ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

THE ROLE OF STRUCTURED-COMMUNICATION-TECHNIQUE IN DEVELOPING PRAGMATIC LANGUAGE CAPABILITY AMONG ASD-CHILDREN

Muhammad Javaid Toor
PhD Scholar, Department of Education, Superior University Lahore,Punjab, Pakistan
toorjavaid07@gmail.com.pk
Somia Shabbir
Lecturer Psychology, Department of Psychology, Abbottabad University of Science & Technology, AUST
somia_sardar@yahoo.com
Ayesha Rauf
National University of Sciences and Technology
raufayesha14@gmail.com
Ayesha Nisar
Psychology Department, Shifa tameer e milat university Islamabad, Pakistan
saeedagghstaxila@gmail.com
Shafaq Safdar
University Of Karachi, Founder Of Educational And Psychological Rehabilitation Center, Pakistan
educationalpyschological@gmail.com
Zaib-Un-Nisa
Principal Garrison Institute for Special Education Kharian, Pakistan
aghoshkharian@gmail.com.pk

Abstract

The current study was focused to assess the effect of structured communication intervention (SCI) in improving the pragmatic language abilities of autistic-kids. Pre-test and post-test research design of the true experimental research was employed with purposive sampling technique. The study was carried out at the Garrison Institute of Special Education (GISE). 40 participants were equally divided into experimental and a control groups. The participants grouped in experimental-unit were treated with an intervention of 12 weeks-long structured-communication-strategy while regular classroom activities less-intervention were carried on for the participants grouped in control-unit. Later, a post-test was conducted in order to assess the children' enhanced expertise. The pre-test score of both of the groups showed that they performed equally on the basis of their prevalent baseline competence, the results after the intervention reflected a significant enhancement in pragmatic language performance of the participants grouped in experimental-unit than that of the control group. It is strongly recommended that the employment of structured communication techniques be used by the therapists and teachers according to each child's need and academic milieu. The curriculum-designers are suggested incorporating SCI-based modules for ASD-kids.

***Keywords**: Autism Spectrum Disorder (ASD), Pragmatic Language Skills, Structured Communication Intervention (SCI), Autistic-Children.*

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

1. Introduction

There are many kinds of neurodevelopmental disorders that generally influence the kids during the first three years of life, but there exits a neurodevelopmental disorder called ASD which is considered more complex in nature as it is characterized with short-span monotonous forms of behavior, interests-and-activities interlinked with complications in social interactions (American Psychiatric Association, 2021). Autism Spectrum Disorder has also been categorized in the Pervasive Developmental Disorders (PDDs), includes a variety of presentations that largely vary in terms of severity, symptomology, and functional ability (Carbone & Dell'Aquila, 2023). That's why ASD is a regarded as diverse disorder and effected-people exhibit cognitive or artistic incapability and experience severe language and learning challenges in routine life. Because of its major impact on everyday functionality in communication, it creates enormous challenges for relevant families, educational systems, and healthcare providers. Obviously, it starts growing with psychiatric problems that grow into major issues hence it is supposed as more complicated disorder (Fernandez et al., 2023)

The list of linguistic issues in ASD extends well beyond diction and grammar, manifesting more acutely in pragmatic domains whereas understanding social rules and interpreting underlying meanings are essential for successful interaction (Zhou, 2011). According to Cantiani et al., (2016), the common problems in pragmatic language initially starts with language use in social situations, as a result, children with ASD suffer a variegated sort of hurdles including their incapability to read nonliteral language and in managing respective conversational turn-taking. They also face multiple problems in modifying the speech according to context and they also feel usability in deciphering the implicit meanings conveyed through tone, gesture, or facial expression. All these are the illustrations of pragmatic language problems (DiStefano et al., 2019).

Autistic-Children are frequently observed harassing with pragmatic communication skills that hinder their ability to participate effectively in social and academic contexts (Cheng et al., 2022). According to Zeidan et al (2022), the global spread of ASD-stricken youngsters is on the verge of increase by the ratio of one percent and if it is going on spreading with the same percentage it is estimated to affect one in every 36 children in the United States (ASD, 2023). Moreover, more than ten million Chinese population is expected to be affected by ASD because about 200,000 new cases are registered each year by the Chinese ministry of special education (Menglin, 2019). A number of ASD-affected children continue to struggle with pragmatic communication throughout their developmental trajectory, frequently resulting in social isolation and restricted engagement in peer and community activities notwithstanding advances in early detection-cum-intervention (Kotila et al., 2020; Pritzker, 2020).

It is very interesting and noteworthy that early childhood is considered as the best to grow the linguistic competence among children, any unevenness during this prime time may lead to the growth of ASD which is regarded due to theory of mind (ToM). As a result, children may suffer from the problems of general conversation including comprehending gestures, body language and metaphorical language as well. This may further lead to the problem of hearing impairment. But there are evidences of research studies that all these problems of comprehending metaphorical language during conversational frameworks in maintaining it more acceptable to

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

others, may be improved as the children grow in age with the passage of time (Mathée-Scott & Ellis, 2022).

For the purpose of refining the pragmatic language skills of the children affected with ASD, structured communication therapy is supposed as the best remedy that's why these interventions are becoming very common nowadays. The strategies are included practices for educating conversational-management, interpretations of nonverbal prompts, and sometime adaptive language is employed according to societal settings. Consequently, there is worldwide appreciations for these therapies and public has acknowledged the potential benefits of these non-medicine-treatments. research on their efficacy remains inconsistent, and more empirical data is needed to determine best practices. Researches are conducted and still in progress so far to discover the effectiveness of therapeutic treatment of the ASD-stricken children. However, present study lime lights the standing of primary, intensive, and methodical therapy for overpowering pragmatic language impairments in ASD-children (Yen et al., 2023).

Systematized communication interventions are kind of drill and technique with the help of which children on the autism spectrum could improve societal communication aptitudes. For that matter, evidence-based practices including social storytelling, role-playing, peer-mediated tactics, and plain conversational drills are incorporated in order to achieve required results for the children affected with autism. But it has been observed with concern that such useful interventional strategies are difficult to adopt in the regions where resources are meagre and limited, all the developing countries are including in these regions. It is, therefore, advised to fill the lack of contextual and cultural adaptation for long-term effect (Nedungadi et al., 2024).

Foregoing above, the study in hand is directed to evaluate how structured communication- therapies (intervention) can play well to optimize the pragmatic-language-skills of ASD-children. The repercussions of the study are useful for educationalists, Curriculum designers, policy-makers and therapists to help them developing evidence-based-strategies that could be beneficial in enhancing communicative skills of ASD-kids and in their over-all wellbeing.

2. Rationale of the Study

Autistic-Children generally suffer with spoken or the oral expression, comprehension, pragmatics, and social reciprocity, limiting their academic achievement, social integration, and future independence. Language and communication abilities are critical for a child's cognitive, social, and emotional growth (Baixauli-Fortea et al., 2019; Cheng et al., 2022). Notwithstanding the reality that international research on ASD has increased, the majority of it has concentrated on behavioural and cognitive aspects, with little emphasis paid to language and communication profiles, particularly in situations with diverse cultural and linguistic norms (Zeidan et al., 2022). There exists still a great lacking regarding the interconnection between pragmatic, receptive, and expressive language deficiencies besides the severity of ASD symptoms (Kotila et al., 2020), and taking care of this is crucial to creating specialized, successful solutions. Since prompt intervention can significantly enhance developmental outcomes, early and accurate diagnosis of these abnormalities is essential (DiStefano et al., 2019), however, differences in diagnostic procedures lead to inequalities in treatment (American Psychiatric Association, 2021).

Apropos, the significance of evidence-based tactics and interventional strategies is inevitable in addressing the exceptional linguistic and communicative requirements of the ASD-

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

children. The research in hand is aimed to edify the therapists, educationalists, clinicians, and policymakers to implement it in true letter and spirit in order to get the optimal benefits of it (CDC, 2023).

3. Statement of the Problem

Autistic-kids are often found struggling with pragmatic linguistic-competency. The generic autistic challenges encompass issues like staying-on-topic during conversational phenomenon, responding aptly in societal circumstances and comprehending the body language. All these complications badly damage the individuality and personal traits of the autistic kids. As a result of these hitches their capability to develop associations among others, taking part in active learning, and accomplishing day-to-day societal relations are adversely affected. Although there exist variegated set of interventions to address the communicative-challenges with autistic-kids, but the inadequacy of explorations-based research and well-organized curricula designed to optimize pragmatic language-skills is a great hinderance in this regard. Various reconnoiters truly aimed at general language advancement have been conducted rather than the pragmatics, particularly in cultural-diversity or in the meagre-resource-environments. In this scenario it is a dire need to explore whether structured-communication-interventions (SCI) could efficiently develop pragmatic-language-abilities among autistic-children. The present research paper was intended to address to fill the gap by assessing the effect of a structured-communication-strategy premeditated for this resolution.

4. Objective of the Study

To analyze the effect of structured communication intervention in enhancing pragmatic language skills among children with Autism Syndrome Disorder (ASD).

5. Research Hypotheses

1. **H0:** There is no significant difference found in the pragmatic-language-skills of autistic-kids in pre-test.
2. **H_1:** Structured-communication-interventions (SCI) have no significant effect on the pragmatic-language-skills of the experimental group in the post-test.
3. **H_2:** There is no significant difference in the pragmatic language skills of the control group in the post-test.
4. **H_3:** There is a significant difference between the post-test scores of the experimental group and the control group in pragmatic language skills after the implementation of structured communication interventions.

6. Significance of the Study

Pragmatic language impairment is one of the most persistent and socially restrictive aspects of autism spectrum disorder (ASD), limiting children's ability to communicate effectively in social and academic settings. Although it is widely known that pragmatic language abilities are crucial, contemporary therapies usually prioritize broad language development over planned, deliberate tactics for pragmatic competence. This study is notable because it empirically

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

examines the effectiveness of a structured communication intervention designed specifically to improve pragmatic language abilities in children with ASD. Its findings will offer clinicians, speech-language pathologists, educators, and caregivers practical, empirically backed recommendations for developing targeted communication assistance plans. With implications for guiding inclusive education techniques and therapeutic paradigms. The research supports the scarcity of investigation in this subject by examining policy initiatives targeted at enlightening societal integration besides adaptive functioning among autistic-children.

7. Review of the Related Literature

There is a growing number of children affected by autism spectrum disorder (ASD) at worldwide level, making it one of the most serious developmental and public health challenges. According to contemporary estimates, one in every 160 children globally has been diagnosed with ASD; these percentages are continuously increasing as a result of better early detection programs, increased awareness, and improved diagnostic processes (Al Husaeni et al., 2024; Homdijah et al., 2022). Despite these advances, the quality and accessibility of specialist educational and therapeutic programs for autistic children remains critically insufficient, notably in the area of pragmatic language development (Malik-Soni et al., 2022). Autistic-Children frequently struggle with social contact, engage in repetitive and limited behaviors, and experience delays in language and communication development. Among these, deficits in pragmatic language abilities, or the capacity to use language in social circumstances, create significant challenges to community participation, relationship development, and academic performance (Canu et al., 2021).

The neurological disease known as autism spectrum disorder is categorized by the hackneyed behaviours, rigidity, and a robust request for constancy (Lyons and Fitzgerald, 2013). Repetitive behaviours, challenges with social interaction communication and inadequate interests are the common symptoms associated with ASD aka autism spectrum disorder._Besides this, autistic-people are also characterized with unusual responses to corporeal involvements (McPartland et al., 2016). In autism spectrum disorder, the nomenclature of, **Spectrum**, indicates to a widespread variety of the wide range of efficient aptitudes highly marked with harshness and requirements starting from extraordinary capacity to severe incompetence (National Institute of Mental Health, 2018).Epidemiological researches are quite evident that autistic-children are often found fighting emotionally and behaviourally which results in demonstration of despair, anxiety, aggression and hyperactivity as well (Tsai et al., 2020).

Autism is an umbrella term for many types of neurological diseases including ASD, Asperger's Syndrome, and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) (American Psychiatric Association, 2013). This amendment recognized the substantial variation in phenotypic and clinical presentation among autistic-people (Abrahams and Geschwind, 2008). The condition impacts several areas of adaptive functioning, is widespread, lifelong, and has an early beginning. Some people with ASD become independent with little help, while many need support throughout their lives (McPartland et al., 2016).

When it was identified at first, ASD was mainly thought of as a mental illness with social awkwardness and intellectual incapacity as its main characteristics. The recent decades are witnessing a sharp and dramatically rise in frequency of autistic-people around the globe that requires a clear, concise and comprehensive definition of ASD (Mody and Belliveau, 2013)

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

Although the precise cause is yet unknown, a complex interplay between genetic and environmental factors is most likely to be responsible. According to estimations from the World Health Organization (WHO), each one among one-hundred-sixtieth children globally has been found affected with ASD (WHO, 2019).

Tunisian and Egyptian studies conducted in this regard ASD illustrate that the prevalence of developmental abnormalities in children is 11.5% and 33.6%, respectively, despite the fact that data for Africa and other developing countries is infrequent (Bakare, 2014). Paul (2008) states that one of the main diagnostic traits of ASD is the inability to communicate and use language. Pre-linguistic, written, gestural, and verbal behaviors are all included, and the way these skills develop in individuals with ASD varies greatly (Longard et al., 2017). Despite the fact that communication is essential to human existence because it facilitates social interaction, emotional expression, and behavioral control, communication is inevitable in seeking attention as well. Harping the same string on the significance of communication, Douglas & Gerde (2019) inferred that social success and academic prowess are closely related to it (Jurgens, 2020).

In order to promote better social interaction and academic prowess in social settings, the capability of effective communication is considered as an integral part of soft skill among children (Kadir et al., 2021). For that matter children not only need to know the basic enhance repertoire, but also they must have mastery in communication skill so as they could ensure to understand the intent of the audience, in contextual situation. Moreover, they need to grasp clarity of thoughts, empathy, openness, and feedback which is required paraphernalia of communicative efficiency (Fuller et al., 2023; Fullerton, 2021). Robust pragmatic correspondents are generally equipped with encouraging and productive-cum-pleasant relations in both proficient and personal circumstances (Balakrishnan et al., 2023).

Inappropriate pronoun usage, stereotyped or repetitive speech, delayed or absent spoken language, conversational difficulties, and imitation issues are some of the communication differences associated with ASD (Lofland, 2021). Remarkably, 25% of kids with ASD still speak very little (Longard et al., 2017). Since speech development by the age of five is a major predictor of favorable outcomes, early diagnosis is essential (Mody & Belliveau, 2013). According to Paul (2008), some people learn a language but find it difficult to use it in social situations. Despite being prevalent, linguistic problems are not necessary for a diagnosis of ASD (Wittke et al., 2017). People with ASD have a wide range of language skills, from advanced vocabulary in certain themes to nonverbal status. Many people have trouble recognizing subtleties like tone of voice, body language, and metaphorical discourse (Mody & Belliveau, 2013).

8. Research Methodology

It was a true-experimental research designed with pre-test and post-test. Garrison Institute for Special Education was a selected venue for the organized conduct of the research study in Kharian. Over all 40 participants were selected at random and later they were equally grouped into control and experimental units.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

9. Instrumentation and Pilot Testing

In order to examine pragmatic language skills among autistic-children, the researcher used a self-created pre-test and post-test evaluation checklist. The content validity of the pre-test and post-test checklists was verified after they were created by means of expert discussions with members of the study advisory committee and speech-language pathologists, special educationists, and psychologists from the Institute for Special Education, Lahore. Following the advice of these experts and the Institute's research council, certain changes were made to the checklist domains, rating scale, and language. After that, these updated instruments were completed for the main stage of data gathering. During the pilot testing phase, the test-retest method was used to assess the content validity of these tools at two-week intervals. Five ASD youngsters from the same institution who were not included in the main study group participated in a pilot test. The pre-test and post-test evaluation checklists were given both before and after a planned, two-week communication intervention during this pilot phase. Using the Statistical Package for Social Sciences (SPSS) software, Cronbach's Alpha was used to examine the post-test evaluation tool's internal consistency reliability.

The reliability coefficient, which was calculated to be 0.89, confirmed the consistency of the tool for assessing pragmatic language skills and showed a high degree of connection among the items. The evaluation materials particularly focused on the development of habits, conversational routines, social reciprocity behaviors, and practical communication skills that improve children's capacity to participate successfully in structured and realistic social interactions when examining the behavioral domain of communication and social participation. The completed tools showed both contextual appropriateness and dependability for use with children with ASD in the Lahore local school system.

10. Participants and Procedure

The study was carried out in Garrison Institute for Special Education Kharian. The researcher personally visited the head of department's office to determine the students' prior knowledge and traits, the researcher asked for permission before administering a pre-test. After that, 20 students were selected for the experimental group and another 20 for the control group using a simple random selection process. The experiment was conducted for twelve weeks. During the first week of treatment, the researcher helped the students gain time management skills by giving them tasks. The instructor led intervention sessions based on specific communicative scenarios and activities designed for children with ASD after making sure the experimental group's children were sufficiently acquainted with the structured communication interventions meant to improve pragmatic language skills. Turn-taking, proper subject introduction, conversation management, and the use of non-verbal cues in social situations were the key topics of these weeks-long interventions.

In contrast to the control group, children in the experimental group demonstrated discernible gains in starting and maintaining conversations, deciphering nonverbal cues, and practicing taking turns by the conclusion of the intervention period. Furthermore, the experimental group exhibited greater levels of peer involvement and social readiness. The following tables show the comparative development of children who received structured communication interventions and those who followed traditional instructional methods. A post-

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

test was given after twelve weeks to evaluate the pragmatic language performance of both groups.

11. Data Collection and Analysis

Data was gathered from the respondent in order to administer pre-test and post-test. When test received it was assigned with number to the achievement grades or the respective scores. Coding was carried on and data was inserted into the computer for statistical treatment. Inferential statistics was applied to analyze the data applying the software of SPSS.

12. Results and findings

Disparity among the participants grouped in experimental-unit and the control-unit conducted through pre-test average achievement-grades.

Table-I:

To know about variance of average achievement grades of the participants grouped in experimental-unit and control-unit during pre-test, for n = 40 application of the independent sample t-test was carried out through SPSS.

Groups	N	M	SD	t	df	Sig.
Control	20	9.85	1.854	o.427	38	0.472
Experimental	20	10.05	1.627			

Table-I elaborated when degree of freedom (df) equals 38 then the calculated t-value reached 0.427. The critical t-value equalled ±2.024 when a two-tailed significance-levelled to 0.05,. The appropriate p-value for the computed t-value was around 0.672. Because the computed p-value exceeded 0.05 and the t-value was less than the crucial value, the null hypothesis could not be rejected. This means that there was no statistically significant difference between the two groups' pre-test results, implying that both groups started the intervention with similar levels of pragmatic language abilities.

Average Achievement Grades Variance of the Participants grouped in Experimental-Unit and Control-Unit During the Conduct of Post-test.

TableII:

To know about the variance in the mean attainment score of the experimental group and control group in post-test, independent sample t-test was employed.

Groups	N	M	SD	t	df	Sig.
Control	20	11.50	2.376	-7.832	38	.000
Experimental	20	23.25	1.743			

Table 2 showed that the computed t-value is -7.832, which is higher in absolute terms than the crucial table value of 1.994 at 38 degrees of freedom (df). Furthermore, the computed p-value is.000, which is lower than the significant level α =.05. This means that there was a

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

statistically significant difference in the average post-test attainment scores between the control and experimental groups. As a result, the null hypothesis, which states that there will be no significant difference between the two groups' post-test pragmatic language ability ratings, is rejected. It is concluded that organized communication therapies had a good effect in increasing the pragmatic language skills of children with ASD, as evidenced by the significant difference in post-test results. Furthermore, a pair sample t-test was employed to determine the extent to which the mean scores of the experimental and control groups differed in the post-test.

Experimental Group' Difference in the Average Attainment Score in Pre and Post-test

Table III(a):

To know about difference in the average attainment score of the experimental group's pre and post – test, Pair Sample t – test was employed

Test	N	r	Sig.
Pair-I Pre-test & Post-test	*20*	*.566*	*.000*

Table-III(a) illustrated calculated value of r =.566 and calculated value of sig =.000, representing that average achievement grades in pre-test and post-test were significant and moderately correlated. Conclusion: The pre-test and post-test scores in respect of experimental group's were reasonably interrelated. Table-III(a) shows the pair difference.

Table III-b(a):

Paired samples test to find out pair difference in the pre- test and post t-test of Control group

Paired Differences	M	SD	SE.M	t	df	Sig.(2- tailed)
Pair-1 Pre-test Post-test (Control Group)	1.65	2.030	0.454	-3.63	19	0.002

Table-III-b(a) illustrated a statistically significant-variance during the conduct of the pre-test and post-test grades associated to the participants grouped in control-unit. The null hypothesis was rejected as the value 0.002< 0.05 value. It may further be deduced that when p-value is less than 0.05 then it lead to the rejection of null hypothesis, so it was inferred that the performance of participants grouped in control-unit altered significantly from pre-test to post-test. Therefore, the control group displayed a statistically significant development from pre-test to post-test (p = 0.002).

Table III-b(b):

Paired samples test to find out pair difference in the pre- test and post t-test of the experimental group

Paired Variences	M	SD	SE.M	t	df	Sig.(2- tailed)
Pair-I Pre & Post-test (Experimental-Unit)	13.20	1.480	0.331	-39.88	19	0.000

It is quite evident through table 3b-b which reflected pre and post-test grades of the participants grouped in experimental-unit differed significantly on average. Experimental-unit's

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

mean during post-test were 13.20 figure developed upward than the respective graded during pre-test (t = - 39.88 < 2.032 at 19 df, p =.000 < α =.05). And it witnessed to conclude that Structured- Communication-Interventions (SCI) had a moderate effect on students' pragmatic language skills in experimental groups among autistic-children.

Table-IV (a):
Variance in the average performance grades of the control-unit during Pre & Post-test was drawn through pair sample t-test shown as under.

Test	N	r	Sig.
Pair1 Pre-test & Post-test	*20*	*.276*	*.243*

Stats displayed through table-IV(a) illustrated the computed r =.276 and computed sig =.243, indicating that average success grades during the conduct of statistical tests of pre-test and post-test were not well-related. Hence concluded that the grades of participants grouped in control-unit during pre and post-test were not substantially associated.

Table 4b:
Paired samples test to find out pair varience during pre- test and post t-test of the Control-Unit

Pair Variances	M	SD	SE.M	t	df	Sig(2-tailed)	Kolmogorov
Pair-I Pre-test-cum-post-test	1.42	2.44	.546	-2.60	19	0.017	.200(assumed normal)

This table displays the grades of a paired samples t-test comparing pre-test and post-test scores for a group of 20 individuals (df = 19), as well as a normality test result to ensure that the data distribution was appropriate for parametric testing. The Kolmogorov-Smirnov test p-value is 0.200, which is greater than 0.05. This indicates that the data is normally distributed, which is a necessary assumption for the paired samples t-test. There is a statistically significant difference between the group's pre-test and post-test scores (p = 0.017), and the data was determined to be normally distributed (p = 0.200), supporting the use of the paired samples t-test. Consequently, the data reported in table 4b revealed that the control group's pre-test and post-test scores differed significantly on average.

Experimental and control group's assessment in development during Pre-test & Post-test
Table-V:

Groups	x̄ Pre-test (df=38)	x̄ Post-test(df=38)	Mean Improvement
Control group (n = 20)	9.85 (t=2.024)	11.50 (t=2.024)	1.65
Experimental group (n = 20)	10.05 (t=2.024)	23.25 (t=2.024)	13.20
Mean Difference	0.20	11.75	11.55

The speak-outs of the stats in table-V depicted the value 9.85 represented quantitative performance associated with participants grouped in the control-unit during pre-test while the

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

figurative value of 10.05 reflected average of the performance by the participants grouped in experimental unit during pre-test, and evidently there was insignificant disparity. Mean score associated with the performance of participants grouped in control-unit during post-test was 11.50 in figure whereas the mean score performance affiliated with the participants grouped in experimental unit was 23.25 in figure during post-test. It was a self-elaboration of the results that the performance of the participants grouped in experimental unit during post-test was than that of the participants grouped in control-unit. Additionally, the performance of participants in control-unit developed only by 1.65 at 0.20 and on the other hand, a hell of variance with enhanced development in performance of the participants grouped in experimental-unit was 13.20 at 11.75 with mean difference. Stats is table-V witnessed that participants in grouped in experimental-unit excelled in acquiring more than that of the participants grouped in control-unit. Hence the study concluded that children exposed to structured communication interventions exhibited significantly better pragmatic language skills compared to those who did not receive the intervention.

11. Discussion

This research reconnoiter was bound to find out the role of the structured-communication- interventions in promoting pragmatic-language-skills among autistic-children. Data was precisely analyzed to reach the conclusions. Conclusions reflected that autistic-children grouped in experimental-slot under the span of twelve-week-long treatment with structured-communication- intervention (SCI) exhibited a vivid enhancement. On comparison with control-grouped autistic children, pragmatic-language-skills of the experimental-grouped autistic-children was found drastically improved. Performance during pre-assessment of the both of the groups highlighted that the children initially had comparable levels of pragmatic-language-abilities before the intervention commenced.

To improve the social-communication-abilities of autistic-children, the researcher implemented a structured program involving visual aids, role-playing, and scripted conversations over a 12-week period. A post-test was orchestrated after the successful conduct of twelve-week-long-intervention. Participants grouped in controlled-unit were observed a minor enhancement in their pragmatic-language-skills, while the children placed in experimental-unit for the observation displayed noteworthy and substantial variegated development in pragmatic-language-skills. Such a discoveries obtained as a result of analyses are evident of the efficacious-role of structured- communication-interventions (SCI) that surely pave the way to the growth of pragmatic-language- skills in the favour of autistic-children.

Results of pre-test and post-test of the control-grouped-participants are marked with a minimal-improvements while results based on pre-test-cum-post-test orchestrated for the experimentally grouped-participants are detected with a significant association. All the analyses are formulated at the basis of twelve-week-long structured-communication-intervention that was successfully provided to the participants grouped in experimental-unit. It is concluded that structured-communication-interventions (SCI) played a noteworthy substantial role in constructing and developing pragmatic-language-abilities among autistic-children.

Existing literature evidences the importance of the structured-communication-interventions (SCI) with similar conclusions as received at the end of present study. Apropos studies are referred as under; the complications associated with theory of mind (ToM) were

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

discovered connected to pragmatic-language-problems among autistic-kids, and the solution to these complications is possible through specific-treatments focusing on cognitive-basis in improving pragmatic-competence (Baixauli-Fortea et al., 2019). Forgoing the same, the effectiveness of structured-pragmatic-interventions are experimentally proven in minimizing communication-challenges within the population affected with ASD (Kotila et al.,2020). Moreover, it is concluded that language and social-pragmatic functioning substantially improved following structured-communication-programs (Cheng et al., (2022). Lastly, it is experimentally proven that orchestrated-communication-interventions are essential in developing social-interactions and unswerving pragmatic-language-skills amongst autistic-people (Yen et al.,2023).

13. Conclusions

The current study came to the conclusion that the autistic-children improved their pragmatic-language-abilities due to the successful conduct of structured-communication-therapies.

As a result of twelve-week-spanned SCI (structured-communication-intervention) organized for the participants grouped in the experimental-unit, they outshined significantly well during the assessment held as post-test. When the performance of the participants grouped in control-unit was analyzed, it was found clear-crystal that their post-test assessment was marked insignificant comparatively. Pre-test assessments of the both of the units, ie; control-group and experimental groups, were conducted at the same footings. Participants grouped in the experimental-unit displayed prominent perfections, on the other hand participants grouped in control-unit reflected negligible performance in the different domains of pragmatic-language. The scores of pre-test-cum-post-tests affiliated with the participants grouped in experimental-unit were found with a moderate, significant relationship contrary to the control-group participants. As a matter of fact, it is evidently proven that the SCI (structured-communication-interventions) pave the path to optimal social-communication amongst autistic-children.

In order to promote the comprehensive development of pragmatic-language-abilities among autistic-children, it is suggested that the strategies known as structured-communication-techniques be meticulously joined into academic-cum-social remedies. Additionally, drills and exercise be organized in schools and institutions for special education at the on the well-organized employment of structured-communication-strategies for the general awareness of ASD and its preventive measures.

The conclusions of the study recommend that the SCI (structured-communication-strategies) be meticulously integrated with curriculum of special education. Moreover, the special courses with SCI-contents be organized for the professional-training of therapists, instructors and administrative with ASD. Furthermore, the policy-makers and curriculum-designers ought to guarantee that academic-content and therapeutic treatments replicate pragmatic-communication appropriate objectives for autistic-children. Lastly, the future-researchers are urged to fill the gap with strategic effectiveness of the structured-communication-interventions as the research in hand directed towards the role played by the instant interventions of the structured-communication. The application of cutting-edged-technology for developing pragmatic-language-skills for autistic-children is highly appreciated for the researchers in future.

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

References

Alshurman, W. A., & Alsreaa, A. M. (2015). Communication barriers associated with autism: A review. *International Education Studies, 8*(12), 161–166. https://doi.org/10.5539/ies.v8n12p161

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing. https://doi.org/10.1176/appi.books.9780890425596

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.

American Psychiatric Association. (2021). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.; DSM-5-TR). American Psychiatric Publishing.

ASD. (2023). *Data & statistics on autism spectrum disorder*. Centers for Disease Control and Prevention (CDC). https://www.cdc.gov/ncbddd/autism/data.html

ASHA. (2015). *Social communication disorders in school-age children: ASHA practice portal*. American Speech-Language-Hearing Association. Retrieved from https://www.asha.org/Practice-Portal/Clinical-Topics/Social-Communication-Disorders-in-School-Age-Children/

Baixauli-Fortea, I., Miranda-Casas, A., & Berenguer-Forner, C. (2019). Theory of mind and pragmatic competence in children with autism spectrum disorder. *Journal of Psycholinguistic Research, 48*(3), 547–560. https://doi.org/10.1007/s10936-019-09628-2

Bakare, M. O. (2014). Prevalence of autism spectrum disorders among African children: A systematic review. *Journal of Public Health in Africa, 5*(1), 22–28. https://doi.org/10.4081/jphia.2014.3491

Balakrishnan, J., Sundararajan, V., & Gupta, S. (2023). Impact of communication effectiveness on workplace productivity: A systematic review. *International Journal of Productivity and Performance Management, 72*(5), 1129–1147. https://doi.org/10.1108/IJPPM-01-2022-0021

Bartak, L., Rutter, M., & Cox, A. (1977). A comparative study of infantile autism and specific developmental receptive language disorder: I. The children. *British Journal of Psychiatry, 131*(4), 361–367. https://doi.org/10.1192/bjp.131.4.361

Cantiani, C., Chorna, O., & Riva, V. (2016). Early predictors of language outcomes in infants with autism spectrum disorder. *Developmental Neuropsychology, 41*(5–8), 245–263. https://doi.org/10.1080/87565641.2016.1242063

Canu, W. H., Tabor, A. L., Michael, K. D., Bazzini, D. G., & Elmore, A. L. (2021). Social challenges and pragmatic language deficits in children and adolescents with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 51*(3), 847–861. https://doi.org/10.1007/s10803-020-04579-6

Carbone, A., & Dell'Aquila, A. (2023). The diagnosis of "pervasive developmental disorder not otherwise specified": A systematic literature review. *Children, 10*(5), 844. https://doi.org/10.3390/children10050844

Casanova, M. F., Buxhoeveden, D. P., & Brown, C. (2002). Clinical and microscopic neuropathology of autism spectrum disorder. *The Journal of Pathology, 197*(4), 403–410. https://doi.org/10.1002/path.1147

Cheng, Y., Lin, C. Y., & Chen, H. (2022). Language and social-pragmatic functioning in children with ASD: A systematic review. *Journal of Autism and Developmental Disorders, 52*(6), 2524–2540. https://doi.org/10.1007/s10803-021-05091-3

Denworth, L. (2018). *Autism spectrum disorder*. Scientific American. Retrieved from https://www.scientificamerican.com/article/autism-spectrum-disorder/

DiStefano, C., Huberty, T. J., & Walker, L. (2019). Language development in children with autism spectrum disorder: Predictors and outcomes. *Journal of Autism and Developmental Disorders, 49*(4), 1499–1512. https://doi.org/10.1007/s10803-018-3804-5

Douglas, S. N., & Gerde, H. K. (2019). Supporting young children with autism spectrum disorder and their families: Partnering with early intervention providers. *Young Exceptional Children, 22*(3), 149–159. https://doi.org/10.1177/1096250618772214

Fernandez, A., Lastname, B., Lastname, C., & Lastname, D. (2023). Title of the article in sentence case. *Title of Journal in Title Case, volume*(issue), page range. https://doi.org/xxxxx

Fombonne, E. (1999). The epidemiology of autism: A review. *Psychological Medicine, 29*(4), 769–786. https://doi.org/10.1017/S0033291799008508

Fuller, E., Skidmore, R., & Durand, C. (2023). The role of empathy in interpersonal communication. *Communication Research Reports, 40*(1), 34–45. https://doi.org/10.1080/08824096.2022.2115063

Fullerton, K. J. (2021). Exploring message clarity and feedback in effective communication: A qualitative study. *International Journal of Communication, 15*, 3452–3470. https://ijoc.org/index.php/ijoc/article/view/16505

Happé, F., & Vital, P. (2009). What aspects of autism predispose to talent? *Philosophical Transactions of the Royal Society B: Biological Sciences, 364*(1522), 1369–1375. https://doi.org/10.1098/rstb.2008.0332

Homdijah, H., Rambe, S. A., & Harahap, D. A. (2022). The prevalence and awareness of autism spectrum disorder among children: A literature review. *Open Access Macedonian Journal of Medical Sciences, 10*(E), 1238–1243. https://doi.org/10.3889/oamjms.2022.9473

Jurgens, A. (2020). Communication challenges of students with autism spectrum disorder: A qualitative study. *Journal of Autism and Developmental Disorders, 50*(10), 3621–3635. https://doi.org/10.1007/s10803-020-04455-9

Kadir, F. M., Yunus, F., & Mohd, F. (2021). The importance of communication competence in developing healthy relationships: A review. *Pertanika Journal of Social Sciences & Humanities, 29*(4), 2509–2524. https://doi.org/10.47836/pjssh.29.4.24

Kempe, C. H., & Bauman, M. L. (1998). Neuropathology of infantile autism. *Journal of Neuropathology & Experimental Neurology, 57*(7), 645–652. https://doi.org/10.1097/00005072-199807000-00001

Klein, E., Armstrong, B. L., & Greer, M. K. (1995). The prevalence of hearing loss in children with autism spectrum disorders. *International Journal of Pediatric Otorhinolaryngology, 33*(3), 227–233. https://doi.org/10.1016/0165-5876(95)01291-2

Kotila, A., Lehtonen, A., & Nieminen, P. (2020). Pragmatic language impairments in children with autism spectrum disorders: A systematic review. *Journal of Autism and Developmental Disorders, 50*(6), 1973–1989. https://doi.org/10.1007/s10803-019-03929-2

le Couteur, A., Bailey, A., & Rutter, M. (1996). Family history as a risk factor for autism spectrum disorders. *Journal of Child Psychology and Psychiatry, 37*(7), 807–818. https://doi.org/10.1111/j.1469-7610.1996.tb01486.x

Lofland, K. B. (2021). Language and communication in autism spectrum disorders. In J. Matson (Ed.), *Handbook of Autism and Pervasive Developmental Disorders* (pp. 169–185). Springer. https://doi.org/10.1007/978-3-030-44155-7_11

Longard, J., Temple, V., & Hudson, M. (2017). Communication interventions for autism spectrum disorders: A review. *Canadian Journal of Speech-Language Pathology and Audiology, 41*(2), 102–120.

Lyons, V., & Fitzgerald, M. (2013). Critical review of the literature: Asperger syndrome. *Irish Journal of Psychological Medicine, 20*(1), 15–21. https://doi.org/10.1017/S0790966700007555

Malik-Soni, N., Shaker, A., Luck, H., Mullin, A. E., Wiley, R. E., & Fuentes, J. (2022). Tackling autism disparities: The impact of global socioeconomic inequities on autism services. *Frontiers in Psychiatry, 12*, Article 787728. https://doi.org/10.3389/fpsyt.2021.787728

Mathée-Scott, L., & Ellis, C. (2022). Language comprehension in children with ASD: Age-related changes. *Autism Research, 15*(7), 1314–1325. https://doi.org/10.1002/aur.2717

McPartland, J. C., Law, K. C., & Dawson, G. (2016). *Autism spectrum disorder*. Oxford University Press. https://doi.org/10.1093/med/9780199937806.001.0001

Menglin, Z. (2019). *Report on the development status of the autism education and rehabilitation industry in China (III)*. China Social Sciences Press.

Mody, M., & Belliveau, J. W. (2013). Speech and language impairments in autism: Insights from behavior and neuroimaging. *North American Journal of Medicine and Science, 5*(3), 157–161.

National Institute of Mental Health. (2018). *Autism spectrum disorder*. Retrieved from https://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd

Nedungadi, P., Acharya, P., & Pandey, P. (2024). Inclusive education practices and interventions for children with autism in low-resource settings: A review of evidence from South Asia. *International Journal of Inclusive Education, 28*(2), 112–134. https://doi.org/10.1080/13603116.2023.2214471

Paul, R. (2008). *Interventions to improve communication in autism*. Child and Adolescent Psychiatric Clinics of North America, 17(4), 835–856. https://doi.org/10.1016/j.chc.2008.06.011

Petersen, A. (2020). The power of active listening in communication. *International Journal of Listening, 34*(1), 40–53. https://doi.org/10.1080/10904018.2018.1509375

Pritzker, S. E. (2020). Pragmatic deficits in children with autism spectrum disorder: A qualitative analysis. *Journal of Speech, Language, and Hearing Research, 63*(2), 493–505. https://doi.org/10.1044/2019_JSLHR-19-00123

Ray-Subramanian, C. E., Huai, N., & Ellis Weismer, S. (2013). Brief report: Adaptive behavior and cognitive skills for toddlers on the autism spectrum. *Journal of Autism and Developmental Disorders, 43*(3), 679–684. https://doi.org/10.1007/s10803-012-1583-9

Tager-Flusberg, H. (1981). On the nature of linguistic functioning in early infantile autism. *Journal of Autism and Developmental Disorders, 11*(1), 45–56. https://doi.org/10.1007/BF01531340

ISSN E: 3006-1466
ISSN P: 3006-1458
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
CJSSR
CONTEMPORARY JOURNAL OF SOCIAL SCIENCE REVIEW
Vol.03 No.02 (2025)

Tsai, H. J., Bell, E. M., Croen, L. A., Newschaffer, C. J., Lee, B. K., & Bilder, D. A. (2020). Prevalence and incidence of autism spectrum disorder among U.S. children and adolescents: A systematic review. *Pediatrics, 145*(5), e20193449. https://doi.org/10.1542/peds.2019-3449

Van Santen, J. P. (2013). Natural language processing for autism spectrum disorders: A review. *Journal of Autism and Developmental Disorders, 43*(2), 352–371. https://doi.org/10.1007/s10803-012-1571-9

WHO. (2019). *Autism spectrum disorders*. World Health Organization. Retrieved from https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders

Wittke, K., Mastergeorge, A., Ozonoff, S., & Rogers, S. (2017). Object learning and engagement in infants at risk for autism spectrum disorder. *Journal of Autism and Developmental Disorders, 47*(4), 1113–1125. https://doi.org/10.1007/s10803-017-3033-9

World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines*. World Health Organization.

Ye, J., Dababnah, S., & Kim, S. (2018). The importance of family routines and rituals in the lives of Latino families with children with autism spectrum disorder. *Autism, 22*(8), 1002–1012. https://doi.org/10.1177/1362361317716601

Yen, C. F., Chen, Y. W., Chien, W. C., Lin, J. D., & Chou, Y. L. (2023). Effects of structured communication interventions on social interaction and pragmatic language skills in children with autism spectrum disorder: A randomized controlled trial. *Research in Autism Spectrum Disorders, 104*, 102134. https://doi.org/10.1016/j.rasd.2023.102134

Zeidan, J., Fombonne, E., Scorah, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., & Elsabbagh, M. (2022). Global prevalence of autism: A systematic review update. *Autism Research, 15*(5), 778–790. https://doi.org/10.1002/aur.2696

Zhou, Y. (2011). Pragmatic impairments in children with autism: Characteristics and interventions. *International Journal of Early Childhood Special Education, 3*(1), 25–34.