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Short communication

# The commitment to quitting smoking scale: Initial validation in a smoking cessation trial for heavy social drinkers

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**Abstract**

We tested the psychometric properties and predictive validity of a newly developed 8-item measure of commitment to quitting smoking, conceptualized as the state of being personally bound or obligated to persist in quitting smoking despite potential difficulties, craving and discomfort. Participants were 157 heavy drinking smokers enrolled in a clinical trial of smoking cessation treatments. The measure showed strong unidimensionality, good internal consistency, and moderate stability from baseline to quit date. Commitment significantly increased from baseline to quit date. Higher commitment to quitting at baseline predicted greater odds of abstinence at post-treatment and 16 and 26 weeks after quit date. Commitment predicted smoking outcome over and above level of tobacco dependence, self-reported importance of quitting smoking, and self-efficacy for remaining abstinent. Results suggest that commitment is a highly relevant construct for smoking cessation, which can be reliably assessed with the Commitment to Quitting Smoking Scale and which may be an excellent target for smoking cessation treatments.


*Keywords:* Addictions; Psychometrics; Measurement; Smoking cessation; Commitment; Motivation

## 1. Introduction

Commitment is defined as "the state of being bound emotionally or intellectually to a course of action" (American Heritage Dictionary of the English Language, 2000). Greater commitment is reflected in

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statements such as "I will…" as opposed to "I want to…" or "I will try to…," and individuals who are highly committed are likely to use expressions such as "whatever it takes" or "no matter how difficult" in their statements regarding a course of action. In this way, commitment is conceptually distinct from related constructs such as desire to quit ("I very much want to quit") and self-efficacy ("I am confident that I can quit successfully"). Recent work by Amrhein and colleagues using linguistic analyses (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003) has highlighted the importance of commitment in understanding and predicting behavioral change. However, we know of no self-report multi-item measure that has been developed specifically to assess the construct of commitment to quitting smoking.

In the present study, we tested the psychometric properties and concurrent and predictive validity of a multi-item self-report measure of commitment to quitting smoking, which we conceptualized as a cognitive state of being personally bound or obligated to avoid smoking despite any potential difficulty, discomfort, or craving associated with quitting, even when the magnitude and duration of that discomfort are unknown and variable.

## 2. Method

### *2.1. Participants*

Participants were 157 smokers recruited from the community as part of a larger, randomized clinical trial. To be included, participants had to: (a) be >18 years of age; (b) have smoked regularly for at least 1 year; (c) smoke at least 10 cigarettes a day; (d) use no other tobacco products or nicotine replacement therapy; and (e) drink heavily according to self-report (>14 drinks per week or > 5 drinks per occasion at least once per month over the last 12 months for men; >7 drinks per week or > 4 drinks per occasion at least once per month over the past 12 months for women). Participants were excluded if they: (a) were alcohol dependent; (b) met criteria for other current psychoactive substance abuse or dependence; (c) met criteria for major depression or mania; (d) were psychotic or suicidal; (e) had an medical condition that would preclude use of the nicotine patch; (f) were pregnant, lactating or intended to become pregnant.

The sample used in these analyses was 49.0% ($n$=77) female and 93.6% non-Hispanic White. The mean age of the sample was 41.6 (SD=11.4) years, and the mean education was 14.2 (SD=2.2) years. Participants smoked an average of 21.2 (SD=8.3) cigarettes per day and had been smoking for an average of 22.8 years (SD=11.3). The mean on the Fagerström Test for Nicotine Dependence (FTND; Heatherton, Kozlowski, Frecker, & Fagerström, 1991) was 4.9 (SD=2.0). Participants drank an average of 15.9 (SD=11.1) drinks per week.

### *2.2. Procedure*

Participants were recruited from the community using newspaper and radio advertisements. They were screened by telephone before completing an intake interview, at which they signed a statement of informed consent approved by the Brown University Institutional Review Board. Treatment consisted of four individual behavioral counseling sessions over 3 weeks with the quit date occurring at session 2, 1 week after session 1. Sessions focused on problem solving regarding high-risk situations for smoking relapse, providing support within the treatment, and encouraging participants to seek support for quitting smoking outside of treatment. All participants received transdermal nicotine patch (4 weeks at 21 mg, 2 weeks at 14 mg, and 2 weeks at 7 mg). In one treatment condition there was an extended relaxation training module, while in the other there was a extended module focusing on alcohol use.