

A ecolalia no desenvolvimento da linguagem de pessoas autistas: uma revisão bibliográfica***

Echolalia in the language development of autistic individuals: a bibliographical review

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Abstract

Background: echolalia is one of the most common symptoms among the language characteristics in Autism. **Aim:** to provide a detailed literature revision about the role of echolalia in the language development process of autistic individuals, and to discuss the use of this language feature in the speech-language clinical practice. The researches show classifications and analysis criterions of echolalia in a discursive context. A few of the analyzed studies are against the use of echolalia, pointing that it has no communicative function, and therefore should be discouraged. On the other hand, other studies indicate that echolalia has a communicative value and can be used as a communicative in speech-language intervention. **Conclusion:** this bibliographical review raises the issue about the importance of evaluating the conditions in which echolalia might occur before considering it as having a communicative value or not.

Key Words: Speech Therapy; Autism; Language; Echolalia.

Resumo

Tema: a ecolalia é um dos sintomas mais comuns dentre as características da linguagem no Autismo. **Objetivo:** oferecer uma revisão bibliográfica detalhada sobre o papel da ecolalia no desenvolvimento da linguagem de pessoas autistas, seguida de discussão sobre seu uso na prática clínica fonoaudiológica. As pesquisas mostram classificações e critérios de análise da ecolalia no contexto discursivo. Alguns estudos se posicionam contra seu uso afirmando que a ecolalia não tem função comunicativa e, por isso, deve ser desestimulada; outros defendem que a ecolalia tem um valor comunicativo, podendo ser inclusive utilizada em terapia fonoaudiológica. **Conclusão:** a pesquisa nos leva a refletir sobre a importância de avaliar as condições em que a ecolalia ocorre, antes de classificá-la como comunicativa ou não.

Palavras-Chave: Fonoaudiologia; Autismo; Linguagem; Ecolalia.

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Introduction

Studies on the linguistic characteristics of autistic individuals have been more frequent in recent years. However, few studies provide a deep analysis on one of the most common and at the same time intriguing linguistic characteristics in Autism: the echolalia.

The knowledge on studies in this area can be of great value to the Speech-Language Pathologist (SLP), especially because all verbal autistic individuals go through a period of echolalia¹ - autism is the main trigger of echolalia².

Therefore, a literature review was proposed. This review will present different views on the topic, pointing out the specifications of the latest studies and developing a discussion related to the clinical SLP practice. This literature review will help the reader to obtain a wider view on the topic and to relate it to his or her experience.

All the studies about the occurrence of echolalia on the speech of autistic individuals published in Portuguese, English and Spanish at the databases of Medline, Lilacs, SIBI, Scielo and APA from 1969 to 2008 are listed below. As mentioned above, research on echolalia is limited, and few papers have been written over the past few years. Later studies that somehow mention the occurrence of this phenomenon in the speech of autistic individuals are also reported below.

Language development in autistic children is gestalt³⁻⁸ - echolalia would be a pronominal inversion and an interactional inflexibility of the process resulting from such gestalt process of language acquisition⁹.

Echolalia is commonly defined as "a repetition in echo of speech." This linguistic phenomenon has been reported as a characteristic of the Autism Syndrome, since the first description in 1943⁴. To be noted that such repetitions can occur immediately or shortly after the affirmative model, or significantly after its production, these repetitions has named as "immediate" and "delayed" echolalia, respectively⁴. These repetitions have, since then, been considered the two general categories of echolalia identified in the language of autistic individuals.

The investigations about the mitigated echolalia were first in 1969⁵ and it refers to any change in echoed emission for communicative purposes and it may also be immediate or delayed.

Some authors considered echolalia as a repetition without meaning and without apparent purpose, as an indication of the severity of the

disorder, 10-12 or even as a speech with no connection to the other party and to any interpretation¹³. Under this perspective, the clinical procedure to be adopted would be the attempt to inhibit the echolalic speech.

Following this perspective, a study was conducted to teach a 21-year-old autistic individual¹¹ to remain quiet before, during and after listening to questions, teaching him to use tips of the environment (cards with words or response model) to increase the likelihood of correct responses. The results showed that echolalia rarely occurred after the subject was exposed to correct answers -although the subject did not always answer the question correctly - he often used trained answers to other questions. This study shows that the elimination of echolalia all the time did not facilitate the use of correct answers by the individual.

However, other studies defined echolalia as a primitive attempt to maintain social contact, when the individual is confronted with a linguistic stimulus beyond their linguistic skills, or as a positive prognostic factor^{1,3,5,6,8,9,14-19}.

The first study that tried to analyze the existence of communicative intention in the immediate echolalia and its specific features was performed by means of analyzing the utterances of four highly echolalic autistic children¹⁶. The results showed that there is, indeed, communicative intention on echolalias. Seven functional categories for immediate echolalia were described. Segmental, supra-segmental, non-verbal and environmental aspects were taken into account for the creation of these categories. Such categories were defined as: non-focused; shift exchange; declarative; test; self-regulatory; affirmative response; and request.

Results of that study changed the course of language and behavior of autistic children research and raised questions related to behavior modification programs that defended the revocation or replacement of immediate echolalia by trained structures.

Another study was carried out with the aim of establishing functional categories of delayed echolalia - which, until then, according to authors¹⁴, was less studied than immediate echolalia for presenting more difficult identification. Three individuals diagnosed with autism participated in the study. Each delayed echolalia was analyzed regarding its interactivity and relevance in the linguistic and situational context, regardless of

comprehension evidence. Fourteen categories of delayed echolalia, based on the several mentioned aspects, were created and divided into two groups:

Non-interactive delayed echolalia:

- . non-focused;
- . situational association;
- . test; d) self-policy;
- . non-interactive labeling.

Interactive delayed echolalia:

- . shift exchange;
- . verbal conclusion;
- . interactive labeling;
- . information;
- . call;
- . affirmation;
- . request;
- . protest;
- . directive.

The results showed that all subjects produced more interactive than non-interactive delayed echolalia. Thus, results demonstrate that the communicative intention may or may not be behind the production of delayed echolalia.

This study highlights the fact that echolalia may or may not be accompanied by communicative intention, depending on the context in which it occurs. Such evidence called the attention of researchers to investigate echolalia in the educational clinical practice, in addition to the investigation of linguistic and contextual variables that might influence its occurrence, which led to the development of other studies that are described below.

In a study with five autistic children¹, it was observed that the type of question asked by the examiner influenced the occurrence of echolalia more than the sentence comprehension did. Therefore, for the authors, in cases with no comprehension, the children could choose the non-emission of verbal response¹. Questions that required yes or no answers as feedback often caused more echoes than WH questions (What? Who? When? Whom?) did. The authors also commented that children who do not manipulate the prosodic aspects of echoed speech are linguistically more affected than those who restructure the prosody of their echoes.

The frequency of immediate echolalia in six autistic children has investigated in environments

with interlocutors and pictures of objects of different degrees of familiarity in different tasks²⁰. The findings showed that the highest occurrence of echolalia was observed in the "non familiar person / non familiar object picture" followed by the "familiar person/non familiar object picture". This suggests that the foreign stimuli are often associated with higher echolalia occurrences, types of interlocutors, and environment. The author concludes that we should take advantage of immediate echolalia in therapy by emphasizing its communicative value.

The analysis of differences in the use of immediate echolalia by autistic children at different stages of language development²¹ was carried out in another study. The author analyzed the correlation between the language level and the use of echolalia in terms of quantity and functionality. Results showed that immediate echolalia varied in terms of use according to the level of language development. However, the quantity of echolalic productions was ambiguous: higher frequency in the intermediate level and few echolalic productions at the lowest level. This occurred because children produced few oral expressions, and these, in their majority, were echolalic. At the highest level, there were less echolalic productions, but, not necessarily, the subjects were no longer producing them.

Investigation of the relationship between comprehension abilities, echolalia and mitigated echolalia in the speech of ten autistic children²² revealed that the high proportion of echolalia in the speech was associated with reduced comprehension ability, and that better comprehension was associated with greater mitigation of echolalia.

Another study examined the effects of two specific types of adult antecedent utterances - high and low restriction - on verbal behavior of three subjects with autism²³. The results revealed that the highest percentages of total utterances of the subjects studied, regardless of the type - echolalic or not - followed the high restriction utterances. The authors suggested that responding to this type of statement requires a higher cognitive load. This makes both typically developing and autistic children produce more echolalia in order to reduce the workload. The author proposed the hypothesis that children use echolalia as a compensatory strategy to more effectively manage such linguistic, social and cognitive demands.

In a later study²⁴ investigated the functions and the types of echolalia (immediate or delayed)

following adult utterances with high or low restriction. They concluded that the higher incidence of immediate echolalia followed high restriction utterances - once the higher proportion of delayed echolalia followed affirmative utterances of low-restriction. These results suggest that the level of language restriction - inherent in adult utterances - directly influences the occurrence of the two types of echolalia. The authors also emphasize that the majority of echolalic productions occurred with comprehension evidence.

Investigating the use of echolalia as an interactional resource, researchers²⁵ carried out a case study of a three year old child in natural interactions with his mother. The use of delayed echolalia had an important role in the interaction of the child with the mother. Echolalia was a means to initiate interactions and to bring the child to the "cartoon world" and also a means to obtain a response from the child. They observed that the mother also made use of delayed echolalia as a resource to attract the attention of the child. This study can make us think about how a speech, though with signs of pathology, can assume a communicative role for the person. When the echolalic speech of the child is accepted, he or she becomes more motivated and tends to use more creative speech¹⁷.

A study of the communicative behavior of ten autistic children with their parents and a therapist observed the verbal group interacted with their parents predominantly by echolalia²⁶. After 20 months of structured therapy the same group showed a reduction in echolalias as well as increased responsive and spontaneous communication. This leads us to the conclusion that echolalia is really an important step in the language acquisition of autistic individuals.

The mitigation of echolalia may serve as a success or failure indicator of language intervention programs of autistic children²⁷. Children who present non-mitigated echolalia or non appropriate linguistic skills are less likely to benefit from therapies based on traditional discourse. The author suggests, for such children, the use of an alternative communication system - with simultaneous speech signs - named "total communication."

A behavioral study on the facilitating effect brought by echolalia on naming of Chinese characters showed that, for autistic children, echolalia contributed to naming acquisition and maintenance²⁸. The author proposed that the auditory stimulus produced by self-imposed

echolalia directed the attention of the child to specific graphic aspects of the symbol, facilitating the connection of the image with its name.

A case study compared the participation of an echolalic autistic child - from an Integrated Group Therapy Model - with children with typical development¹⁵. Through the facilitation of the adult on dramatized play, the echolalia and stereotyped games became more semantically contingent. This occurred because it is possible to repeat the same behavior and/or speech several times on play. According to the author, there is no inappropriate speech in "wonderland". For the author, the deficit in symbolic play would be the main aspect in the autistic syndrome, and it would explain the great intervention difficulty. The author pointed out that mediated play provides a natural means of intervention, providing multiple opportunities for practice and mastery of a non stigmatized context. This, according to the same author, allows the convention of behaviors previously perceived as foreign and, therefore, increases the chances of inclusion.

A more recent study carried out in Brazil¹⁷ investigated how different types of discourse and interlocutors, in different play situations, could influence the occurrence of echolalia during language development of a nine year old autistic boy. Sessions with the child in moments of interaction with three different types of interlocutors: mother; Speech-Language Pathologist; and strange were recorded. Three different types of games were used with each interlocutor. Data analysis was based on transcriptions of the tapes - through quantitative and qualitative criteria - taking into consideration linguistic aspects and production conditions.

Results of the study showed that the interaction with different interlocutors does not appear to be the most determinant factor in the manifestation of echolalia in the speech of the studied child. It was observed that, in the analysis of the influence of the type of utterance used by adults, longer emissions increased the occurrence of echolalia. It was also observed that most of the echolalias produced by the child presented communicative function and represented, for the child of the study, an effective communication strategy.

Through aim to investigate the interactional organization of repetition practices found in the talk of an adolescent girl with autistic spectrum disorders, her talks was video-recorder for six hours of activity in a school classroom²⁹. The example were them transcribed in detail and Conversation Analysis was used to explorer the sequential

contexts. The results showed two forms of repetition occur very frequently in Helen's talk:

1. repeats of turn-final lexical items from immediately before talk (a form of immediate echolalia).
2. repeats of the first item within a turn is produced consisting entirely of repeated items (palilalia).

The study showed the two forms of repetition co-occur to display on-going engagement with a recipient's prior turn. Although Helen has limited verbal resources she was interactionally competent. The study highlighted the importance of the analysis of speech to understand the pragmatic abilities of autistic children and its implications on rehabilitation and in further studies.

In contrast with most of the current authors, one study performed in Brazil 12-13 criticized the determination of the communicative functions for the echolalia, and questioned the use of the terms "immediate echolalia", "delayed echolalia" and "mitigated echolalia" as well as the classifications of the communicative functions of it. Argument about the term "immediate echolalia" is redundant; "delayed echolalia" is inappropriate; and "mitigated echolalia" is paradoxical, once it dilutes the distinction between normal and pathological. For the author, researchers that attributed communicative functions to mitigated echolalia distanced from first descriptions of echolalia - which is the exact, automatic, involuntary, senseless and non-communicative repetition. However, the study does not have the intention to aboard about the use the echolalias in the therapeutic setting.

In a new research, the same author conducted case studies with two patients that had Global Development Disorder 13, in which she emphasized the importance of clinical SLP with echolalic children to disarticulate and give new meaning to their speech.

Conclusion

Although echolalia is considered by many authors a characteristic or symptom of communication difficulties in autism, we cannot analyze it separately from the context in which it appears, neither separately from the interlocutor. Due to interaction difficulties of autistic individuals described in the literature, we consider echolalia a strategy of high communicative value. Several authors 15,25,27-28 provide examples of how echolalia may be useful in clinical practice.

Repetitions in autism are generally more literal and automatic¹, and are noticed by their extreme degree of perfection. It is not easy to distinguish the echolalia from more normal forms of repetition. Thus, structural

analysis of the echolalic behavior must be accompanied by a functional analysis in order to make any decisions on appropriate intervention techniques³. The indiscriminate extinction of all forms of immediate echolalia is not recommended because of the functions that echolalia might have for autistic children.

The notion of communicative intention should the initial focus on language intervention 5-6. The production of an adequate response from one of interlocutors does determines the success or failure of communication in the therapeutic process, bat the establishment of a situation of interaction in which both interlocutors promote significant exchange^{6, 10}.

The present study aimed to introduce elements that stimulate reflection on the role of echolalia in language development of autistic individuals. Through a literature review, this study makes us reflect on the importance of conducting further research on the topic.

The study leads us to think about the importance of carrying out a good assessment of the communicative functions that echolalia might have for each individual, since several studies show that echolalia can serve as an important communicative tool and also that it can be used as a strategic resource in the SLP therapeutic context.

Echolalia does not have a communicative intention in all situations. In certain moments, it comes out as a stereotyped speech and not as a communicative speech. In an evaluation setting, extensive vocabulary copied from an adult speech may be understood, for instance, as a sign of linguistic ability, and not as a stereotyped language, and thus delay the conclusion of a real diagnosis³⁰. However, the sole fact of having echolalia in the speech of autistic individuals is already a starting point for SLP. Regardless of the terminology used (mitigated echolalia, palilalia, etc), there is consensus among the authors that when any sort of change in the structure of the echoed speech starts to occur, even if only in prosody, there is evidence of communicative intention. The most creative speeches are reached when ecolalia occurs. To inhibit echolalia is to inhibit the speech. To accept, to understand, and to contextualize it means including it in the communicative context.

Finally, this study highlights the importance of the SLP presence in multidisciplinary teams of assistance of autistic individuals, being the role of the SLP to warn the team, as well as families, to the possible communicative intentions of each patient, promoting a more comprehensive and effective communication in all contexts, regardless of the type of communicative strategy used.

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