Longitudinal study of language therapy in 142 children and adolescents with autism spectrum disorders

Estudo longitudinal da terapia de linguagem de 142 crianças e adolescentes com distúrbios do espectro do autismo

ABSTRACT

The last 25 years produced important changes in the Speech Language intervention for children with Autism Spectrum Disorders in the whole world. They refer to diagnostic criteria, research methods and systematization of data about diagnostic and intervention processes. In this context, the first results about the use of a recording system used on a specialized service highlights the importance of including information about each intervention process on reliable and accessible systems. This procedure allows the association among several types of data and studies with large populations, something that is not usual in the field.

RESUMO

Os últimos 25 anos proporcionaram mudanças significativas na atuação fonoaudiológica dirigida aos Distúrbios do Espectro do Autismo em todo o mundo. Elas envolvem os critérios diagnósticos, a metodologia de pesquisas e a sistematização de dados de processos diagnósticos e de intervenção. Nesse contexto, os primeiros resultados do uso de um sistema de registros utilizado num serviço especializado reforçam a importância da inclusão das informações referentes a cada processo de intervenção em sistemas confiáveis e acessíveis, garantindo a associação de informações, e evidenciam as possibilidades de estudos com grandes populações, o que não é comum na literatura da área.
INTRODUCTION

The last 25 years produced important changes in speech language intervention with children with autism spectrum disorders (ASD) in the whole world. The first Brazilian service of language therapy in childhood psychiatry is completing its 27th year and reflects this evolution in the Brazilian reality.

The implications of diagnostic criteria supported mainly by clinical observation has been widely discussed, as the differential diagnosis within the autism spectrum. Most of the studies that describe these pictures point out to the need for multidisciplinary perspectives for the diagnosis\(^1\). Methodological issues in these studies are frequently mentioned\(^2\). The need for systematization of data about diagnosis and intervention processes is mentioned in analyses about the World Report on Disabilities published by the World Health Organization in 2012\(^3,4\).

In this context, this brief report presents the first results of the use of a data recording system used on a specialized service.

METHODS

The ethical committee of the School of Medicine, Universidade de São Paulo authorized the use of the databases of the Research Laboratory on Speech-Language Therapy in ASD (LIF-DEA) of the School of Medicine, Universidade de São Paulo, Sao Paulo, Brazil (protocol #228/11).

As a preliminary study, we sought to identify the association between chronological age at treatment onset and the number of progress indexes observed in the last 24 months (i.e. the last four semestral assessments). Data refers to 142 participants with ages ranging from 2 to 16 years about which there were complete sets of information. Progress indexes considered were: increase on the scores of each of the seven observed areas of the Social-Cognitive Performance, improvement in the number of communicative initiatives, larger proportion of use of the communicative space, improvement in communication’s interactivity, and increase in the proportion of use of vocal and verbal communication.

RESULTS

The results presented in Figure 1 show a general inversely proportional relation between both sets of information. It means that children who started language therapy in the earlier ages presented more indexes of progress than older children and adolescents. However, it is evident that this is not an absolute tendency; it is possible to observe that there are adolescents with up to the maximum possible indexes and children that started therapy processes at 4 years but didn’t present progress according to the proposed criteria.

Table 1 presents data about the result of the \(t\)-Student test applied to the averages of progress indexes observed in the different ages. It is clear that the only significant difference involves children at 4–5 years and 6–7 years.

DISCUSSION

Information regarding adherence to treatment, environmental factors, and interaction with other treatments are essential to the comprehension of each individualized situation. Other issue that needs consideration is the need for other criteria to
the assessment of progress of individuals with different ages or different symptoms, that are not comprised in the adopted criteria. This way, the simple and objective use of other data from the system may allow the quicker identification of answers (or their absence), as was done in a previous study (5).

The results in Table 1 are similar to those observed in a recent study (6), that identified a general tendency of children presenting better responses to therapeutic intervention.

**CONCLUSION**

The changes that happened along time have influenced on the organization of services that provide services to ASD children. One of the most important of them is the notion of autism spectrum. During the 1980s, the diagnosis of childhood autism was attributed only to a group of children with extremely severe disorders that often presented very little response to intervention. It was made clear by the large changes observed since criteria like the ones of the DSM-III started to be used and by the repercussions of the translation of the work by Hans Arperger, from German to English, in 1989 that allowed a new perspective to the assessment of these individuals. Therefore, during these three decades the diagnostic criteria evolved to a broader and more comprehensive perspective that considers the different degrees of severity, aiming to identify the common traits among these individuals and not just their description. It led to the use of the concept of autism spectrum that, in turn, modified the epidemiological features regarding these disorders. In the 1980s it was considered that childhood autism involved one child among 10 000 (or even 50 000). Nowadays it is considered that one child out of every 100 (or 70 when just boys are considered) is included in the autism spectrum. This difference in the diagnostic criteria certainly will demand specific attention to individuals who received the diagnosis in the last decades of the last century or the beginning of the present one. These considerations will be easier once all the information about each intervention process is registered in reliable and accessible systems, allowing the association of information according to the information that is relevant for each analysis.

The first trials conducted with data recorded on a specific system reveal the possibility of studies with large populations, something that is not usual in this field.

*CAHA, THFS and MRPB were responsible for collecting data and helping design the software. FDMF organized the project and coordinated the research.

**REFERENCES**