

# Age related interactions on key theoretical determinants of smoking cessation: Findings from the ITC Four Country Smoking and Vaping Surveys (2016-2020)

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## **Abstract**

**Background:** This paper explores whether plans to quit, wanting to quit and quit efficacy add predictive value over measures of habit strength and dependence in making quit attempts and/or attaining smoking abstinence.

**Aims and methods:** We used three waves of the International Tobacco Control (ITC) Four Country Smoking and Vaping Survey conducted in 2016, 2018, and 2020. Baseline daily smokers (N=6710) who provided data for at least one wave-to-wave transition (W1 to W2, N=3511 or W2 to W3, N=3199) and providing outcome data at the next wave (follow-up) formed the analytic sample. Generalized estimating equations (GEE) logistic regression analyses examined predictors of quit attempts and abstinence at follow-up (1 and 6 months sustained abstinence).

**Results:** Wanting and planning to quit were significantly positively associated with making quit attempts, but negatively associated with smoking abstinence. A significant interaction between the Heaviness of Smoking Index and age warranted an age-stratified analysis for both abstinence outcomes. Lower HSI predicted abstinence in only the younger smokers Motivation and plans to quit were positively associated with abstinence in younger smokers, but surprisingly were negatively associated with abstinence in older smokers. Quit efficacy was associated with abstinence in the older, but not the younger smokers.

**Conclusions:** Models of smoking abstinence are significantly improved by including motivational predictors of smoking. Age was an important moderator of the association between abstinence for both dependence and motivational variables.

**Implications:** The findings from this large cohort study indicate there are age-related differences in predictors of smoking abstinence but not quit attempts. These associations may reflect differential experiences of older and younger cohorts of smokers, which may have implications for interventions to motivate and assist smokers in quitting.

## **Recommended Citation**

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