Construct and predictive validity of three measures of intention to quit smoking: Findings from the International Tobacco Control (ITC) Netherlands Survey

Hummel, K., Candel, M.J.J.M., Nagelhout, G.E., Brown, J., van den Putte, B., Kotz, D., Willemsen, M.C., Fong, G.T., West, R., & de Vries, H.

Abstract

INTRODUCTION: The aim of the study was to compare the construct validity and the predictive validity of three instruments to measure intention to quit smoking: a Stages of Change measure, the Motivation To Stop Scale (MTSS) and a Likert scale. We used the Theory of Planned Behaviour as theoretical framework.

METHODS: We used data from the International Tobacco Control (ITC) Netherlands Survey. We included smokers who participated in three consecutive survey waves (n=980). We measured attitude, subjective norm, and perceived behavioural control in 2012, intention to quit with three instruments in 2013, and having made a quit attempt in the last year in 2014. We conducted Structural Equation Modelling with three models for the instruments of intention separately, and with one model that included the three instruments simultaneously.

RESULTS: All three instruments of intention were significantly and positively related to attitude and perceived behavioural control but none was related to subjective norm. All three instruments were significantly and positively related to making a quit attempt. The relation of the Likert scale with making a quit attempt ($\beta=0.38$) was somewhat stronger than that of the Stages of Change measure ($\beta=0.35$) and the MTSS ($\beta=0.22$). When entering the three instruments together into one model, only the Likert scale was significantly related to making a quit attempt.

CONCLUSIONS: All three instruments showed reasonable construct validity and comparable predictive validity. Under the studied conditions, the Likert scale performed slightly better than the Stages of Change measure and the MTSS.

IMPLICATIONS: An assessment of the Stages of Change, the Motivation To Stop Scale (MTSS) and a Likert scale showed comparable predictive and construct validity as measures for intention to quit smoking. All three instruments can be used in future research; however, under the studied theoretical framework, i.e. the Theory of Planned Behaviour, the Likert scale performed slightly better than the other two instruments.