

**Is the Fagerström Test for
Nicotine Dependence a
good instrument to assess
tobacco use in patients with
schizophrenia?**

**O Teste de Fagerström para Dependência
de Nicotina é um bom instrumento para
avaliar o uso de tabaco em pacientes com
esquizofrenia?**

Dear Editor,

We have read with great interest the article by Chaves and Shirakawa,¹ in which the authors confirmed previous observations that patients with schizophrenia smoke in a higher rate as compared to the general population. They also observed that the patients were considered as heavy smokers according to the Fagerström Tolerance Questionnaire (FTQ).

Although the FTQ is considered to be adequate to assess nicotine dependence due to its extensive use, it suffers from significant psychometric shortcomings, such as low internal consistency and poor criterion validity.² In order to address these problems, the Fagerström Test for Nicotine Dependence (FTND) was developed. The modifications of the FTQ consisted in the elimination of two items (“nicotine content of cigarette”; “frequency of inhalation”)

and in the expansion of the scoring format for two items (“time to first cigarette”; “number of cigarettes smoked per day”), resulting in a six-item questionnaire that provides a 0-10 score. The results from both the original study and subsequent research indicate that the FTND has satisfactory psychometric qualities due to its greater internal consistency and to the fact that it has a single factor.² However, no studies to date have evaluated the psychometric properties of the translated Portuguese version of this instrument. We have recently³ examined this issue using the Brazilian version of the FTND in three different samples of smokers: university students (n = 61); patients of a Psychosocial Care Center for Alcohol and Drug Users (PCC-AD; n = 30) and patients treated at an Emergency Unit and at the PCC-AD (n = 271). The FTND showed high reliability levels, with correlation coefficients of 0.92 for test-retest and 0.99 for inter-rater reliability. At the cut-off score of four, the instrument presented a sensitivity of 0.80, specificity of 0.74, positive predictive value of 0.95, and negative predictive value of 0.30. The evaluation of the internal consistency yielded a Cronbach’s alpha coefficient of 0.83. An Exploratory Factorial Analysis found two factors in the FTND (‘Smoking Pattern’ and ‘Morning Smoking’ factors), attested by a Confirmatory Factor Analysis. Thus, the results obtained in our study confirm the efficiency of the Brazilian version of the FTND.

Nevertheless, few studies (none in the Brazilian context) have examined the psychometric properties of the FTND in smokers with schizophrenia. This would be particularly important since some questions have been raised about the applicability of the FTND to this population. The patients’ smoking habits are usually controlled by others and there seem to exist differences between the smoking patterns, living arrangements, and daily routines of patients and healthy individuals.⁴ These factors are believed to produce an underestimation of nicotine dependence in schizophrenia, which

may have a negative impact in the dosage of the nicotine replacement treatment if the FTND scores are used to guide it.⁴ For instance, Weinberger et al. studied the reliability of the FTND in smokers with schizophrenia and observed that the test-retest correlations were lower for patients than for controls (0.65 versus 0.82).⁵ Moreover, when the test was administered to schizophrenia patients, lower internal consistency (Cronbach’s alpha) and a non-conventional factorial structure were found.⁴ To date, as far as we know, there is no validity study of the FTND in patients with schizophrenia.²

Therefore, despite its wide use in research and clinical practice, the FTND still requires further psychometric investigation including patients with schizophrenia. In particular, studies evaluating its validity are necessary and opportune in order to provide the basis for the definition of specific cut-off points for this psychiatric population.

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For more information, see instructions for authors.

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