

Tobacco smoking and internalizing behaviour: A longitudinal study from childhood to adolescence and adulthood

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INTRODUCTION

- Tobacco smoking is an important public health issue; its association with internalizing disorders (anxiety disorders and major depression) has been long recognized.
- Few studies have examined the developmental relationships between tobacco smoking and internalizing behaviour problems from childhood to adolescence and adulthood.

OBJECTIVES

The present study aims at examining:

- The association between internalizing behaviour during childhood (6-12 years of age) and tobacco smoking during adolescence (16 years of age).
- The association between tobacco smoking during adolescence and the incidence of anxiety disorders and major depression during late adolescence/early adulthood (17-22 years of age).

METHOD

Sample

- 863 male and female Canadian participants, followed longitudinally from 6 to 22 years of age

Measures

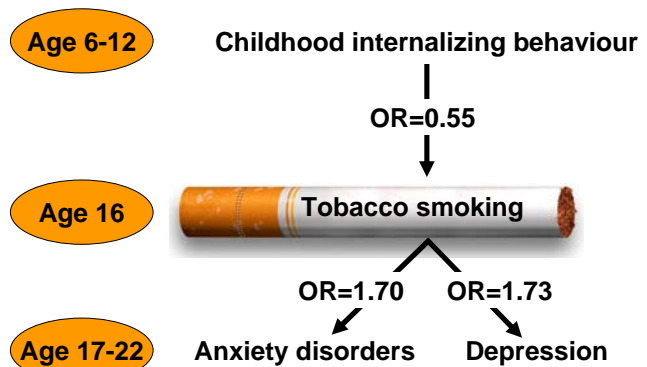
- Childhood internalizing behaviour: Developmental trajectories from 6 to 12 years of age (High/Moderate/Low)
- Adults internalizing disorders: At least one anxiety diagnostic or one depressive episode between 17 and 22 years of age based on the Diagnostic Interview Schedule (DIS)
- Tobacco smoking: smoker/non-smoker status at 16 years of age
- Control variables:
 - Sex
 - Externalizing behaviour at 6 years of age (inattention-hyperactivity, aggression-opposition)
 - Socio-economic status (SES)
 - Parents/siblings tobacco smoking

Statistical procedure

- Binary logistic regression analysis

RESULTS

- Children on the high internalizing behaviour trajectory were approximately **twice less likely** to be smokers at 16 years of age (OR = 0.55, χ^2 Wald = 4.96, $p < .05$) than children on moderate and low trajectories.
- This association remained statistically significant after controlling for sex, SES, childhood externalizing behaviour, and parents/siblings tobacco smoking.
- Adolescent smokers were approximately **two times more likely** to suffer from at least one anxiety disorder (OR = 1.7, χ^2 Wald = 8.46, $p < .01$) or one depressive episode (OR = 1.73, χ^2 Wald = 4.14, $p < .05$) during late adolescence/early adulthood, compared to non-smokers.
- These associations remained statistically significant after controlling for sex, SES, childhood externalizing and internalizing behaviours, and parents/siblings tobacco smoking.



CONCLUSION

- High levels of childhood internalizing behaviour acted as a protective factor against smoking.
- Tobacco smoking during adolescence increased the risk to exhibit anxiety disorder and major depression in late adolescence/early adulthood.
- These associations were not moderated by sex
- These results suggest that social-behavioural inhibition displayed by children with high levels of internalizing behaviour may reduce the probability of smoking initiation by reducing exposure to peer smoking.
- These results also draws attention to the adverse effects of tobacco smoking on adolescent/adulthood mental health.

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