Relações entre a *Autistic Behavior Checklist* (ABC) e o perfil funcional da comunicação no espectro autístico***

Relations between the Autistic Behavior Checklist (ABC) and the functional communicative profile

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Abstract

Background: language and communication disorders are proposed as one of the three fundamental criteria for the description or diagnosis of pervasive developmental disorders (PDD), along with social disabilities and a narrow focus of interest. This way, the determination of simple procedures that can be used by health and education professionals to identify the persons that need specialized services is essential. The *Autistic Behavior Checklist* (ABC) is being used in several studies because it allows simple application and may be based on filmed behavior samples, interviews with parents or therapists. Its' results, on the other side, had been tested for a few decades and been shown reliable. Aim: the general aim of this study is to verify the possibility that the assessment of the relation between communicative profile and the ABC score contributes to the diagnostic process of persons with disorders of the autistic spectrum. Method: subjects were 117 children and adolescents with ages between 2 and 16 years attending language therapy. Results: were statistically analyzed and indicated that there are negative correlations between the ABC scores and communicative interaction and complexity. The small amount of correlations between language sub-scale and the other data suggest that there is a dissociation of the description provided by the ABC and the criteria proposed by the DSM-IV and the ICD-10 to the diagnosis of autism. Conclusion: the search for objective criteria to determine subgroups of the autistic spectrum remains a challenge.
Key Words: Child; Language; Autistic Disorder.

Resumo

Tema: as alterações de comunicação e linguagem têm sido propostas como um dos três elementos fundamentais para a caracterização e o diagnóstico dos distúrbios globais do desenvolvimento (DGD). A *Autistic Behavior Checklist* (ABC) tem sido utilizada em diversas pesquisas, pois possibilita uma aplicação simples, que pode ser realizada a partir de amostras filmadas de comportamento, entrevistas com pais ou terapeutas, e pode ser utilizada por profissionais das áreas da saúde e da educação. Objetivo: a proposta deste estudo envolve a verificação das correlações entre o perfil funcional da comunicação e as diferentes pontuações na ABC. O objetivo geral desta pesquisa é identificar a possibilidade de contribuição da avaliação fonoaudiológica de crianças e adolescentes incluídos no espectro autístico a partir da verificação de relações entre seu desempenho comunicativo e a pontuação obtida na ABC. Método: foram sujeitos desta pesquisa 117 crianças e adolescentes, entre 2 e 16 anos de idade, já atendidos ou em atendimento no Laboratório de Investigação Fonoaudiológica em Distúrbios Psiquiátricos da Infância do Curso de Fonoaudiologia da Faculdade de Medicina da USP. Resultados: indicaram a existência de correlações negativas entre a pontuação na ABC e a interatividade e complexidade da comunicação. As poucas correlações entre a sub-escala de linguagem e os outros dados sugerem a dissociação entre a descrição propiciada pela ABC e os critérios sugeridos pelo DSM-IV e pela CID-10 para o diagnóstico de autismo. Conclusão: a busca de critérios objetivos para a determinação de sub-grupos no espectro autístico permanece um desafio.
Palavras-Chave: Transtorno Autístico; Linguagem; Criança.

Introduction

The concept of autistic spectrum is being proposed as a way of including the various global developmental disorders in an articulate perspective that includes the complex interrelations between the different clinic pictures and not only placing them side by side (1). The questions of language related to the psychiatric disorders included within the autistic spectrum have been object of previous reviews (2-3) and detailed descriptions (4).

The recent perspectives consider that probably there is a genetic component involved at the origin of the autistic features (5) that are considered as a behavioral syndrome with variable symptoms according to the age and interventions (6).

An important point of this discussion is also marked by the criteria proposed by IDC-10 and by DSM-IV that indicate the need of "qualitative damages" in each of the great areas studied. This observation refers to the great phenotypic variety observed, where criteria of presence or absence of symptoms wouldn't be enough to describe each clinical case (7-9). A large part of the researches involved on the description of the different clinical pictures that are part of the autistic spectrum emphasizes the need of multidisciplinary perspectives for diagnosis (9). The search for better diagnostic criteria has generated several studies (10-14).

The Autism Behavior Checklist (ABC), composes the Autism Screening Instrument for Educational Planning (ASIEP) (15).It is a scale of non-adaptable behaviors, created to scan and indicate the probability of autism diagnostic. It has been validated in Brazil (16) and has been widely used at academic and institutional contexts. (Attached). Otherwise, there is not unanimous agreement about the values indicated in that proposal, they are considered too high tending to not classify an important portion of children (17).

It is important to underline the fact that non verbal children do not take points at the items that refers to expressive language inside the subscale of language. This represents an important bias for diagnostic. This took several authors to consider the ABC a scale with high specificity, in other words, it does not includes non autistic individuals, and tends to do not include many autistic individuals (13,15,17,18,23).

The performance in functional activities of communication was the best indicator of the future performance (19), in a study that investigates the

progress of children attended at specialized schools.

The proposal of this study involves the verification of hypothesis that it is possible to identify correlations between the functional profile of communication of children and teenagers with psychiatric diagnostics included in the autistic spectrum and their scores at ABC.

Objective

The objective of this research is to determinate the existence of correlations between the functional profile of communication of children and teenagers with psychiatric diagnostics included in the autistic spectrum and their scores at ABC.

Methods

Subjects

The subjects of this research were 117 children and teenagers between 2 and 16 years (average 7.8 y.). All of them were or have been patients of the Laboratory of Language Pathology Investigation in Infantile Psychiatric Disorders of the course of Language Pathology of Medicine School, University of Sao Paulo (USP). Parents or responsible signed the consent form approved by the ethic commission of the institution. (Cappesq-460/02)

Procedures

The videotape recordings realized during the process of construction of a data basis for evaluations realized at the Laboratory of Language Pathology Investigation in Infantile Psychiatric Disorders of the course of Language Pathology of Medicine School, USP were analyzed.

These records register 30 minutes of interaction between the subject and the language pathologist in play situations with the material chosen by each subject.

The tapes were analyzed by the researcher, by the language pathologist that conducted the assessment of each of the subjects and by a third judge, a scholarship student with technical capacitating for a guarantied the fidelity of the results. The data were registered in an individual specific protocol (Attached) and resumed in digitalized planeloads of data.

For the application of ABC the data were complemented by interviews with parents and therapists.

For the statistic study the Spearmen correlation analysis was applied with the objective of verification of the level of relation between the variables. The significance level determined was 5%.

Results

In what refers to the functional communication profile, only the communicative functions "Narrative" and "Consent Request" do not figure between the most frequently expressed by none of the subjects.

Table 1 shows the value that refers to each one of the sub-scales and the total score at ABC of the whole group of subjects.

The analysis of correlation between the studied aspects was realized trough the Spearman correlation analysis and also used indexes of significance of 5%.

Table 2 shows the most significant results of correlation between the functional communicative profile and the results of the application of ABC, in each one of the sub-scales and in their partial results.

Table 3 shows the significant values of the correlation between the total scores in each of the sub-scales of ABC and the communicative functions expressed with higher frequency by the subjects of this study.

TABLE 1. ABC's subscales and total scores averages

	SS	RE	BO	LG	PS	Total
Minimum	0	0	0	0	0	0
Maximum	23	34	28	21	17	95
Average	3.17	14.07	7.01	6.76	6.04	37.07
Standard-deviation	3.88	6.52	6.54	5.01	4.2	17.54

Legend: SS = sensorial stimulus; RE = relationship; BO = use of body and objects; LG = language; PS = personal-social development.

TABLE 2. ABC scores and Functional Communicative Profile – significant correlations

	ABC- SS	ABC- RE	ABC - BO	ABA - LG	ABC – PS	ABC - total
Subject- acts				0.003		
Acts/ minute				0.025	0.031	
G	0.001	0.018	0.001	0.043 (-)	0.044	0.045
Ve	0.013 (-)		0.002(-)	0.044		
Vo						
IF	<0.001 (-)	0.002(-)	0.003(-)			0.001 (-)
NIF	<0.001	0.001	0.006			0.001

Legend: ABC = Autism Behavior Checklist; SS = sensorial stimulus; RE = relationship; BO = use of body and objects; LG = language; PS = personal-social development; G = gestual; Ve = verbal; Vo = vocal; IF= interactive functions; NIF = non-interactive functions.

TABLE 3. ABC and Communicative functions – significant correlations

	ABC - SS	ABC - RE	ABC – BO	ABC - PS	ABC – total
XP				0.009	
NF		0.032	0.001		0.001
AR				0.044 (-)	
PR			0.04		
LA		0.022(-)	0.048 (-)		
CO	<0.001 (-)	0.066 (-)	<0.001(-)	0.001 (-)	<0.001(-)
SO					0.033 (-)

Legend: ABC = Autism Behavior Checklist; SS = sensorial stimulus; RE = relationship; BO = use of body and objects; PS = personal-social development; XP = exploratory; NF – non-focused; AR = action request; PR = protest; LA = labeling; CO = comment; SO = show-off.

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Discussion

It was possible to observe that only the functions "Narrative" and "Consent Request" do not figure between the most frequent for none of the studied subjects. Both can be associated to the need of meta-presentation, because they demand at least some comprehension about the variable role of the interlocutors. In this way their absence can be related to the difficulties of meta-presentation and Theory of Mind, frequently associated to the features of the autistic spectrum (1,4,12). It also became evident the huge individuals variations mentioned at literature for many decades (11,14,19-20,23).

At table 1, the possibility of absence of scores in some of the sub-scales, on the other hand, may indicate difficulties relative to translation and/or to the application of the protocol. Despite the attempts to control the possibility, through the utilization of filmed material, and parents and therapists interviews (11,19-20) it is possible that the research of behaviors in terms of only presence and absence (8,21-22) had taken all to look for identifying any possibility of occurrence of each one of the behaviors.

The data at Table 2 indicate that the correlations of the total result are positive with the use of the gestual communicative mean and with the expression of non-interactive communicative functions and negative with more interactive communicative functions. That is, the better functional communicative profile, smaller the ABC scores. All the significant correlations of the use of interactive communicative functions are negative, while they are positive for the use of non-interactive communicative functions. These data can suggest that there is consistency at the association between the use of non-interactive functions and the autistic spectrum diagnostic (10), although this it is not an ABC criterion. The positive correlation between the uses of verbal communication and the language sub-scale (the better the verbal communication, the higher the ABC scores), seems to confirm the weak relation between it and the autism diagnostic mentioned before (6,15).

The lack of correlations with the language sub-scale as verified at Table 3, seems one more time to indicate the weak relation between the items of this sub-scale and the language disorders observed in individuals of the autistic spectrum (17). On the other hand, the negative correlation with the

interactive communicative functions and positive with the non-interactive ones, suggests again the functional characterization of the language disorders of the autistic spectrum.

Conclusion

The present study proposed the determination of the existence of correlations between the functional communicative profile of children and adolescents with psychiatric diagnostics included in the autistic spectrum and their scores at the ABC. Generically, data indicated negative correlation between the interactivity of communication and the use of verbal communicative mean and the scores at sub-scales of Sensorial Stimulation and Use of Body and Objects. The results indicate proportionally more correlations between the total results and each of the sub-scales of ABC and the aspects involving communication interactivity and the communicative means used than to the use of certain communicative functions. In what refers to each of the sub-scales the absence of correlations between the Language sub-scale and communicative functions is emphasized. On the other hand, also deserves attention the negative correlation between scores on all sub-scales, except Language, of the ABC and the use of Comment communicative function. These data seem to indicate that there is a significant correlation between the ABC scores and the results referring to the functional communication profile, except on the Language sub-scale. For sure this constitute a strong argument in favor of the complementarily use of the ABC and the determination of the functional communicative profile in the diagnosis of autistic spectrum individuals.

The large number of subjects in this research and the fact that all of them had psychiatric diagnosis included in the autistic spectrum, according to the ICD-10 criteria or DSM-IV, argue in favor of studies that question the value of the ABC utilization as diagnostic criteria for autism. The results reinforce the notion that there is no agreement between the diagnostic description proposed by the ABC and the criteria suggested by DSM-IV and ICD-10.

In this way, at the lack of psychiatric diagnostics, it is suggested that the application of ABC can confirm the diagnostics hypotheses, but must do not function as the only one instrument of determination of therapeutic choices.

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Anexo

III: *Autism Behavior Checklist* (ABC) (Krug et al., 1980).

Nome: Sujeito Nº
Avaliador: Data:

		ES	RE	CO	LG	PS
1.	Gira em torno de si por longo período de tempo			4		
2.	Aprende uma tarefa, mas esquece rapidamente					2
3.	Raramente atende a estímulos não verbais, sociais, ambientais		4			
4.	Ausência de respostas para solicitações verbais (vem cá, senta...)				1	
5.	Usa brinquedos inapropriadamente			2		
6.	Pobre uso na discriminação visual (fixa partes de objetos)	2				
7.	Ausência de sorriso social		2			
8.	Uso inadequado de pronomes (inversão pronominal)				3	
9.	Insiste em manter certos objetos consigo			3		
10.	Parece não escutar (suspeita-se de surdez)	3				
11.	Fala monótona e sem ritmo				4	
12.	Balança-se por longos períodos de tempo			4		
13.	Não estende o braço para ser pego (nem quando era bebê)		2			
14.	Reações fortes a mudanças no ambiente					3
15.	Ausência de atenção ao seu nome				2	
16.	Gira em torno de si, balança as mãos			4		
17.	Ausência de reposta para expressão facial / sentimento dos outros		3			
18.	Raramente usa "sim" ou "não"				2	
19.	Habilidades em áreas específicas					4
20.	Ausência de repostas a solicitações envolvendo referenciais espaciais				1	
21.	Sobressalto a som intenso	3				
22.	Balança as mãos			4		
23.	Intensos acessos de raiva ou birra					3
24.	Evita ativamente o contato social		4			
25.	Resiste ao toque / a ser pego / a carinho		4			
26.	Não reage a estímulos dolorosos	3				
27.	Difícil ou rígido no colo (mesmo qdo bebê)		3			
28.	Flácido quando no colo		2			
29.	Aponta para indicar o objeto desejado				2	
30.	Anda nas pontas dos pés			2		
31.	Machuca os outros, mordendo, batendo...					2
32.	Repete a mesma fresa muitas vezes				3	
33.	Não brinca de imitar outras crianças		3			
34.	Não pisca para luz forte nos olhos	1				
35.	Machuca-se mordendo-se, batendo a cabeça...			2		
36.	Não espera para ser atendido (quer as coisas imediatamente)					2
37.	Não aponta mais que cinco objetos				1	
38.	Dificuldade em fazer amigos		4			
39.	Tapa os ouvidos para vários sons	4				
40.	Gira, bate objetos muitas vezes			4		
41.	Dificuldade no treino de toalete					1
42.	Usa de 0 a 5 palavras / dia para indicar necessidades				2	
43.	Freqüentemente muito ansioso ou medroso		3			
44.	Franze sobrancelhas, cobre ou vira os olhos com luz natural	3				
45.	Não se veste sem ajuda					1
46.	Repete constantemente as mesmas palavras ou sons				3	
47.	Olha através das pessoas		4			
48.	Repete perguntas e frases ditas por outras pessoas				4	
49.	Freqüentemente inconsciente dos perigos de situações do ambiente					2
50.	Prefere manipular e ocupar-se com objetos inanimados					4
51.	Toca, cheira ou lambe objetos do ambiente			3		
52.	Freqüentemente não reage visualmente à presença de pessoas	3				
53.	Repete seqüências complexas de comportamento				4	
54.	Destrutivo com seus brinquedos e coisas da família			2		
55.	Atraso no desenvolvimento identificado antes dos 30 meses					1
56.	Usa mais de 15 e menos de 30 frases diárias para comunicar-se				3	
57.	Olha fixamente algo por longos períodos de tempo	4				

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