

Heaviness of Smoking Index predicts smoking relapse only in the first weeks of a quit attempt: Findings from the International Tobacco Control Four Country Survey

Yong, H.H., Borland, R., Balmford, J., Hyland, A., O'Connor, R.J., Thompson, M.E., Spittal, M.J.

Abstract

INTRODUCTION: The Heaviness of Smoking Index (HSI) is the measure of dependence most strongly predictive of relapse. However, recent research suggests it may not be predictive of longer term relapse. Our aim was to examine its predictive power over the first 2 years after quitting and explore whether use of stop-smoking medications is a moderator.

METHODS: Data ($n = 7,093$) came from the first 7 waves (2002-2009) of the International Tobacco Control Four-Country Survey, an annual cohort survey of smokers in Canada, United States, United Kingdom, and Australia. HSI and its 2 components (cigarettes per day [CPD] and time to first cigarette [TTFC]) were used to predict smoking relapse risk in the 2 years after the start of a quit attempt.

RESULTS: Scores on HSI and its components all strongly predicted relapse, but there was an interaction with time ($p < .001$). These measures were strong predictors of relapse within the first week of quitting (hazard ratios [HR] = 1.17, 1.24, and 1.30 for HSI, CPD, and TTFC, respectively, all $p < .001$), less predictive of relapse occurring between 1 week and 1 month, and not clearly predictive beyond 1 month. Among those using medication to quit, hazard ratio for HSI (HR = 1.11, $p < .001$) was significantly lower than for those not using (HR = 1.24, $p < .001$) in the first week, but not beyond.

CONCLUSIONS: HSI and its 2 components are strong predictors of short-term smoking relapse, but they rapidly lose predictive power over the first weeks of an attempt, becoming marginally significant at around 1 month, and not clearly predictive beyond that.

Recommended Citation

Yong, H.H., Borland, R., Balmford, J., Hyland, A., O'Connor, R.J., Thompson, M.E., Spittal, M.J. (2014). Heaviness of Smoking Index only predicts smoking abstinence in the first month of a quit attempt: Findings from the International Tobacco Control Four Country Survey. *Nicotine and Tobacco Research*, 16 (4), 423-429.

Link To PDF: <https://academic.oup.com/ntr/article/16/4/423/1171824>