same span prompted interruption of the task. Reliability was estimated by the split-half method, using the first trials from each span to compose the first half and the second trials to compose the second half. Reliable change indexes (RCIs) were calculated for all test measures.

Table 1 shows descriptive data, internal consistency, and reliable change coefficients for each task. Reliability was high for Digit Span forward, low for Digit Span backward, and moderate for the Corsi Block-Tapping task. The RCI for the tasks can be used to track significant changes in longitudinal assessment, although the high variability and moderate reliability of the tasks are likely to hinder assessment of mild or slight changes.

Jonas J. de Paula,[1,2] Leandro F. Malloy-Diniz,[1,3] Marco A. Romano-Silva[1,3]

[1]*Instituto Nacional de Ciência e Tecnologia em Medicina Molecular (INCT-MM), Faculdade de Medicina, Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, MG, Brazil.* [2]*Departamento de Psicologia, Faculdade de Ciências Médicas de Minas Gerais, Belo Horizonte, MG, Brazil.* [3]*Departamento de Saúde Mental, Faculdade de Medicina, UFMG, Belo Horizonte, MG, Brazil.*

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It is time to prepare mental health services to attend to migrants and refugees

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Brazil is a multicultural nation. Since the 1970s, the country has received a substantial number of immigrants and refugees, mainly from Latin America, Europe, Africa, and China. In 2012, over 940,000 people were living in Brazil with a permanent visa.[1] Compared to other countries, this still represents a small percentage of the population (0.9%), but with recent international events, rapid growth is expected. As of March 2015, according to the Brazilian Federal Police, 1,189,947 immigrants with a permanent visa and 4,842 refugees were living in the country.[2]

The immigration process represents a risk factor for mental health problems, putatively through several pathways including unfavorable life circumstances (such as wars, extreme poverty, and political persecution); exposure to stress; low income; loss of contact with family; losses in social status, culture, and home; and lack of contact with one's ethnic and cultural group of origin. The fragility of migrant populations has also been linked to marginalization, legal issues, lack of social support, and everyday exposure to stigma and discrimination.[3]

Furthermore, immigration implies acculturation and continuous adaptation to a new language, different cultural roles, and an unknown and frequently hostile environment, requiring constant effort to survive and succeed.[4] Although the impact of a migration experience on the vulnerability to mental disorders and emotional suffering is relatively well described, mental health services in Brazil are still poorly adapted to the needs of immigrants and refugees, and health professionals are largely culturally unprepared to establish good rapport with these patients. One study on Bolivian immigrants in the city of São Paulo found that 72% of the sample reported experiences of discrimination during medical appointments in the public health system.[5]

In addition, although the number of immigrants and refugees who seek mental health care in Brazil is growing, there are international data supporting that most mental health resources are underused by this population.[6] This can be attributed to several barriers to care, including sociocultural differences (in manifestations of symptoms, in expression of emotional suffering and attribution of causes, and in methods used to manage mental health

problems) and stigma. For example, some cultures with strong family bonds can perceive mental disorders as something that would expose the family and affect its reputation. Structural-contextual barriers in Brazil include the lack of access to appropriate and culturally sensitive mental health services, due to the lack of staff members who understand and speak languages other than Portuguese, and the very small number of workers from minority groups or trained to work with people from different ethnic and cultural backgrounds. Brazil's political and racial context could also affect the capacity of adults and children to trust the mental health system to help them, especially among undocumented immigrants. These barriers are even more complex in small municipalities and far from major centers.

Reducing barriers to care and providing culturally appropriate mental health services is a significant challenge for professionals, policy makers, and migrant and refugee advocacy organizations. To cultivate best practices in assessment and diagnosis, clinicians could take various steps to examine consciously and take into consideration the extension of cultural and linguistic differences between patients and the predominant culture of Brazil. One way to do this is to recognize the dynamic nature of culture and incorporate cultural variables at all stages of the assessment process, e.g., by using culturally sensitive interviews or collecting data on acculturation, religious practices, racism/discrimination, and cultural values. The use of a contextual approach that takes the explanatory models of patients into account, and whereby patients could understand the medical hypothesis easily, would also be useful, as would assessment of the possibility of culture-related syndromes. Finally, for mental health professionals to have access to translators and work in partnership with the different cultural communities would greatly benefit the health services and help meet the needs of the growing number of immigrants and refugees in Brazil.

Lineth Hiordana Ugarte Bustamante,[1,2] Emilie Leclerc,[1,2] Jair de Jesus Mari,[1,2] Elisa Brietzke[1,2]
[1]*Departamento de Psiquiatria, Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil.* [2]*Programa de Pós-Graduação em Psiquiatria e Psicologia Médica, UNIFESP, São Paulo, SP, Brazil*

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A neurofeedback protocol to improve mild anxiety and sleep quality

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As most psychiatric disorders, anxiety and depression are conditions whose severity can be represented over continuums that range from subclinical manifestations (expectancy/fear without proper justification and low mood, respectively) to full-blown biosocial disabilities. From an endophenotypic perspective, alpha band (8-12 Hz) asymmetry in the left frontal cortex has emerged as the most prominent electroencephalographic (EEG) correlate of both anxiety and depression in right-handed people, followed by excessive band power in beta 1 (12-20 Hz) and beta 2 waves (20-30 Hz) in the right parietal lobe.[1] Shared features also extend to the genetic level, where the presence of copies of the short variation of the 5-HTTLPR polymorphism increases the risk of both anxiety and depression.

EEG neurofeedback is an operant conditioning technique in which subjects learn to self-regulate and modify their brain activity through a feedback loop. In the recent past, induction of healthy alpha asymmetry[2,3] and regulation of alpha power bands[4] have been successfully used to treat anxiety and depression, whereas increasing the power of sensorimotor rhythm (SMR) bands – a sort of EEG activity ranging from 12-15 Hz over the sensorimotor cortex – has been used successfully to improve memory and sleep quality.[5]

We report the case of a 29-year-old woman, with no previous psychiatric history, who presented with anxiety symptoms, sleep problems, and mild cognitive impairments which she associated to a contingent situation she was facing. We assessed pre- and post-EEG data using a protocol reported elsewhere.[3] Anxiety and depression symptoms were assessed using Beck scales (Beck Anxiety Inventory [BAI] and Beck Depression Inventory [BDI]), and sleep quality, with the Pittsburgh Sleep Quality Index (PSQI). Cognitive measures were also administered. A summary of results is presented in Table 1.

The training protocol lasted 20 sessions, during which the subject was trained to increase beta 1 (12-15 Hz) at C4 with eyes open, followed by closed-eyes training designed to increase the alpha/beta 3 ratio (9.5-12 Hz/23-38 Hz) at P4. There was marked improvement of anxiety, depression, and sleep quality, as well as some improvement in executive functions (Table 1). From an endophenotypic viewpoint, there was an overall increase in beta 1, low alpha (8-10 Hz), and high alpha (10-12 Hz) powers and a decrease in beta 2