Title: Cross-Cultural Comparison of Behavioral Profiles of Children with Williams Syndrome: Brazil and the United States

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Introduction: The Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) is the mostly commonly used measure of behavioral and emotional problems in studies of children with Williams syndrome (WS; Pérez-García et al., 2017). This measure has been translated into more than 100 languages. Multicultural norms based on population samples from 57 societies are available. As such, the CBCL provides a standardized but culturally-sensitive opportunity to compare behavioral profiles cross-culturally. The aim of the current study was to identify similarities and differences in the behavioral profile of children with WS from two different countries: Brazil and the United States (US).

Method: Participants were 56 children with WS from Brazil and 56 children with WS from the US aged 8 – 17 years. The Brazilian (M: 13.87 years) and US (M: 13.83 years) groups were well matched on age (p = .90) and sex (33 boys, 23 girls). Parents completed the CBCL for Ages 6 – 18. The CBCL has eight empirically-based syndrome scales and six Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) based scales; recently, three scales (2007 scales) were added. The empirically-based scales load onto three higher-order factor scales: Internalizing Problems, Externalizing Problems, and Total Problems. T-scores are computed from the sum of the items of each scale. Multicultural norms are provided.

Results: Results of Mann-Whitney U tests indicated significant differences in raw scores between the Brazilian and US groups on four of the empirically-based scales: Anxious/Depressed, Withdrawn/Depressed, Social Problems, and Thought Problems; all three higher-order factors; two of the DSM-5-based scales: Depressive Problems and Anxiety Problems; and two of the 2007 scales: Obsessive Compulsive Problems and Stress Problems (all p-values < .003). In all cases, the distributions were higher (indicating more problems) for the Brazilian sample than for the US sample. In contrast, T-score distributions did not differ significantly on any of the higher-order factors, DSM-5-based scales, or 2007 scales. Significant differences were found only on two empirically-based scales: The distribution of T-scores for the US group was significantly higher than the Brazilian group for Attention Problems (p = .004) and Somatic Complaints (p < .001), indicating significantly more problems for the US sample than the Brazilian sample relative to same-country general-population peers. Chi-square tests indicated no significant differences in the proportion of children whose T-scores were in the normal vs. the borderline or clinical range on each scale as a function of nationality. Spearman correlational analyses (alpha = .01) examining relations between age or IQ and CBCL scale T-scores indicated a significant correlation between CA and Internalizing Problems T-score (rho = .35, p = .009) for the Brazilian group and between IQ and Thought Problems T-score (rho = -.40, p = .002) for the US group. No other correlations were significant.

Discussion: Evaluation of CBCL raw scores revealed that the Brazilian sample evidenced significantly more problem behaviors than the US sample on more than half of the CBCL scales, according to parental report. A very different pattern emerged when between-nationality comparisons were conducted based on the country-specific norms: T-scores differed significantly on only two scales. The T-score distribution was significantly higher for the US sample than the Brazilian sample on Attention Problems and Somatic Complaints. However, the medians for both groups were within the normal range on Somatic Complaints. This pattern of findings highlights the importance of the development of country-specific norms for standardized assessments to account for cultural differences. Possible cultural influences on the intensity of attentional problems in WS will be discussed.

References/Citations: