

# Dynamic, data-driven typologies of long-term smoking, cessation and their correlates: Findings from the International Tobacco Control (ITC) Netherlands Survey

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## Abstract

**Rationale:** Efforts towards tobacco control are numerous, but relapse rates for smoking cessations remain high. Behavioral changes necessary for continuous cessation appear complex, variable and subject to social, biological, psychological and environmental determinants. Currently, most cessation studies concentrate on short-to midterm behavioral changes. Besides, they use fixed typologies, thereby failing to capture the temporal changes in smoking/cessation behaviors, and its determinants.

**Objective:** To obtain long-term, data-driven longitudinal patterns or profiles of smoking, cessation, and related determinants in a cohort of adult smokers, and to investigate their dynamic links. **Methods:** The dataset originated from the International Tobacco Control (ITC) Netherlands Project, waves 2008 to 2016. Temporal dynamics of smoking/cessation, psychosocial constructs, and time-varying determinants of smoking were extracted with Group-Based Trajectory Modeling technique. Their associations were investigated via multiple regression models.

**Results:** Substantial heterogeneity of smoking and cessation behaviors was unveiled. Most respondents were classified as persistent smokers, albeit with distinct levels of consumption. For a minority, cessation could be sustained between 1 and 8 years, while others showed relapsing or fluctuating smoking behavior. Links between smoking/cessation trajectories with those of psychosocial and sociodemographic variables were diverse. Notably, changes in two variables were aligned to behavioral changes towards cessation: decreasing number of smoking peers and attaining a higher self-perceived control.

**Conclusion:** The unveiled heterogeneity of smoking behavior over time and the varied cross-dependencies between smoking data-driven typologies and those of underlying risk factors underscore the need of individually tailored approaches for motivational quitting.

## Recommended Citation

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