

Do predictors of smoking relapse change as a function of duration of abstinence? Findings from the United States, Canada, United Kingdom and Australia

Yong, H.H., Borland, R., Cummings, K.M., & Partos, T.R.

Abstract

Aims: To estimate predictors of time to smoking relapse and test if prediction varied by quit duration.

Design: Longitudinal cohort data from the International Tobacco Control Four-Country survey with annual follow up collected between 2002 and 2015.

Setting: Canada, United States, United Kingdom and Australia.

Participants: A total of 9171 eligible adult smokers who had made at least one quit attempt during the study period.

Measurements: Time to relapse was the main outcome. Predictor variables included pre-quit baseline measures of nicotine dependence, smoking and quitting-related motivations, quitting capacity and social influence, and also two post-quit measures, use of stop-smoking medications and quit duration (1–7 days, 8–14 days, 15–31 days, 1–3 months, 3–6 months, 6–12 months, 1–2 years and 2+ years), along with socio-demographics.

Findings: All factors were predictive of relapse within the first 6 months of quitting but only wanting to quit, quit intentions and number of friends who smoke were still predictive of relapse in the 6–12-month period of quitting [hazard ratios (HR) = 1.20, $P < 0.05$; 1.13, $P < 0.05$; and 1.21, $P < 0.001$, respectively]. Number of friends smoking was the only remaining predictor of relapse in the 1–2 years quit period (HR = 1.19, $P = 0.001$) with none predictive beyond the 2-year quit period. Use of stop-smoking medications during quit attempts was related negatively to relapse during the first 2 weeks of quitting (HR = 0.71–0.84), but related positively to relapse in the 1–6-month quit period (HR = 1.29–1.54). Predictive effects of all factors showed significant interaction with quit duration except for perceiving smoking as an important part of life, prematurely stubbing out a cigarette and wanting to quit.

Conclusions: Among adult smokers in the United States, Canada, United Kingdom and Australia, factors associated with smoking relapse differ between the early and later stages of a quit attempt, suggesting that the determinants of relapse change as a function of abstinence duration.

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