assessment in clinical and research scenarios. It assesses diagnostic status and symptom severity, and was developed in 1989 at the U.S. Department of Veterans Affairs National Center for PTSD.<sup>3</sup> To reflect recent changes in the definition and diagnostic criteria of PTSD, the CAPS has been adapted to the DSM-5 criteria,<sup>4</sup> and has demonstrated good psychometric properties when compared to its previous version. Even though the CAPS-5 is available in English, there is still no DSM-5-based, clinician-administered structured interview in the Brazilian Portuguese language to measure presence and severity of PTSD symptoms. In this letter, we describe the process of cross-cultural adaptation of the CAPS-5 for use in Brazil.

For the cross-cultural adaptation process, we used a formal, structured methodology to ensure conceptual, semantic, and operational equivalence.5 The original scale was translated into Brazilian Portuguese by two native Brazilian translators, experts in English, and both first versions merged by one of the authors of this study (RCS, bilingual and qualified in use of the previous version). Back-translation was performed by a native English speaker who is fluent in Portuguese and has extensive experience with psychological instruments. Then, an expert team evaluated the equivalence of the instrument to review cultural differences. A pilot study of this version of the instrument was conducted with five individuals who sought treatment at PROVE, a specialized outpatient PTSD clinic of the Universidade Federal de São Paulo (UNIFESP) Department of Psychiatry. The operational equivalence process was conducted by the expert team to analyze some discrepancies found when the target population completed the instrument, and a final version was proposed.

It is our opinion that incorporation of the CAPS-5 as a diagnostic instrument in the context of Brazilian violence is critical. A reliability study to assess the internal consistency of the final version of this instrument, after the cross-cultural adaptation process, is already ongoing. An important step to follow is validation of the translated version, which will allow it to be widely used in Brazil.

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## **Disclosure**

The authors report no conflicts of interest.

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# Mosaic 15q duplication syndrome (tetrasomy 15q11.1-q13.2) in a child with behavior disorders: case report

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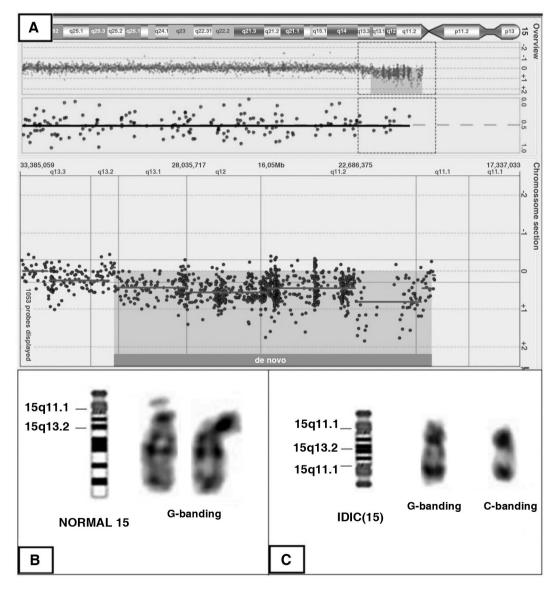
Chromosome 15q duplication syndrome, also known as isodicentric chromosome 15, idic(15), or invdup(15) syndrome, is a rare chromosomal disorder characterized by distinctive features such as autism spectrum, epilepsy. and developmental delay. 1 According to the literature, the 15q11.2-q13.1 segment is the most common region of the large idic(15) syndrome that is duplicated.<sup>2,3</sup> We report a new case of mosaic isodicentric chromosome 15 with 15q11.1-q13.2 tetrasomy (duplication of the 15q11.1q13.2 region) in a 4-year-old female referred for medical evaluation due to autistic behavior, anxiety, facial dysmorphism, and developmental delay. Physical examination revealed large, low-set ears, a broad forehead, and malformed pinnae. She also suffered from reflux. The patient exhibited several signs of autistic behavior, including repeated and stereotyped movements (such as rotating objects) and echolalia (repetitive speech patterns). The parents described their daughter as a cheerful and loving child with good eye-to-eye contact. According to medical records, an echocardiogram showed a ventricular septal defect with no significant hemodynamic changes. An organic acids test and electroencephalogram were normal.

Array comparative genomic hybridization (array CGH) analysis of genomic DNA samples (blood) was performed

using the Human Genome CGH Microarray technology platform (Agilent), containing 60,000 oligonucleotide probes. Array CGH analysis showed an abnormal female array profile with a gain of three copies in the 15q11.1-q13.2 region (10 Mb, 20,190,682-30,367,656; Build 37/Hg19) (Figure 1A). Cytogenetic analysis was performed on peripheral blood lymphocytes. Analysis of C- and G-banded metaphases showed that 15 chromosomes (30%) had the normal 46,XX karyotype, whereas 35 (70%) had the 47,XX,+mar karyotype (Figure 1B-C). Further analysis showed 47,XX, + mar[35]/46,XX[15] mosaicism. The patient's parents did not undergo cytogenetic analysis. Due to the presence of chromosomal mosaicism in 30% of normal cells, array CGH identified amplification of only three copies of the 15q11.1q13.2 segment. However, the combination of cytogenetic analysis and array CHG indicated 15g11.1-15q13.2 tetrasomy.

The mosaic form of 15q duplication syndrome is particularly rare, occurring in only 17% of large idic(15) cases.<sup>4</sup> This is in contrast to most marker chromosomes, which are more frequently observed to be mosaic.<sup>5</sup> At least half of patients with idic(15) exhibit convulsions and/ or spasms during childhood.<sup>4</sup> The probability of epilepsy is reduced by up to 50% in idic(15) syndrome patients with mosaicism.<sup>4</sup> In the case reported herein, 70% of cells carried the marker chromosome 15.

At the time of writing, the proband is 7 years old and shows no signs of epilepsy or reflux; weight is 24 kg and height is 1.25 m. Despite developmental and speech delays, she is able to speak in short sentences. She walks without difficulty and is quite active during the day; she can brush her teeth and eats a varied diet, feeding with the help of her parents. Nevertheless, she experiences anxiety, learning difficulties, fine motor impairment, and is



**Figure 1** A) Array comparative genomic hybridization analysis showing amplification of the 15q11.1-15q13.2 chromosomal region (10 Mb; 20,190,682-30,367,656; *Build 37/Hg19*). B) Partial G-banding: ideogram and normal chromosomes 15. C) Partial G- and C-banding: ideogram and marker chromosome 15.

unable to write. Our patient is receiving physical therapy, educational psychology interventions, and equine therapy. We hope our report can contribute to the literature by expanding on genotype-phenotype correlations for this syndrome.

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## Corruption: the culture of a society and/or personality factors?

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Corruption is a global challenge, hindering economic growth, reducing per capita income and negatively affecting the development of industry and commerce. Although present worldwide, it is mainly found in developing countries, especially those with low incomes and closed economies, very much like Brazil. The losses Brazil has endured because of corruption are difficult to calculate, but official estimates suggest that tens of billions of reais are lost annually. Such evidence of widespread corruption in the Brazilian scenario reinforces the need for conducting multidisciplinary studies, producing a better

understanding of this phenomenon, and developing interventions to address it.

Despite a wealth of psychological and psychiatric research on criminal behavior, the scientific literature is still lacking when it comes to studies on corruption. Corruption is defined as the use of public power for personal benefit, and although no social phenomenon is reducible to the sphere of the individual, it has been recognized that individual personality is an important element in the adoption of behaviors and attitudes, with several negative personality traits having been associated with morally and ethically questionable behaviors.

There is a long tradition in psychology and psychiatry of studying personality traits associated with criminal behavior. It is known, for example, that certain disorders (such as antisocial personality disorder) are associated with aggression and criminality.2 In addition, the nuances of the various personality disorders often relate to different types of violent behavior: borderline personality disorder is more associated with interpersonal aggression than is antisocial personality disorder, which is a risk factor for "victimless" crimes, such as corruption.2 On the other hand, studies have shown that individuals with higher levels of conscientiousness, according to the five-factor model, are less likely to engage in deviant behavior. This observation is consistent with the theoretical model, since conscientiousness mainly relates to the degree of organizational capacity and evaluation of the necessary steps to reach an objective, in addition to persistence and motivation in objective-oriented behavior. Therefore, high levels of conscientiousness are related to greater perception of risk, which reduces criminal engagement.4

In addition to these aspects of personality, the large amounts of money embezzled in Brazil may also contribute to corruption, as, when high monetary values are involved, they tend to justify behaviors, shifting the perception of guilt from individuals to the money itself. As with crime in general, it is neither possible nor prudent to reduce the issue of corruption to a single biopsychological dimension. However, greater knowledge about the neural and psychological mechanisms underlying this phenomenon would undeniably contribute to addressing the problem of corruption more effectively.

Ayal et al.<sup>5</sup> propose behavioral methods for reducing corruption based on scientific evidence, such as requesting a public declaration of ethics, which has been shown to reduce the risk of corruption by generating cognitive dissonance. Fostering this line of research among Brazilian scientists in mental health can make a great difference to the present and future of the country.

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