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Assessment Battery for Communication (ABaCo): searching for Social (pragmatic) Communication Disorder (SPCD) in the complex world of Special Needs

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Introduction:

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5 [1]), introduced Social Pragmatic Communication Disorder (SPCD), which is characterised by difficulties in pragmatics. Traditionally pragmatics refers the use of language to convey meanings in a given context [2]. In a multimodal perspective, however, not only linguistic but also extralinguistic and paralinguistic features play a crucial role in communication [3, 4]. A lack of clinical assessment tools, allowing specific differential diagnosis between SPCD and other disorders is documented [5-7]; this absence leads to challenges in the detection of SPCD.

The Assessment Battery for Communication (ABaCo; [8]) is a validated assessment tool for the evaluation of pragmatic abilities, both comprehension and production, through a linguistic, extralinguistic, paralinguistic, contextual and conversational scale. In previous studies, ABaCo has proven to be useful in the detection of pragmatic development in children [9, 10].

This study aims to investigate whether it is possible to identify children with undiagnosed SPCD within the "Bisogni Educativi Speciali" (BES) group, the students with special needs labelled in this way in Italy [11], and whether ABaCo can detect their difficulties. There is no nosographic classification of BES, but this category includes difficulties with school activities.

Materials and Methods:

15 children (7-15 years old) with BES, were recruited from an Italian care centre; exclusion criteria: diagnosis of specific learning disorder or cognitive impairment (QIT<80). A control group of children with typical development was also recruited. The following tests were performed:

- ABaCo [8, 9];
- Children's Communication Checklist, II Edition (CCC-2; [12]);
- WISC IV [13];
- Standard Progressive Matrices [14];
- Some subtests from NEPSY II [15];
- Socio-Economic-Status Questionnaire [16].

Results and Discussion:

A series of independent samples t-test were conducted, to analyse participants' total score on ABaCo. As expected, there was a significant statistical difference between the two groups, with the BES group performing worse ($t(28)=2.69$; $p=.012$).

When analysing the two groups' performance on the comprehension tasks, a difference was found at the edge of statistical significance ($t(28)=2.04$; $p=.050$), while a significant statistical difference was found when considering only the production subtests ($t(28)=2.72$; $p=0.011$). These results suggest that production is more involved in the overall results than comprehension.

Repeated measures ANOVA and a series of t-tests (Bonferroni correction for multiple comparisons) were performed, to analyse the performance on each scale of ABaCo, and in comprehension and in production. Both analyses revealed a statistically significant difference between the performances of BES and the control subjects on the paralinguistic scale ($t(28)=3.46$; $p=.002$; $t(28)=2.904$; $p=.007$), but not on the other scales of ABaCo.

Performance was also analysed considering the general communication score (GCC) of CCC-2. The analysis (independent samples t-test) revealed no statistically significant differences between BES and controls. In addition, no significant statistical correlation (Pearson) was found between GCC and overall ABaCo scores.

These preliminary results suggest that ABaCo seems to be an effective assessment tool for identifying children with SPCD. However, further studies with larger samples are needed to provide better insights on this topic.

Keywords: *Social Pragmatic Communication Disorder, Special Needs, Pragmatics*

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