide. It aims to identify the skills that are essential for a child's development and provides a structured curriculum to teach those skills systematically (Usry, 2015).
- b) Domains: The ABLLS-R covers a comprehensive range of skill domains, including 25 areas of development. These domains include receptive language, expressive language, visual performance, motor skills, self-help skills, play and leisure skills, social interaction, and academic skills. Each domain is further divided into specific sub-skills(*ibid.*).
- c) Assessment: The ABLLS-R assessment is typically conducted through direct observation and involves the systematic evaluation of the individual's current skill levels. It provides a standardized framework for assessing and scoring a wide range of skills across the various domains. The assessment helps to identify areas of strength and areas that require further development (Ahmad Abdel-Hafez Mahmoud, 2021).
- d) Curriculum Guide: Based on the assessment results, the ABLLS-R provides a curriculum guide that offers specific targets and strategies for teaching each skill. The curriculum includes a sequence of steps or tasks designed to help the individual acquire and generalize the targeted skills. The curriculum can be tailored to meet the individual's specific needs and can be used in various educational settings (Partington, 2006).
- e) Individualized Instruction: The ABLLS-R emphasizes individualized instruction and allows for customization based on the unique needs and abilities of each learner. It provides guidance on teaching strategies, prompting techniques, reinforcement strategies, and data collection methods to track progress (Griffen, et al, 2022).
- f) Tracking Progress: The ABLLS-R includes a scoring system that allows for ongoing monitoring of a learner's progress. It enables educators, therapists, and parents to track skill acquisition over time, identify areas that need further attention, and make data-informed decisions regarding instructional planning and intervention strategies (Partington & Sundberg, 2020).
- g) Collaboration and Goal Setting: The ABLLS-R encourages collaboration among professionals, educators, and parents to develop appropriate goals and implement effective intervention plans. It promotes a team-based approach to support the individual's development and learning (Partington, 2013).

Since the present paper deals with the positive impact of the ABLLS-R Model for communication on children with ASD at Al-

Sibtain Academy, the researcher identifies the difficulties in various aspects of social communication, such as:

- a) Social interaction: children with ASD may struggle with initiating and maintaining conversations, appropriately using eye contact, understanding and interpreting social cues, and engaging in reciprocal social interactions.
- b) Social cognition: They may have difficulties in understanding and interpreting others' perspectives, emotions, intentions, or sarcasm. They may struggle with recognizing and responding appropriately to social norms and rules.
- c) Pragmatic language use: Pragmatic language refers to the use of language in different social contexts, such as adjusting language based on the listener's needs, using appropriate tone and register, taking turns in conversation, and using gestures and body language effectively. Individuals with SCD may have challenges in these areas.

2.3.2 The SCDS Scale

Social Communication Disorder (SCD) is a communication disorder characterized by difficulties in using verbal and nonverbal communication for social purposes. Individuals with SCD may struggle with social interaction, understanding and using social cues, and engaging in conversation. These difficulties can significantly impact their social relationships, academic performance, and daily functioning (Luyster et al., 2008).

Social Communication Disorder (SCD), also known as pragmatic communication disorder, is a neurodevelopmental disorder characterized by persistent difficulties in the social use of verbal and nonverbal communication. It involves challenges in understanding and using language for social purposes, which can significantly impact social interaction and communication skills (Hus, 2021).

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by challenges in social interaction, communication, and repetitive or restricted behaviours. Communication difficulties are a common feature of ASD, and some individuals with ASD may also exhibit symptoms similar to those of SCD. It's important to note that SCD is a separate diagnosis from ASD, although they can coexist or share similar traits (ibid.).

Individuals with SCD may experience difficulties in various aspects of social communication, such as assessing and understanding the sociolinguistic aspects of children with ASD, it is crucial for their overall development and support (Kim, 2021). It involves evaluating their communication abilities, social interaction skills, and the impact of these difficulties on their daily lives.

Sociolinguistic assessments often involve observing and analyzing the child's verbal and nonverbal communication, understanding their comprehension of social cues, evaluating their conversational skills, and assessing their pragmatic language abilities (Lo Castro, 2013). Accordingly, SCD is distinct from other communication disorders or conditions such as autism spectrum disorder. While individuals with ASD often have difficulties with social communication, SCD specifically focuses on social communication challenges without meeting the criteria for an ASD diagnosis. However, SCD and ASD can coexist, and some individuals may receive dual determination (Hume, et al., 2014).

The Social Communication Disorder Scale (SCDS) is a measure used to assess autistic students who lack social interaction and communication skills. It is based on the American Psychiatric Association standards to diagnose and test those autistic students.

The translated form of the scale undergoes validation by a panel of expert jury members. Once this validation process is completed, the scale is then presented to the committee of the English department within the College of Education at Kerbala University. Subsequently, the set of 50 questions derived from House's fifth edition model of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, 2013) will be provided to the trainers at Al-Sibtain. This scale aims to assess various aspects related to social interaction, contextual understanding, rule comprehension, and nonliteral language expressions. The diagnostic criteria are reflected in the items and scales of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

3. METHODOLOGY

The present study utilizes a quantitative approach to quantitatively examine the data. The research design involves collecting numerical data through surveys or experiments and subsequently subjecting it to statistical analysis. This methodology enables the objective and precise measurement of variables and facilitates the generalization of findings to larger populations.

3.1 DATA ANALYSIS

3.1.1 Participants

The study investigated a cohort of 30 children with diagnosed Autism Spectrum Disorder who were enrolled at Al-Sibtain Academy for Autism and Developmental Disorders. The participants' ages varied between 49 and 123 months. The majority of the children, specifically 25 out of the 30, were male.

Table 1: The Participants in the Study

Participants	Frequency	Percentage
Male	25	83.4%
Female	5	16.6%
Total	30	100%

The purpose of selecting this particular sample was to assess the efficacy of the new program designed for children with ASD in enhancing their performance on the ABLLS-R program. This evaluation involved comparing the participants' performance before and after implementing the new program, utilizing the SCDS scale as a measure.

3.2. RESEARCH MATERIAL AND METHODS:

3.2.1 The Experimental Design:

The present study employed an experimental pre-post design, where the research team implemented data collection techniques before and after the intervention. A single group was utilized, consisting of 30 children with ASD. By examining the performance of these children before and after engaging in specific training activities, the design aimed to evaluate the impact of the instructional interventions on their outcomes.

3.2.2 Questionnaire

According to Wardhaugh (2006, p.148), sociolinguists employ various scales to categorize individuals within a social framework. In this study, the researcher will utilize the Social Communication Disorder Scale (SCDS) questionnaires to evaluate children with ASD at Al-Sibtain A academy and explore sociolinguistic aspects. The SCDS questionnaire comprises 50 items, categorized into social interaction, context, rules, and nonliteral elements. Higher scores on the scale indicate a greater likelihood of sociolinguistic communication disorders, while lower scores suggest fewer difficulties in this domain.

3.2.3 Assessing SCDS

For Assessing SCDS, the following steps will be followed:

1. Reviewing the SCDS assessment tool and its scoring procedures, subtests, and items (*cf.* Appendix).
2. Obtaining information about the autistic children being assessed, such as their age, gender, developmental history, and social communication difficulties.

3. Using the SCDS assessment tool to administer subtests that evaluate different social communication skills, social interaction, context, rules, and nonliteral language.
4. Scoring each subtest based on the individual's performance, using the guidelines provided in the SCDS manual.
5. Reviewing the results and identifying the individual's strengths and weaknesses in various social communication skill areas.
6. Using the assessment results to develop individualized goals and intervention plans to target areas of need.

4. FINDING AND DISCUSSION

To determine the statistical significance of any observed differences, appropriate statistical analyses, such as paired sample t-tests, need to be conducted.

A pre-and post-test study design is used to investigate whether there are statistically significant effects of the ABLLS-R program on improving fundamental learning abilities related to social interaction, context, rules, and nonliteral items.

In this study, only specialists are instructed to complete the questionnaires because they are qualified to discuss the difficulties and concerns faced by children with ASD. Since they are the trainers, it is simpler to observe and choose the best samples from them because they are familiar with every child in the institution. The paired t-test is a method for determining whether or not the mean difference between two measurement pairs is zero.

By understanding the specific areas of strength and weakness in language and communication skills, the researcher can adapt interventions to target the specific needs of children with ASD. This knowledge can also help in developing child support strategies that promote effective communication and overall development in these children.

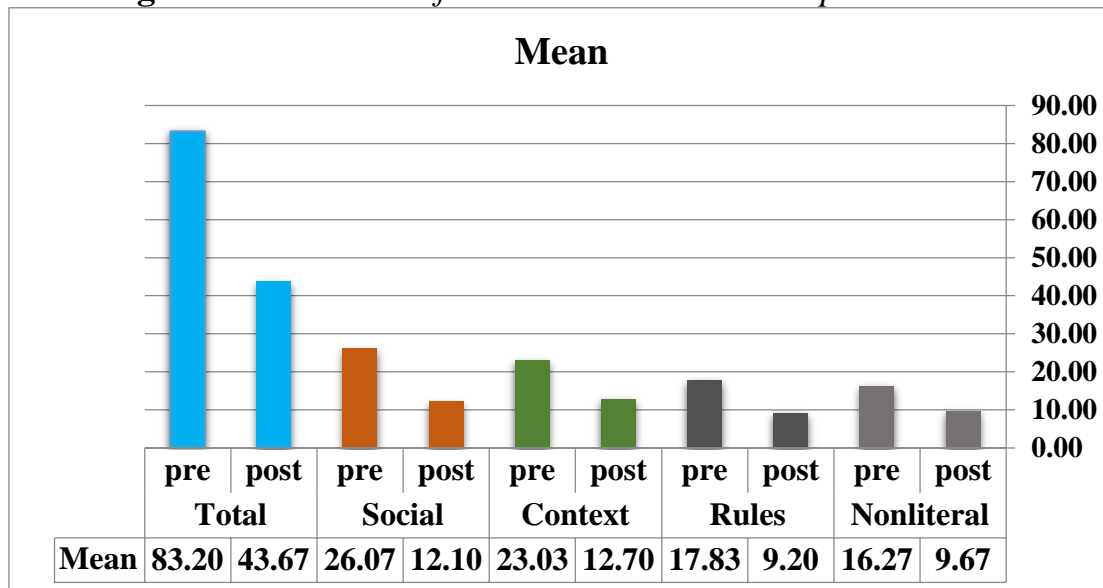
Table 2: *The Paired T-Test in Standard Deviation in Pre and Post T-Test*

Subscale	Test	Mean	S. D	S. E	t-test	p.v
Nonliteral	Pre	16.27	11.66	2.13	4.309	.000
	Post	9.67	10.48	1.91		
Rules	Pre	17.83	8.78	1.68	6.222	.000
	Post	9.20	9.21	1.60		
Context	Pre	23.03	12.93	2.36	6.518	.000
	Post	12.70	10.77	1.97		
Social	Pre	12.10	10.71	1.96	7.498	.000
	Post	43.67	38.31	6.99		
Total	Pre	26.07	12.31	2.35	7.644	.000
	Post	83.20	43.19	7.89		

In the previous table, the results show that the total standard deviation (DS) in the pre-test is (12.31) and the post-test is (43.19), and the probability value (p.v.) is close to zero, indicating that there are significant differences between the results of the pre-test and post-test. These findings suggest that the intervention or treatment implemented between the two tests had a significant impact on the outcome measures being assessed.

The *t*-test score for the aspects of non-literal communication skills is 9.67; for the rule items, it is 12.70; for the context, it is 6.518; and finally, for the aspects of social interaction, it is 43.67. By revealing their statistical significance, it is found that they are statistically significant at a level of significance greater than 0.01, which indicates that in the post-assessment, the children with ASD had a lower percentage of improvement in the aspect of social communication skills, which indicates that the first question is answered.

Figure 1: *The Score of means Pre and Post the paired t-Test.*



The previous figure depicts the histogram of the comparison means of the respondents’ scores. It demonstrates that respondents’ overall test scores are positive on the post-test application of the SCDS item subscales. The distribution is 83.20; SD = 43.19, and the post-test (M = 43.67; SD = 38.31) is significant (*t*-test = 7.644; p 0.000). They perform well on the post-test application of SCDS item subscales. The distribution is 83.20; SD = 43.19; and the post-test is M = 43.67; SD = 38.31. The results indicate that the participants’ performance on the post-test application of SCDS item subscales was significantly affected by the interference, as evidenced by the high *t*-test value and low *p*-value. This suggests that the interference had a significant negative impact on their self-concept and self-esteem.

5. CONCLUSION

Assessment is the cornerstone of creating appropriate and effective interventions. The ABLLS-R is made up of two components: the ABLLS-R Protocol and the ABLLS-R Guide. The protocol is comprised of a skill-tracking system, assessing items ranging from listening and language skills to academic Activities of Daily Living (ADL) skills. The scoring system is simple, in that each specific skill is broken down into 2-4 levels (Partington,2006).

Based on the paired *t*-test analysis, it can be concluded that the program had a significant impact on improving the non-literal communication skills, rules, context, and social interaction aspects of children with ASD. In order to encourage the best language and speech development in children with ASD, early intervention is crucial. However, the study underscores the effectiveness of Al-Sibtain Academy's program and training methods in fostering language development among autistic children. The results emphasize the significance of early intervention and sustained therapeutic efforts in maximizing positive outcomes.

REFERENCES

Adams, C., & Bishop, D. V. (1989). Conversational characteristics of children with semantic-pragmatic disorder: I. Exchange structure, turn-taking, repairs and cohesion. *British Journal of Disorders of Communication*, 24(2), 115-137.

Ahmad Abdel-Hafez Mahmoud, H. (2021). Using Teaching Activities for Developing Some Receptive Language Skills determined in the light of The (ABLLS-R) at children with Autism Spectrum Disorder Integrated in Primary Schools. *المجلة التربوية لكلية التربية بسوهاج*, 86 (86), 1-38.

Aldred, C., Green, J., & Adams, C. (2004). A new social communication intervention for children with autism: Pilot randomized controlled treatment study suggesting effectiveness. *Journal of Child Psychology and Psychiatry*, 45(8), 1420-1430. doi: 10.1111/j.1469-7610.2004.t01-1-00324.x

Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a “theory of mind”? *Cognition*, 21(1), 37-46.

Bell, R. (1976). Cognitive processing strategies and the learning of syntax in connectionist networks. *Cognitive Psychology*, 8(4), 441-480.

Cumming, T. (2011). Pragmatics and communication in traumatic brain injury. *A Physiology*, 25(7), 822-836.

Edwards, J. (2008). *Language and identity: An introduction*. Cambridge University Press.

Ganz, J. B., Earles-Vollrath, T. L., Heath, A. K., Parker, R. I., Rispoli, M. J., & Duran, J. B. (2018). Characterizing language

performance in children with autism spectrum disorders: Social-communicative functioning, morphosyntactic development, and autistic traits. *Journal of Autism and Developmental Disorders*, 48(8), 2783-2799. doi: 10.1007/s10803-018-3569-6.

Goldstein, B. A. (2011). *Encyclopedia of language and literacy development*. Canadian Language and Literacy Research Network. Retrieved from <http://www.literacyencyclopedia.ca/pdfs/topic.php?topId=13>.

Goodwin, A., & Fein, D. (2012). Inappropriate Conversation in Autism Spectrum Disorder. In J. L. Matson (Ed.), *Autism Spectrum Disorders - Advances in Research and Treatment* (pp. 101-118). In Tech. <https://doi.org/10.5772/34741>

Griffen, B., Woods-Catterlin, L., Lorah, E. R., & Whitby, P. S. (2022). Teaching Communication to Individuals with Autism Spectrum Disorders. *Autism Spectrum Disorders: Advancing Positive Practices in Education*.

Grosjean, F. (2010). *Bilingual: life and reality*. Harvard University Press.

Heflin, L. J., & Alaimo, D. F. (2007). *Students with autism spectrum disorders: Effective instructional practices*. Pearson Education.

Hudson, R. A. (1996). *Sociolinguistics*. Cambridge University Press.

Hume, K., Boyd, B. A., Hamm, J. V., & Kucharczyk, S. (2014). Supporting independence in adolescents on the autism spectrum. *Remedial and Special Education*, 35(2), 102-113.

Hus, V. (2021). Autism Spectrum Disorder (ASD). In Stat Pearls [Internet]. *Treasure Island (FL)*: Stat Pearls Publishing. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK519704/>

Johnson, E. (2015). Enhancing language learning through cooperation and reinforcement. *Journal of Educational Psychology*, 107(3), 785-796.

Kim, R. E. (2021). A Systematic Review of the Literature on the Assessments Used for Social Communication in the Diagnosis of Autism Spectrum Disorder. *Western Michigan University*.

Lo Castro, V. (2013). *Pragmatics for language educators: A sociolinguistic perspective*. Routledge.

Lövdén, M., Wenger, E., Mårtensson, J., Lindenberger, U., & Bäckman, L. (2012). Structural brain plasticity in adult learning and development. *Neuroscience & Biobehavioral Reviews*, 37(9), 2296-2310.

Luyster, R. J., Kadlec, M. B., Carter, A., & Tager-Flusberg, H. (2008). Language assessment and development in toddlers with

autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 38(8), 1426–1438. doi:10.1007/s10803-007-0510-1

Matson, J. L., & Kozlowski, A. M. (2011). The increasing prevalence of autism spectrum disorders: Autism spectrum disorders. In J. L. Matson (Ed.), *Applied behavior analysis for children with autism spectrum disorders* (pp. 1-14). New York: Springer.

Owens, R. E. (2005). *Language development: An introduction*. Boston: Allyn and Bacon.

Partington, J. W. (2006). Assessment of Basic Language and Learning Skills-Revised (ABLLS-R) as an assessment tool for students with autism and other developmental disabilities: Progress in initiating an international norming project. *The Journal of the Association for Persons with Severe Handicaps*, 31(1), 26-35.

Partington, J. W. (2013). *The Assessment of Functional Living Skills-The AFLSTM*. Behavior Analysts Inc.

Partington, J. W., & Sundberg, M. L. (2020). *The Assessment of Basic Language and Learning Skills-Revised (The ABLLS-R Protocol)*. Concord, CA: Behavior Analysts, Inc.

Partington, J. W., & Sundberg, M. L. (1998). The Assessment of Basic Language and Learning Skills-Revised (ABLLS-R). *The Analysis of Verbal Behavior*, 15(1), 45-68.

Peppé, S. (2009). *Prosody in autism spectrum disorders: A critical review*. *International Journal of Language & Communication Disorders*, 44(6), 660-673. doi:10.1080/13682820802620129

Peterson, C. C. (2002). Nonverbal communication in autism. In M. J. Fine & L. H. Smith (Eds.), *The handbook of autism: A guide for parents and professionals* (pp. 307-324). Routledge.

Piazza, C. C., Fisher, W. W., Hagopian, L. P., Bowman, L. G., Toole, L. M., Goh, H. L., ... & Kurtz, P. F. (1996). Using the Assessment of Basic Language and Learning Skills (ABLLS) to guide treatment of severe language delays in early intervention. *Journal of Early Intervention*, 20(2), 150-164.

Rapin, I., & Tuchman, R. F. (2008). *Autism: Definition, neurobiology, screening, diagnosis*. *Pediatric clinics of North America*, 55(5), 1129-1146.

Robert, C. C. (2002). Nonverbal communication in autism. In M. J. Fine & L. H. Smith (Eds.), *The handbook of autism: A guide for parents and professionals* (pp. 307-324). Routledge.

Smith, J., & Jones, K. (2018). The effectiveness of cooperation and reinforcement skills in promoting language development. *Journal of Speech, Language, and Hearing Research*, 61(9), 2211-2221.

Tager-Flusberg, H. (2001). *Neurodevelopmental disorders*. MIT press.

Tager-Flusberg, H., Rogers, S., Cooper, J., Landa, R., Lord, C., Paul, R., ..., Tarbox, J., Madrid, W., Aguilar, B., Jacobo, W., & Schiff, A. (2009). Use of chaining to increase complexity of echos in children with autism. *Journal of Applied Behavior Analysis*, 42(4), 901-906. <https://doi.org/10.1901/jaba.2009.42-901>.

Tantam, D., Monaghan, L., Nicholson, H., & Stirling, J. (1993). Autistic children's ability to interpret faces: A research note. *Journal of Child Psychology and Psychiatry*, 34(2), 369-375.

Trudgill, P. (2000). *Sociolinguistics: An Introduction to Language and Society*. England. Penguin Group.

Usry, J. N. T. (2015). *Validation of the Assessment of Basic Language and Learning Skills-Revised for students with autism spectrum disorder using an expert review panel*. Liberty University.

Van Dijk, T. A. (2009). *Society and discourse: How social contexts influence text and talk*. Cambridge University Press.

Vigliocco, G. (2018). Language. *Oxford Research Encyclopedias*. doi: 10.1093/acrefore/9780199384655.013.455.

Wambaugh, J. L., Duffy, J. R., McNeil, M. R., Robin, D. A., & Rogers, M. A. (2006). Treatment guidelines for acquired apraxia of speech: A synthesis and evaluation of the evidence. *Journal of Medical Speech-Language Pathology*, 14, xv–xxxiii.

Wardhaugh, R. (2010). *An introduction to sociolinguistics*. John Wiley & Sons.

Whitehouse, A. J. O., & Bishop, D. V. M. (2008). Do children with autism 'grow out of' their language difficulties? An overview of longitudinal studies of cognitive and social development. *In Language acquisition in autism spectrum disorders* (pp. 109-130). Psychology Press.

Wilkinson, K. M. (1998). Communicating with children with autism: A review of the literature. *Focus on Autism and Other Developmental Disabilities*, 13(2), 75-84.

Williams, D., Botting, N., & Boucher, J. (2008). Language in autism and specific language impairment: where are the links?. *Psychological bulletin*, 134(2), 944-963. doi: 10.1037/0033-2909.134.2.944.

Wardhaugh, R. (2006). *An Introduction to Sociolinguistics*. Wiley-Blackwell.

APPENDIX

Social Communication Disorder Scale (SCDS)

The Social Communication Disorder Scale (SCDS) is a measure used to assess autistic students who lack social interaction and communication skills. It is based on the American Psychiatric Association (APA) standards to diagnose and test those autistic students. The current study uses this scale as a data analysis tool to examine the (ABLIS) validity. After it is presented to the committee of the English department in the College of Education at Kerbala University, the following 50 questions will be delivered to Al-Sibtain trainers. This scale is based on House's fifth edition (DSM-5, 2013) model and is used to examine topics like social interaction, context, rules, and nonliteral phrases. The diagnostic criteria are reflected in the items and subscales of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

Each item on the SCDS is rated by using a four-point scale:
(0) never, (1) sometimes, (2) often, (3) always.

According to House (2013:1-4) the SCDS has four subscales:

- Social - assesses social interaction with peers and adults.
- Context - assesses being able to communicate appropriately in social situations and change behaviour based on the setting.
- Rules - assesses using the rules for interaction and conversation to communicate appropriately in social situations.
- Nonliteral - assesses understanding of nonliteral forms of language, multiple meanings of words, analogies, and picture and/or verbal absurdities.

Additionally, the researcher translated these scales into the Arabic language to clarify and facilitate the task for the trainers to answer the questions.

Social Communication Disorder Scale

(SCDS)

(0) never, (1) sometimes, (2) often, (3) always.

Social

- 1. Has difficulty expressing opinions, feelings, and/or emotions.
- 2. Does not interact/reciprocate socially with others.
- 3. Has difficulty using ritualistic greetings/ closings when appropriate (e.g., “Hello,” “Goodbye”).

- 4. Does not exhibit awareness of social “codes of conduct” or does not learn appropriate behaviour from observing such behaviours (e.g., saying, “please/thank you,” turn taking, sharing, etc.).
- 5. Has difficulty using verbal language as a tool to obtain desired results.
- 6. Does not engage in conversations with peers.
- 7. Does not engage in conversations with adults.
- 8. Has a limited expressive vocabulary.
- 9. Has a limited receptive vocabulary.
- 10. Does not express complete thoughts when speaking (e.g., speaks in incomplete sentences, unable to retrieve words to express ideas accurately, etc.).
- 11. Does not use appropriate verbal and/or nonverbal language in social situations or interactions with peers.
- 12. Does not use appropriate verbal and/or nonverbal language in social situations or interactions with adults.
- 13. Does not show change in emotion through facial expressions (e.g., flat or inappropriate facial expressions in varying situations, etc.).
- 14. Does not laugh appropriately at humor.
- 15. Does not participate in friendly teasing.

Raw score

Context

- 16. Lacks spontaneity, originality, and/or variety in verbal interactions (e.g., repeats words/phrases excessively).
- 17. Does not communicate for the purpose of sharing positive affect (e.g., joint attention).
- 18. Has difficulty pretending, role-playing, and imagining with peers (e.g., playing house, pretending to be someone he/she is not, etc.).
- 19. Has difficulty producing information required in a specific situation (e.g., excited).
- 20. Uses unusual speech patterns that are overly precise and pedantic (i.e., talks like a “little professor”) or speaks in a singsong manner.
- 21. Does not use others’ emotional responses to guide behaviour (i.e., social referencing).
- 22. Inappropriately uses newly learned communication skills in novel and familiar communicative situations (e.g., over applies greetings to everyone he/she sees, answers “fi ne” to all questions directed to him/her, etc.).
- 23. Has difficulty assuming role reversals in play (e.g., always is the “chaser” rather than being chased, always plays the “monster,” etc.).
- 24. Demonstrates little tact/politeness in interactions; is very blunt in communication.

- 25. Does not respond to others' communication initiations (e.g., doesn't respond to his/ her name).
- 26. Demonstrates difficulty with topic initiation, maintenance, and/or closure including irrelevant, tangential, or associative response; and/or tends to circumlocute - talking "around" instead of "on" the topic.
- 27. Has difficulty understanding or accepting others' point of view?
- 28. Remains fixated on topics of personal interest in conversation with others.
- 29. Exhibits overly animated or odd facial expressions, for no apparent reason, that seem inappropriate for the context.
- 30. Is unable to interpret nonverbal facial cues of others (i.e., emotional state of others).

Raw score

Rules

- 31. Is unable to participate in conversational turn taking.
- 32. Is slow to respond and/or fails to respond with relevant responses (e.g., When asked, "What is your name?" the student may respond, "I'm fine.").
- 33. Demonstrates inappropriate (or inaccurate) sequencing skills when speaking (e.g., does not relate information in the correct order, including events in a day and/or rote type activities such as counting).
- 34. Does not ask for clarification when confused, but instead ignores others or changes the subject (e.g., won't say, "I don't know.").
- 35. Uses language to get his/her needs met yet is unresponsive to the communicative needs of others.
- 36. Overly obsessive about looking into others' faces/eyes.
- 37. Does not use grammatically complete sentences when speaking (e.g., "Ball under the table." instead of "The ball is under the table.").
- 38. Avoids looking at speaker when spoken to, as if the person speaking is not there.
- 39. Interrupts others' conversations often with no consideration of his/her behaviour.
- 40. Has difficulty identifying and/or maintaining personal space/boundaries?

Raw score.

Nonliteral

- 41. Demonstrates difficulty expressing logical and reasonable responses to questions (e.g., problem solving, making decisions, and making inferences).
- 42. Has difficulty understanding nonliteral forms of speech such as idioms, proverbs, similes, metaphors, jokes, puns, and riddles.
- 43. Has difficulty comprehending passive sentence form (e.g., "The boy was being followed by his sister. Was the sister in front?").

التأثير الإيجابي لنموذج ABLLS-R للتواصل على الأطفال المصابين بالتوحد في

- 44. Has difficulty understanding analogies (e.g., hot is too cold as up is to down).
- 45. Has difficulty understanding and using synonyms, antonyms, and homonyms (e.g., pretty/beautiful, up/down, and sea/see).
- 46. Has difficulty understanding cause-and effect relationships (e.g., If you oversleep, you will be late for school.).
- 47. Has difficulty recognizing and using multiple meaning words (e.g., “The fly is on the wall.” and “I will fly home.”).
- 48. Demonstrates difficulty understanding the meaning of words indicating a question (e.g., who, what, when, where, why, and how).
- 49. Demonstrates difficulty comprehending picture and/or verbal absurdities (e.g., cannot explain what is wrong when given a picture or a verbal statement such as “The miniature dog is as big as a horse.”).
- 50. Interprets comments literally.

Raw score.

أكاديمية السبتين للتوحد واضطرابات النمو

الباحثة سحر حمودي كاظم شبيب

أ.م.د. نداء حسين فهمي الخرجي

المستخلص

تستقصي هذه الدراسة جوانب الاتصال لدى الأطفال المصابين بالتوحد في أكاديمية السبتين للتوحد واضطرابات النمو. الهدف الأساسي من هذا البحث هو فحص ما إذا كان برنامج الأكاديمية وطرق التدريب لها تأثير إيجابي على تطوير اللغة والتواصل للأطفال المسجلين في البرنامج.

لتحقيق هذا الهدف، تمت صياغة الفرضية الأتية: البرنامج المستخدم وطرق التدريب تعزز بشكل كبير تطور اللغة لدى اطفال طيف التوحد. تم استخدام النهج الكمي في التحليل باستخدام مقياس اضطراب التواصل الاجتماعي (SCDS) للعالم House. يشمل تصميم البحث جمع البيانات العديدة من خلال الاستبانة، والتي تخضع لاحقًا للتحليل الإحصائي. تشير النتائج إلى أن التدخل المبكر كان له الأثر الأكبر على الأطفال الذين شاركوا في الأنشطة اليومية المصممة لاحتياجاتهم الخاصة والذين بدأوا البرنامج في سن مبكرة والعلاج المتسق في تعزيز تنمية اللغة لديهم.

تؤكد هذه الدراسة على فاعلية برنامج أكاديمية السبتين وطرق التدريب في تعزيز تنمية اللغة لدى الأطفال المصابين بالتوحد. كما تؤكد النتائج على أهمية التدخل المبكر والجهود العلاجية المستمرة في زيادة النتائج الإيجابية.

الكلمات المفتاحية: برنامج تقييم المهارات اللغوية الأساسية والتعليمية، اضطرابات طيف التوحد، مقياس اضطرابات التواصل الاجتماعي، أكاديمية السبتين للتوحد واضطرابات النمو، علم اللغة الاجتماعي.