

Conversation Analysis: A Methodology for Diagnosing Autism

Irfan Abbas

Assistant Professor, University of Central Punjab, Lahore, Punjab, Pakistan.

Email: irfan.abbas@ucp.edu.pk
(Corresponding Author)

Khalid Ahmed

Associate Professor, University of Central Punjab, Lahore, Punjab, Pakistan.

Muhammad Asad Habib

Principal Lecturer, University of Central Punjab, Lahore, Punjab, Pakistan.

▪ p-ISSN: 2663-3299

▪ e-ISSN: 2663-3841

▪ L-ISSN: 2663-3299

Abstract: *The present study examines the conversational turn-taking patterns in autistic-neurotypical talk. The objective of the study is to find out the distinctive features of autistic-normal conversations. This study is cross-sectional, descriptive and qualitative in its nature. Recordings are done in an autism center in Lahore for a period of ten days. It is mainly a qualitative study in its nature. Five autistic children of different ages are selected from an autism center in Lahore. The data for the study is collected through video recording of the conversations between autists and speech therapists. The sample is selected through convenient sampling and analysis is done by following the methods of conversation analysis. The results of the analysis highlight certain distinct features of autistic child-therapist talk which are not observed in the normal ordinary conversation. However, there is not a total violation of the conversation rules on the part of autists. Moreover, the findings of the research show that conversational patterns in autistic-normal conversation are also affected by the chronological age of the autists. Finally, the research concludes that conversation analysis can be used as a tool for the identification of autism.*

Key Words: Autism, Conversation, Conversation Analysis, Diagnosis, Turn, Overlap

Introduction

Humans have an amazing ability to engage themselves in conversations. However, this ability is not entirely instinctive. Rather the human child acquires linguistic knowledge after passing through several pre-determined universal stages of language acquisition. Every stage of language development adds specific information to the child's linguistic

competence. At last, there comes a time when this child starts having adult-like linguistic competence. This happens when a child is almost 6 years of age (Scovel, 2008). Nonetheless, all human children aren't lucky to acquire this level of linguistic competence and some children's verbal skill remains limited to the level of words or phrases only. There are quite a number of speech and language disorders, with distinct symptoms

and causes, which hinder a child's progress in language acquisition. There are also some disorders that don't fall in the category of speech and language disorders, yet the sufferers of those disorders *inter alia* do have speech and language problems. Autism is also one such disorder. It is a neurodevelopmental disorder and according to American Psychological Association (APA), its criteria include impairments in social communication and interaction, restricted or repetitive behavior, and unusual sensory sensitivity or interests (APA, 2013). Previous studies have shown that autists dislike interacting with other people and thus, they face many difficulties in maintaining old or generating new social contacts (Kunz, 2009). This disorder starts at the very early stages of life. Delayed linguistic development of the child is one of its symptoms that alarms parents and they approach a psychiatrist to confirm whether their child is suffering from autism or not. There is a controversy regarding the exact level of linguistic competence acquired by these children; however, it is confirmed that these children make face difficulty in understanding the intended meanings (Eales, 1993). This inability to understand intended meanings does impact an autist's performance in conversation. However, this isn't the only difficulty faced by autists during a conversation. Conversation analysis has brought forwarded many hitherto unknown problems faced by autists during conversations. The present study will use methods of conversation analysis to explore the conversational characteristics of autistic talk.

Objectives of the Study

The main objective of the study is to find out the distinctive conversational patterns during asymmetric interaction. The secondary objectives of the study can be enumerated as under

1. To figure out the ways autistic children construct their turns during a conversation.
2. To find out the relative distribution of turns during autist-normal conversations.
3. To ascertain the ways transition of speakers is carried out during autist-normal conversation.

Rationale of the Study

The identification of the problems faced by the Urdu-speaking autistic children in turn-taking can have manifold benefits. Firstly, In spite of Urdu being the fourth largest language in the world, had not been much examined in CA (Sohail, 2011). So, the present research will fill up some gaps in the literature. Secondly, this study will have pedagogical implications: therapists will be able to know the problems of autistic children in turn-taking which will help them to design their lectures accordingly. Thirdly, it will help to create awareness among the general public pertaining to the problems of the autistic children which will ultimately result in a positive attitude towards these children. Fourthly, it will engender a new ray of hope in autistic children and their parents about the possibility of improvement in the condition of such children.

Research Questions

1. Do autistic children construct their turns like neurotypicals?
2. Is the relative distribution of turns in the autistic child-neurotypical conversation normal?
3. How does the transition of speaker take place in the autistic child-neurotypical conversation?

Literature Review

Conversation Analysis

Conversation Analysis (CA) is a relatively new discipline that studies the ways which

help interlocutors to organize social acts through conversation. These social acts may include greetings, requests, commands, compliments, invitations, simple passing of information etc. CA owes this concept of studying the organization of social acts in conversation to sociology. Two sociologists, namely Harold Garfinkel & Goffman Erving, are responsible for initiating this thought of studying social systems from a particular angle: to discover the ways through which social systems are organized. Goffman showed that local micro-practices and rituals are the means through which broader macro social orders are created (1967). Garfinkel stressed the point that individuals produce and reproduce social order through daily interaction. Gafinkel & Goffman based their studies on the analysis of recorded conversations. They were immensely helped by the recording instruments which were being invented during that period. CA as a distinct field of enquiry was established due to the contribution of three other sociologists: Emanuel Schegloff, Harvey Sacks and Gail Jefferson. These sociologists not only followed the approach of Garfinkel and Goffman but, like them, CA practitioners also based their research on the analysis of recorded conversations (Sacks, Schegloff & Jefferson, 1974).

Importance of Conversation Analysis

Today Conversation Analysis methods are being used in multiple disciplines like sociology, psychology, anthropology, linguistics etc. This multidiscipline applicability is due to the fact that CA helps to study conversations by keeping in consideration a 'variety of types of context including myriad orders of interactional organization' i.e. sequence organization, topic, repair, preference

structures, turn-taking etc. (Sidnell & Stivers, 2012).

Turn-Taking

The turn-taking mechanism is one of the basic facts in conversation. Goffman stressed the importance of turn-taking by employing an analogy (Goffman, 1963). He commented that it is a well-known fact that people avoid collision with others during a walk, in the same way interlocutors try to avoid interruption during a talk. He further asserted that if turn-taking rules are not observed and people start talking simultaneously, then it disrupts the flow of talk and results in incomprehensibility. However, this non-adherence to turn-taking convention is very rare and interestingly, it has been found that non-appliance to the rules of turn-taking is more common in abnormal people than in the conversation of mentally normal individuals (Leighton, Stollak & Ferguson, 1971). Numerous investigations have proved that normal people generally adhere to the rules of turn-taking in conversation. For instance, Yngve opined that the notion of turn-taking 'is nearly the most obvious aspect of conversation' (1970). Miller also observed that 'turn-taking is language universal' (1963). Schegloff asserted that during a conversation, 'one party at a time is organizational primary' (1965).

Study of Turn-taking in Pakistani Autistic Population

The previous studies carried out on autistic children by following methods of conversation analysis have shown that these children face difficulties in making requests (Frith, 1989). A more detailed work carried out by Fine, Bartolucci, Szatmari, & Ginsberg (1994) has shown that these children don't follow the general principles of conversation.

According to Sacks, Schegloff and Jefferson (1974), there are general principles

of turn-taking that are normally observed in the ordinary conversation. These principles help interlocutors to construct their turns, obtain a turn, main a turn, pass on a turn and repair any problems emerging during conversations. Apart from the general principles, there are some variations in these rules of turn-taking across different contexts and cultures (Cook, 1989). The comparative studies of turn-taking patterns in different cultures have brought forth some interesting facts (Stivers et al., 2009). It will be interesting to explore turn-taking patterns in Pakistan, a country with having distinct and rich culture. Pakistan is a multilingual country; however, the Present study is going to explore turn-taking patterns based upon the recorded conversations of Pakistani

Urdu-speaking autistic children with their speech therapist.

Urdu is a member of the Indo-Aryan family of languages; it is mostly spoken in India and Pakistan. In Pakistan, it has got the status of national language (Koul, 2008). The grammatical structure of the Urdu language is different from English. This difference is most clearly evident in the difference in word order. English follows SVO (Subject, Verb, Object) word order, while the word order of Urdu language is SOV (Subject, Object, Verb). The difference between structure of Urdu and English is well documented by Sohail (2011). For example, she shows that in English, we will say.

I	read	a book
Subject	Verb	Object

In the Urdu language same situation will be expressed by following different word order

mein (I)	kitab (a book)	Parhtā hōn (read)
Subject	Object	Verb

Urdu and English also have a different structure in some phrases. For instance,

Book	of	Ali
Noun (head)	Preposition	Noun

But in Urdu, the same phrase will be written as

Ali (school)	ki (of)	kitab (book)
Noun	Preposition	Noun (head)

Pakistan is a multi-cultural and multilingual society; this multiculturalism has an impact on conversational patterns (Cook, 1989). However, the researcher will delimit his study to the analysis of conversations on the basis of general patterns of turn-taking which are discussed by Sacks, Schegloff and Jefferson (1974).

Methods and Materials

The researcher employed a qualitative methodology for carrying out the present study. This decision was taken because it has richness and depth of explorations and descriptions²⁰. Moreover, the researcher intended to employ methods of conversation analysis for the collection and analysis of the

data which itself follows a qualitative approach.

Data Collection

The researcher selected five male autistic children for carrying out this study. The selection of the sample was carried out by following convenient sampling. Convenient sampling is a nonrandom probability sampling technique where all the members of the population do not get equal chances of getting selected. But as the researcher didn't have access to a large autism population, so he opted for this sampling technique. An

autism center in Lahore was approached and a request was made to provide access to autistic children.

Keeping in view the objectives of study, five autistic children were provided by the center and recordings were made during their conversations with their therapist. While making the selection, it was made sure that each of the autists is verbal and has been under the supervision of the same therapist for at least last one year. There was noticeable variability in the ages of the children (see table 1).

Table 1. Details of Participants

S. No	Name	Gender	Age	Length of Recording	
				Hours	Minutes
01	Baber	Male	4.09 years	02	49
02	Hamza	Male	5.02 years	02	22
03	Ali	Male	6.07 years	02	20
04	Qasim	Male	7.11 years	02	48
05	Saim	Male	15.04 years	02	35

The researcher didn't carry out any diagnostic tests, rather he relied upon the diagnosis of psychiatrists, physicians, as well as the observation of parents and therapists. There were two main reasons for not carrying out any diagnostic tests. Firstly, there were instances of such studies which didn't take any diagnostic tests and relied upon the reports of the clinicians. Secondly, the researcher believed that the conversational performances of these children would help to validate whether these children are autists or not.

The video recording and observational notes were the tools through which data was collected for the study. This choice of tools was made by keeping in view the overall qualitative design of the study as according to Barret andEvid (2018) a researcher who wishes to carry out a qualitative study should use video recording and observational notes. The preference was given to video recordings

over audio recordings because autists do have behavioral issues which can be better captured through video recordings. The researcher himself didn't participate in the conversations rather he was sitting outside the room and observing every child's conversation with the therapist. The collection of the data was carried out between May 25 to June 8, 2018. The approximate duration of recorded conversation was of 2.5 hours for each child.

Data Analysis

The data of this study were obtained by observation, video recording and field notes. All conversations were in the form of questions and answers. There was a total of 16450 lines, out of which 5650 were spoken by the children. Once the data was obtained, it was jotted down verbatim. Next, the important and relevant turns were marked and transcribed by following the method of

Jefferson⁷. The researcher didn't transcribe the whole data. Only that data was transcribed which was thought relevant to the research questions of the study. After transcribing the data, the researcher also had to transliterate the relevant fragments. The need for transliteration was motivated by the structural differences between the two languages. Transliteration was done by following the method invented by R.S. McGregor (McGregor, 1992). After the transliteration, the data was translated into English in order to make it easily understandable for the people who can't understand the Urdu language. The researcher didn't go for the word-to-word translation rather, the employed idiomatic translation which is thought to be more comprehensible than a word-to-word translation (Cuellar, 2011).

As English is the official language of Pakistan (Ahmad, 2011), there were few places where speakers did employ code-switching from Urdu to the English language. The researcher capitalizes those words or clauses to show that those words/clauses were spoken in English.

The researcher used pseudo names of the participants. The use of pseudo names in the conversation transcription was intended to protect the identity of the speakers (Surmiak, 2018).

Results and Discussions

Firstly, It is generally observed that in a conversation, interlocutors employ various turn-construction units which can be 'one word long, or they can be sentential in length' (Sacks, Schegloff & Jefferson, 1974). The data showed that some turns were only one word long. The children were replying with single word utterances and even where they employed sentences, the sentence was simple. There is no instance of complex or compound sentences in the whole data. The possible reasons behind children's use of one word or simple sentences can be that either they didn't want to talk, or they were suffering from impaired linguistic knowledge to construct complex and compound sentences.

The following fragment is an example of one-word or simple sentence utterances employed by the children.

Conversation # 523

53	Therapist	SIXES lgaty haim? Can you hit sixes?
54	Qasim	ěam yes
55	Therapist	ghr mym khlyty haim CRICKET? Do you play cricket at home?
56	Qasim	ěam yes
57	Therapist	Kis ky sath khlyty haim? With whom do you play? (0.2) Kis ky sath khlyty haim? With whom do you play?
58	Qasim	apny MAMA ky sath. With mama

Sometimes it is also observed that while constructing their turns, these children use the same phrases as were present in turn of the therapist.

Secondly, the recorded data showed that change of speakers did occur in the conversations, but the frequency of change was much less than what happens in normal conversation.

There may be different reasons for such differences between the turns taken by the autists and therapists. Firstly, autistic children lack the social skills of either initiating or sustaining a conversation with others². That's why their contribution to the conversation was much less than the therapists. Secondly, there was a lot of

repetition on the part of the therapist. Almost 52 percent of all turns taken by the therapist were either rephrased or repeated by them. In normal circumstances, repetition is done to clarify something but here, it was being done to make the autists speak who were either hesitant to carry on the conversation or were unable to provide an appropriate answer (Ehmke, 2019). The repetitions or

rephrasing done on the part of the therapist can be classified into three different categories

Following is an example when the autist was not replying to a question and the therapist rephrased the same question to get a reply.

Conversation # 903

03		āp ky COUNTRY ka nam kia hai? What is the name of your country? (0.2)
04		āp ky mulk ka kyā nam hai? What is the name of your country? (0.3)
05		kyā nam hai mulk ka? What is the name of the country? (0.3)
06	Ali	Pakistan

In the above conversation, Autist Ali was not replying to the question, so the therapist had to rephrase her question in order to get a reply. She rephrased her question two times, and in the end, the autist was able to give a correct reply.

- a) Sometimes therapist repeats the same lines as are spoken by the autist in order to provide him correct structure to reply, as can be seen in the following example.
- b) On some other occasions, the therapist repeats the same lines as are spoken by the autist in order to encourage him to speak more.

In addition to this, an interesting thing was observed that on their turns, the autists gave very short and brief replies. In normal circumstances, short sentences reply are

preferred to longer ones. But here, the shorter replies are neither preferred nor dispreferred because they showed a lack of interest on the part of autistic children and their desire to quickly bring the conversation to its closure (National autistic society,2019).

Thirdly, the collected data carried a very nominal percentage of overlap during the transition of speakers. The important thing was that chronicle age seems to play a vital role here. The percentage of overlap was much higher in the younger autists' conversations with the therapist as compared to older autists' interactions with the therapist. This lack of overlap shows a lack of willingness to talk because according to Yong, overlap' exists in almost 17 percent of the whole conversation(Yong, 2016). The

interruptions in the present data were observed because of two reasons

a. Because of idiosyncratic vocabulary

Conversation # 01

05	Therapist	CARDS caëy [āp kv]? Do you need cards?
06	Baber	[()]
07	Therapist	[Cards āchy lagty haiṁ āp]? [Do you like cards]?
08	Baber	[()]

Here the autistic Baber was uttering a few words which were uninterpretable for the therapist. The therapist was trying to get a reply in the Urdu language while the boy kept speaking by using his own idiosyncratic vocabulary which created an overlap.

or phrases on the part of the child.

As can be observed in the following example, Qasim was giving irrelevant answers and was also repeating those irrelevant same phrases/sentences, again and again, which resulted in the overlap and interruption

b. Because of repetition of same words

Conversation # 602

55	Qasim	abv, yě abv hai, [yě abv hai] Father, this is father, this is father
56	Therapist	[achā] ok
57		[āp ky bṛy bha'y ka nam kyā hai]? What's the name of your elder brother?
58	Qasim	[yě abv hai, yě abv hai] this is father, this is father

The above example shows that such children give irrelevant information and they keep on repeating the same phrases (echolalia), creating interruption.

Unlike overlap, the data is abundant with instances of silence and pause. 79 % of the turns either carried a gap or silence. These silence and pauses were there when the question was put to the autists and they didn't reply.

Conversation #804

06	Therapist	Qasim āp ky age kyā hai? Qasim, what is your age? (0.2)
07		āp ky age kyā hai? What is your age? (0.3)
08		āp ky 'mr kitny hai? What is your age? (0.2)
09		āp kaēām rēity haiṁ? Where do you live? (0.3)

10	WHERE DO YOU LIVE? (0.2)
11	Jaldy btia'm Answer quickly

In the above example, it can be seen that the therapist asks a question from an autistic, waits for a reply when no answer comes then repeats the same question. Then the therapist tries to make the autistic speak by changing the question but of no use. There are plenty of examples in the whole data where the question is put to the autistic but he doesn't reply and it creates a gap between the two utterances. The most observed area of difficulty was answering WH questions because such autistics face difficulty in comprehending or replying to WH questions. Autistics even face difficulty in replying to the simple question 'who are you.'

Lastly, Turn allocation rules are also important factors in the discussion of speakers' transition. In a normal ordinary conversation, there are three rules for the allocation of turns. Sacks, Schegloff & Jefferson (1974) name them as 1a (current speaker selects the next speaker), 1b (if no speaker has been selected, then any speaker may self-select) and 1c (if neither the current speaker selects other nor anyone other self-selects then the current speaker may continue). In the recorded data, the therapist asks a question and 'selects other' to reply but the data is also abundant with the use of rule 1c because there were many instances where an opportunity was given to the listener to hold the floor but he did not take it. Such a huge frequency of employing rule 1c is clearly something that is not observed in the normal ordinary conversation. Moreover, it also shows that the children acknowledge the authority of the therapist as a turn allocator.

Conclusion

The analysis and discussion of the data helped to draw the conclusion that autistic-neurotypical talk carries some distinct

patterns which are not generally observed in normal ordinary conversations. Following conclusions may be drawn from the study (a) in a conversation involving both autistics and neurotypicals, the number of turns taken by typically developing persons is much higher than what is taken by autistics (b) autistic children's attempt to construct turns is limited to the level of single words, phrases or simple sentences only (c) any such conversations are abundant with silences and pauses which ultimately leads to final closure (d) some autistics possess idiosyncratic vocabulary (e) autistics do seem to keep repeating same lines or phrases. However, these characteristics were not uniform in the whole sample, for the results of the study do show the effect of chronological age on the overall performance of autistic children. This might be due to the reason that autistic children keep on improving their conversational skills with time. As was observed that the instances of interruption were most frequent in the conversations of younger children, gaps and silences were more observed in the children between 5-8 years of age and the use of intonation to signal TRP was evident in the conversation of the oldest child.

The results of the present study clearly show the significance of using methods of conversation analysis in the diagnosis of autism. The importance of conversation analysis in the field of autism may further be highlighted by pointing out the fact that there is no such tool that can very precisely diagnose autism. Especially in Pakistan where we don't have well-developed tools for diagnosing autism, conversation analysis can be a good method to try.

It is recommended that more research studies should be carried out on the same topic so that conversational problems of

autistic children may be assessed from different angles. It will ultimately lead towards the overall improvement in the autistic population. Furthermore, it is the need of the hour that experts from other

fields, especially those who are working in linguistics, must pay their useful contribution to understanding and deal with autism.

References

- Ahmad, S. I. (2011). Issues of medium of instruction in Pakistan. *International Journal of Social Sciences and Education*, 1(1), 66.
- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders* (2013). Washington, DC: Author.
- Barrett, D, & Evid, A.T. (2018). Data collection in qualitative research. *Evid Based Nurs*, 21.
- Cook, G. (1989). *Discourse*. Oxford: Oxford University Press.
- Eales, M. J. (1993). Pragmatic impairments in adults with childhood diagnoses of autism or developmental receptive language disorders. *Journal of Autism and Developmental Disorders*, 23, 593-617.
- Ehmke, R. (2019). *What Should an Evaluation for Autism Look Like?* Cited on November 18, 2018. <https://childmind.org/article/what-should-evaluation-autism-look-like/>
- Fine, J., Bartolucci, G., Szatmari, P., & Ginsberg, G. (1994). Cohesive discourse in pervasive developmental disorders. *Journal of Autism and Developmental Disorders*, 24, 315-329.
- Frith, U. (1989). A new look to language and communication in autism. *British Journal of Disorders of Communication*, 24, 123-150.
- Garfinkel, H. (1967). *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice Hall.
- Goffman, E. (1963). *Behaviour in public places: Notes on the social organization of gatherings*. New York: Free press of Glencoe.
- Goffman, E. (1967). *Interaction Ritual: Essays on Face-to-Face Behavior*. New York, NY: Pantheon Books.
- Koul, O. N. (2008). *Modern Hindi Grammar*. Springfield: Dunwoody Press.
- Kunz, P. A. (2009). *Social Experiences of Adolescents with High Functioning Autism (HFA) and/or Asperger Syndrome (AS) - Their Perceptions and Their Views of Their Caregivers: An Exploratory study* [Dissertation]. Chicago: Loyola University.
- Leighton, L. A., Stollak, G. E., & Ferguson LR. (1971). Patterns of communication in normal and clinical families. *Journal of counseling and clinical psychology*, 36, 252-256.
- McGregor, R. S. (1992). *Urdu study materials for use with outline of Hindi grammar*. Oxford: Oxford University Press.
- Miller, G. A. (1963). Universals of Language. *Contemporary Psychology*, 8, 417-418.
- National autistic society (2019). *Social isolation and social interaction*. Date of publication November 2018. <https://www.autism.org.uk/about/communication/social-isolation.aspx>
- Sacks H, Schegloff, E. & Jefferson, G. (1974). A simplest systematics for the organization of turn taking for conversation. *Language*, 50: 696-735.
- Schegloff, E. A. (1965). Sequencing in conversational opening. *American Anthropologist*, 70: 1075-1095.
- Scovel, T. (2008). *Psycholinguistics*. Oxford: Oxford University Press.
- Sidnell, J., & Stivers, T. (2012). *The handbook on Conversation Analysis*. Wiley-Blackwell.
- Sohail, A. (2011). *Repetition: a method for affiliation and agreement in Urdu conversation* (dissertation). University of Sheffield, Sheffield, UK.
- Stivers, T., Enfield, N.J., Brown, P., Englert, C., Hayashi, M., Heinemann, T., Hoymann, G...Levinson (2009). Universals and cultural variation in turn-taking in conversation. *Proceedings of the National Academy of Sciences of the United States of America*, 106 (26), 10587-10592.

Surmiak A. Confidentiality in Qualitative Research Involving Vulnerable Participants: Researchers' Perspectives (2018). *Forum: Qualitative Social Research*, 19(3).

Yngve, V. H. (1970). On getting a word in edgewise. *Papers from the sixth regional meeting of the Chicago Linguistic*

Society. Chicago: Chicago Linguistic Society.

Yong, E. D. (2016). The Incredible Thing We Do During Conversations When we take turns speaking, we chime in after a culturally universal short gap. *The Atlantic*. Retrieved on January 4, 2016: