How to Face the Association between Tobacco and Psychosis?

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Abstract

Evidences suggest an association between tobacco and psychosis. However, the reasons why people with psychosis have a higher tendency to smoke than the general population are not yet clear. Recently, Gurillo et al. reported that daily use of tobacco is associated with an increased risk of psychotic disorder and an earlier age of onset of psychotic illness. His study also calculated a significant mean difference in age at onset, expressed in years, and estimated the prevalence of smoking in people with their first episode of psychosis. According to this and other findings, it could be said that the causes of the smoking-schizophrenia association are complex and cannot be explained solely as a result of some aspect of schizophrenia. Thus, new studies in this area are needed, as well as strategies that look for the monitoring of smoking effects in order to reduce it among individuals with schizophrenia.

Smoking prospectively predicts risk for schizophrenia (SCZ). [1] Schizophrenia patients have been widely reported to have heavier smoking pattern when compared with general population and patients with other mental disorders. [2] For example, the prevalence of smoking among people with SCZ in the United States is about 3 times that of the general population. [3] Given this, monitoring the distribution and the intensity of tobacco use is critical for identifying the priority areas for action and evaluating the progress acquired with these interventions. [4]
In *The Lancet Psychiatry*, Pedro Gurillo and colleagues [5] report that daily tobacco use is associated with an increased risk of psychotic disorder and an earlier age at onset of psychotic illness. However, the effect of smoking seems to be modest. The authors performed a systematic review and meta-analysis of prospective, case-control, and cross-sectional studies to test some hypotheses: an excess of tobacco use is already present in people with their first episodes of psychosis; daily tobacco use is associated with an increased risk of subsequent psychotic disorder and an earlier age at onset of psychotic illness; and, finally, an earlier age at initiation of smoking is associated with an increased risk of psychotic disorder. Gurillo et al. [5] aimed to produce a significant mean difference in age at smoking onset, expressed in years, and to estimate the prevalence of these actions in people presenting their first episode of psychosis. Thus, they found that people with psychosis have begun smoking 0.44 years earlier than the controls, although this difference was not significant, and the prevalence of smoking in patients with their first episode of psychosis was 57%.

In this study [5], it is also highlighted that the reasons why people with psychosis are more likely to smoke compared with the rest of the population are still unclear. Several hypotheses have been brought up to explain the high prevalence of smoking in patients with SCZ [6], which demonstrate that the causes of the smoking-schizophrenia association are complex. [1] Also, shared familial/genetic risk factors and, to a lesser extent, other epidemiological confounders contribute to the association. [1] However, while no significant association was found between smoking and antipsychotics and their extra-pyramidal side effects (EPS) [2] and, despite clearly demonstrable improvements in attentional performance, these benefits do not seem to be a primary motivator of tobacco smoking in SCZ. [7]

Previous studies to Peter Gurillo and his colleagues showed that the risk for schizophrenia was substantially higher in heavy smokers than in light smokers as defined using the standard measure of average consumption of cigarettes per day [1] and that smoking rates may increase sharply as the illness progresses from its early stages. [6] Besides, it is known that stimulants (e.g. methamphetamine, cocaine) may precipitate psychosis. [8]

Facing this, although patients with chronic schizophrenia have substantially higher smoking rates than either the general population or the patients with other mental illnesses, drug-naive patients with a first-episode schizophrenia (FES) have received little systemic study. [6] A study in New South Wales, Australia, revealed half of first psychosis admissions had comorbid substance diagnoses. [7] Individuals experiencing their first psychotic episode reported rates of substance and tobacco use that were higher than those observed in the general population. [9] Moreover, smoking was associated with an increase in psychotic symptoms in FES patients. [6]

Pedro Gurillo and colleagues [5] also report that use of nicotine at a young age could be attributed to self-medication for anxiety in individuals at the prodromal stage of illness. Although attention-enhancing effects of nicotine are likely not the primary driving force of tobacco consumption in smoking among people with SCZ, [7] patients with more severe symptoms may have smoked to counteract these symptoms or used smoking to improve subtle psychotic symptoms occurring before the onset of full-blown psychosis. [6] Furthermore, there is evidence of genuine nicotine-induced enhancement of cognitive performance. [10] Facing such evidence, the smoking-schizophrenia association cannot be explained solely as a result of some aspect of SCZ, including its symptoms or its treatment, increasing the risk of smoking onset. [1] As the authors [5] highlighted, future studies, particularly longitudinal and prospective studies with larger sample sizes, should investigate the relation among daily smoking, sporadic smoking, nicotine dependence, and development of psychotic disorders.
Finally, as suggested in Gurillo et al. [5] study, cigarette smoking might be, hitherto, a neglected modifiable risk factor for psychosis, but confounding and reverse causality are possible [5]. Therefore, policies and strategies to improve global health must include comprehensive efforts to control tobacco use, as envisaged under the Framework Convention on Tobacco Control (FCTC). Nevertheless, the implementation of policies is not enough; countries, and the global health community need to collect timely, reliable, and detailed information on the effects of those policies, particularly among vulnerable populations and those being directly targeted by the tobacco industry. [4]

References