

# Translation and transcultural adaptation to Brazilian Portuguese of the Theory of Mind Task Battery for assessment of social cognition in the elderly

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## Dear Editor,

Social cognition is an important area that involves the ability to recognize the mental states of other persons, such as desires, beliefs, and feelings, and consequently, it differentiates them from their own mental states<sup>1</sup>.

In 2013, the American Psychiatric Association launched the 5<sup>th</sup> edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) with important changes in the criteria for the diagnosis of dementia. Among the changes, it is worth highlighting the inclusion of social cognition. The section regarding neurocognitive disorders in the DSM-5 describes the recommended tests for each area's assessment, considering that the tasks of facial emotion recognition and the theory of the mind were recommended for the assessment of social cognition<sup>2</sup>.

Despite the indication in the DSM-5, few resources are available for the assessment of this cognitive area among the elderly<sup>3</sup>. This letter presents a translation and transcultural adaptation for Brazilian Portuguese of the Theory of Mind Task Battery (ToM TB). This is the first study that proposes the use of the ToM TB to evaluate theory of mind specifically in elderly. This task was chosen for these specific purposes because it is easy to understand and quick to apply.

The ToM TB was initially developed for use in children who have different cognitive profiles according to their age group<sup>4</sup>. This tool comprises nine different situations, which are introduced through short vignettes, and a total of 15 questions that can be classified as correct or incorrect with a total score varying from 0 to 15. These tasks are arranged in increasing order of difficulty, enabling the assessment of the recognition of simple facial expressions up to the second-order false beliefs.

The translation and transcultural adaptation were performed as recommended by Beaton *et al.*<sup>5</sup> after authorization from the authors of the battery. The procedure involved stages of translation performed by two bilingual professors from the mental health area with experience in the use, translation, adaptation and validation of assessment tools. The translations were performed independently. A common version was produced based on consensus, considering semantic, idiomatic, experimental, and conceptual/cultural equivalence. This version was back-translated into English and reviewed by an author of original version. Finally, an analysis was performed on the applicability of the final version of the instrument in six older adults between 60 and 67 years old, three men and three women, with different levels of education. The participants signed a voluntary and informed consent form.

The versions from the two translators showed a high level of agreement and few discrepancies, most of which were related to semantic equivalence. No item in the instrument was considered non-applicable. Regarding the cultural equivalence, the changes were

mainly related to characters' names of the vignettes in order to adapt to the Brazilian culture. For example, the name Brynn was replaced with "Bia", Franklin with "Francisco", among others. In the pilot study, it was observed that the elderly with greater levels of education had better performance, which may indicate that the ceiling effect should be considered in the elderly with higher levels of education. Despite this, the questions and the structure of the instrument were considered appropriate by the elderly. In addition, the ToM TB had high acceptability and understanding, and no suggestion was made by them. Therefore, no changes were performed with regard to the final version. The total time of application was approximately 10 minutes.

Up to this time, few social cognition instruments were used and their psychometric qualities evaluated in samples with elderly persons. In addition, the majority of the studies performed with these tools were applied to the elderly with high levels of education, since these tests generally involve complex tasks<sup>6</sup>. This fact must be taken into consideration when choosing the tool to be used in illiterate populations with poor levels of education, which occur particularly in low and middle income countries such as Brazil. To gain a more accurate picture, the illiterate rate in Brazil above 60 years old is of 26.5% and about half of the people over 50 years of age are considered functionally illiterate<sup>7</sup>. Therefore, the ToM TB must be considered as an alternative for these populations, since the tool proposes to assess the theory of mind at different levels of linguistic and cognitive capacity. In addition, researches with cognitive rehabilitation programs have pointed to improvement in several cognitive domains<sup>8</sup> without assessment of social cognition, so the ToM TB could be used in intervention studies to evaluate this important domain.

Considering the aspects mentioned above, the Brazilian version of the ToM TB seems to be a viable and effective tool for the assessment of social cognition, particularly the theory of the mind, in the elderly within the Brazilian context. Currently, it is in the process of clinical validation in elderly samplings with and without neurocognitive disorders. More information of the ToM TB is available at <http://www.theoryofmindinventory.com/task-battery>. On this website, it is possible to find the contact email of all researchers responsible for the validation of the tool in different languages.

## Conflict of interest

The authors declare no conflict of interest.

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