Does treating tobacco addiction in persons with mental illness compromise their quality of life?

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"We cannot take smoking away from them; it is their only pleasure in life". Anonymous Health Provider

In contrast to overall declining smoking rates, the high rates among persons with mental illness remain unchanged. They consume 44% of purchased cigarettes and are heavier, more addicted smokers. Smoking is the most salient risk factor for their premature death, estimated at 25 years. Chemicals in tobacco affect mental symptoms and neurobiological vulnerabilities, and increase the metabolism rate of many psychiatric medications resulting in increased dosages, costs, and side effects. Tobacco's substantive costs are particularly problematic for persons with mental illness when lacking discretionary funds. Tobacco addiction treatment is effective in this population, particularly with combinations of motivational enhancement, cognitive behavioural, and pharmaceutical therapies. Yet treatment is often withheld out of concern quitting would negatively reduce their quality of life.

Method: The Tobacco Reduction and Cessation (TRaC) Project studied a multimodal cessation intervention on quality of life (QoL) for persons with mental illness. Following HREB ethical approval, this prospective open-label non-randomized trial occurred through three Edmonton sites: primary care, psychiatric outpatient, and university/research hospital. Inclusion criteria included a psychiatric illness for at least 2 years; documented Global Assessment of Functioning less than 40 once during that time; currently smoking; and over 18 years.

The intervention included individualized combinations of motivational enhancement, cognitive behavioural and/or pharmaceutical therapies delivered by an addiction psychiatrist, registered nurses and pharmacist. Quit attempts typically coincided with session four of the nine week group therapy. Effective administration and dosing of medications using a 'pharmaco-extinction' model (titration of nicotine dosages upwards with concomitant reduction of smoking) was ensured through individual counseling. Therapy exceeding recommended (monograph) doses and duration were under medical supervision.

Measurement occurred upon entry, monthly, and six-months post-completion. Abstinence was confirmed with exhaled carbon monoxide levels less than 10 ppm; reduced smoking was determined as less than 5 cigarettes per day (cpd), and non-completers assumed to continue smoking. The Smoking Cessation Quality of Life Scale (SC-QoL) constructs included social interaction, self-control, sleep, cognitive functioning, and anxiety reduction.

Results: The mean age of the eighty-eight participants was 46 years with slightly more female representation. Psychiatric diagnoses were major depressive disorder, anxiety disorder, and/or schizophrenia. The majority (71.3%) were heavy smokers (more than 20 cpd) with severe dependence. The 50% attrition rate was not unexpected due to the severity of patients' illnesses, transient living conditions, and life complexities. At six months post-intervention, 28% had quit and 13.6% reduced.

The differences in mean SCQoL from baseline to 6-month post-program demonstrated improvements in all fields irrespective of smoking status with the exception of social interaction for Reducers. Quitters had significant, positive changes in parameters of self-control, cognitive functioning, and anxiety reduction. The one significant change among reducers was anxiety reduction, and quitters had significant changes in social interaction (Table 1).

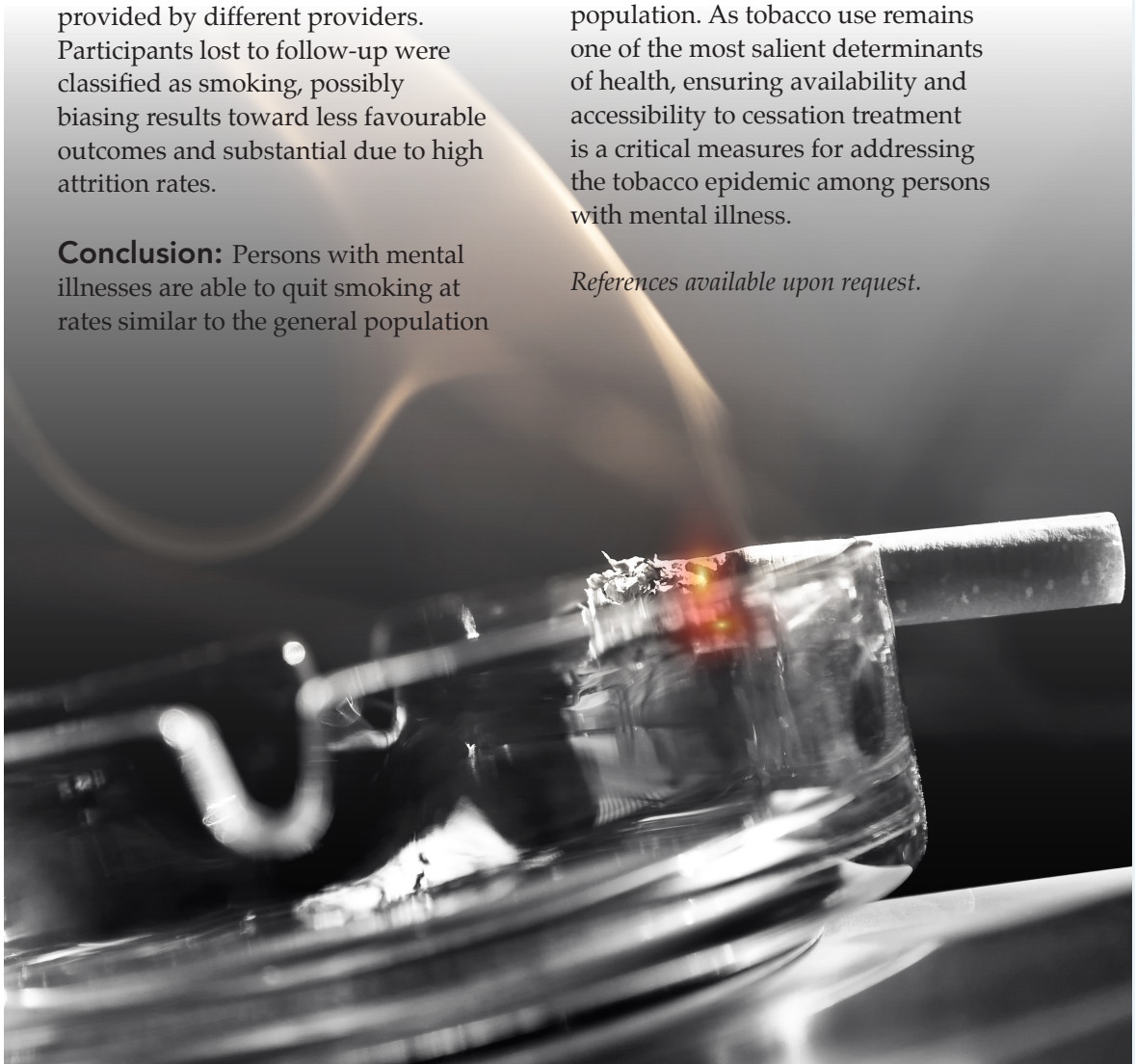
Discussion: This 'real-world' trial examined the impact of a multi-modal cessation intervention in a sample with numerous conditions complicating treatment that typically ensures exclusion from most trials. The 6-month abstinence rate of 28% compares favorably with treatment outcomes for other chronic diseases, e.g. hypertension and quitting in the general population. Most (65.5%) were on disability benefits, and reported inability to afford cessation medications or other costs associated with treatment. It is uncertain whether future studies or programming would result in similar outcomes without subsidies.

Table 1 Changes in SCQoL measures from baseline to 6 months assessment.				
	Total	Abstaining	Reducing	Smoking
	N=44	N=25	N=12	N=7
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Social Interaction	5.11 (17.01)	9.50 (20.82)*	-4.17 (14.43)	5.36 (12.20)
Self-Control	23.41 (31.02)*	38.80 (27.28)*	2.5 (24.26)	2.5 (24.26)
Sleep	6.63 (25.45)	5.00 (24.06)	6.25 (32.78)	13.10 (17.25)
Cognitive Functioning	12.69 (24.08)*	13.33 (26.13)*	9.72 (24.58)	15.48 (16.96)
Anxiety Reduction	15.06 (27.83)*	8.5 (29.13)	26.04 (26.36)*	19.64 (21.48)
* Statistically significant $p < 0.05$ References are available upon request.				

Participating in cessation treatment alone appears to yield a positive effect on quality of life, and this effect is enhanced with reducing or quitting. This finding is encouraging but may reflect the therapeutic effects of health provider contact. When interpreting the findings, it is important to remember participants entered at different points and had individualized interventions often provided by different providers. Participants lost to follow-up were classified as smoking, possibly biasing results toward less favourable outcomes and substantial due to high attrition rates.

Conclusion: Persons with mental illnesses are able to quit smoking at rates similar to the general population during monitored interventions. This study's findings do not support the notion that smoking cessation negatively impacts quality of life in persons with mental illness. This outcome warrants further exploration because of implications for healthcare systems to ensure availability of smoking cessation interventions, and to address resistance to treating tobacco addiction in this vulnerable population. As tobacco use remains one of the most salient determinants of health, ensuring availability and accessibility to cessation treatment is a critical measures for addressing the tobacco epidemic among persons with mental illness.

References available upon request.



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