MEGAN E. PIPER – Relevant Publications


**Background:** People with psychiatric disorders are more likely to smoke and smoke more heavily than the general population, and they suffer disproportionally from smoking-related illnesses. However, little is known about how quitting versus continuing to smoke affects mental health and the likelihood of developing a psychiatric diagnosis. This study used data from a large prospective clinical trial to examine the relations of smoking cessation success with psychiatric diagnoses 1 and 3 years after the target quit day.

**Methods:** This study enrolled 1504 smokers (83.9% white; 58.2% female) in a cessation trial that involved the completion of the Composite International Diagnostic Interview to assess psychiatric diagnoses and biochemical confirmation of point-prevalence abstinence at Baseline and Years 1 and 3.

**Results:** Regression analyses showed that, after controlling for pre-quit (past-year) diagnoses, participants who were smoking at the Year 3 follow-up were more likely to have developed and maintained a substance use or major depressive disorder by that time than were individuals who were abstinent at Year 3.

**Conclusions:** Quitting smoking does not appear to negatively influence mental health in the long-term and may be protective with respect to depression and substance use diagnoses; this should encourage smokers to make quit attempts and encourage clinicians to provide cessation treatment.


**Objective:** Alcohol consumption is associated with smoking cessation failure in both community and clinical research. However, little is known about the relation between alcohol consumption and smoking cessation milestones (i.e., achieving initial abstinence, avoiding lapses and relapse). Our objective in this research was to examine the relations between pretreatment alcohol consumption patterns (non/infrequent drinker, moderate drinker, binge drinker) and smoking cessation milestones and tobacco dependence.

**Method:** Data were collected from 1,504 smokers (58.2% women; 83.9% White; mean age = 44.67 years, SD = 11.08) making an aided smoking cessation attempt as part of a clinical trial. Alcohol consumption pattern was determined with the Composite International Diagnostic Interview. Tobacco dependence was assessed with the Wisconsin Inventory of Smoking Dependence Motives (WISDM).

**Results:** Alcohol consumption pattern was significantly associated with initial cessation and lapse, and these findings remained after controlling for the effects of treatment, race, gender, and cigarettes per day. Relative to moderate drinkers, both non/infrequent drinkers and binge drinkers were less likely to achieve initial cessation (p < .05), and binge drinkers were more likely to lapse (p < .01). When drinking categories were compared on tobacco dependence indices, results showed that relative to moderate drinkers, non/infrequent drinkers scored higher on several WISDM Primary Dependence
Motives subscales (Tolerance, Loss of Control, and Automaticity) and binge drinkers scored higher on WISDM Secondary Dependence Motives subscales (Cue Exposure and Social–Environmental Goads).

**Conclusions:** Non/infrequent drinkers' smoking cessation difficulties may be particularly related to core features of tobacco dependence, whereas binge drinkers' difficulties may be related to environmental and social influences.


**Objective:** This research examined why smokers receiving combination medication for smoking cessation are more likely to quit smoking than are those who receive either single agent (monotherapy) or placebo.

**Method:** Data were collected from 1,504 current smokers (58.2% women, 83.9% White; mean age = 44.67 years, SD = 11.08) participating in a cessation clinical trial who were randomized to 1 of 6 cessation pharmacotherapy conditions (placebo, nicotine patch, nicotine lozenge, bupropion, nicotine patch + nicotine lozenge, and bupropion + nicotine lozenge). Participants completed ecological momentary assessments 4 times a day, concerning 5 hypothesized mediators (negative affect, positive affect, craving, smoking expectations, and withdrawal) of pharmacotherapy effects. Medications were provided for 8–12 weeks post-quit along with 6 individual counseling sessions. Mediational paths were estimated via a novel Bayesian approach with estimation of multiple mediator models.

**Results:** Biochemically confirmed 8-week abstinence was the outcome variable, with the monotherapy and combination pharmacotherapy composites producing 45% (n = 689) and 54% (n = 478) abstinence rates, respectively. The univariate models suggested that the combination treatments produced higher abstinence rates than the monotherapies because of greater suppression of withdrawal, craving, and smoking expectations. However, multiple mediator models showed that the suppression of craving on the quit day produced the strongest mediational effects and could account for the mediational effects of other tested variables.

**Conclusion:** Suppression of craving on the quit day significantly mediates the clinical effects of monotherapies and combination smoking pharmacotherapies, and the higher abstinence rates for combination therapy versus monotherapies appear primarily due to greater craving suppression.


**Background:** There has been limited research addressing changes in subjective well-being as a result of quitting smoking.

**Purpose:** The purpose of this study was to use longitudinal data to determine the relation between smoking cessation and subjective measures of well-being, including global quality of life (QOL), health-related QOL (HR-QOL), affect, relationship satisfaction, and stressor occurrence.

**Methods:** As part of a randomized, placebo-controlled smoking cessation trial, 1,504 participants (58.2% women, 83.9% white) completed assessments and had their smoking status biochemically confirmed at baseline and years 1 and 3 post-quit.
**Results:** Compared with continuing smokers, quitters showed improved global QOL, HR-QOL, and affect at years 1 and 3 and fewer stressors by year 3. Smoking status did not influence marital relationship satisfaction.

**Conclusions:** Successful quitters, in contrast to continuing smokers, reported improved subjective well-being, which could be used to motivate quit attempts by individuals with concerns about what life will be like without cigarettes.


**Aims:** To understand the relations among anxiety disorders and tobacco dependence, withdrawal symptoms, response to smoking cessation pharmacotherapy and ability to quit smoking.

**Design:** Randomized placebo-controlled clinical trial. Participants received six 10-minute individual counseling sessions and either: placebo, bupropion SR, nicotine patch, nicotine lozenge, bupropion SR + nicotine lozenge or nicotine patch + nicotine lozenge.

**Setting:** Two urban research sites.

**Participants:** Data were collected from 1504 daily smokers (>9 cigarettes per day) who were motivated to quit smoking and did not report current diagnoses of schizophrenia or psychosis or bupropion use.

**Measurements:** Participants completed baseline assessments, the Composite International Diagnostic Interview and ecological momentary assessments for 2 weeks.

**Findings:** A structured clinical interview identified participants who ever met criteria for a panic attack (n = 455), social anxiety (n = 199) or generalized anxiety disorder (n = 99), and those who qualified for no anxiety diagnosis (n = 891). Smokers with anxiety disorders reported higher levels of nicotine dependence and pre-quit withdrawal symptoms. Those ever meeting criteria for panic attacks or social anxiety disorder showed greater quit-day negative affect. Smokers ever meeting criteria for anxiety disorders were less likely to be abstinent at 8 weeks and 6 months post-quit and showed no benefit from single-agent or combination-agent pharmacotherapies.

**Conclusions:** Anxiety diagnoses were common among treatment-seeking smokers and were related to increased motivation to smoke, elevated withdrawal, lack of response to pharmacotherapy and impaired ability to quit smoking. These findings could guide treatment assignment algorithms and treatment development for smokers with anxiety diagnoses.


As compared to smokers in the general population, smokers with schizophrenia have increased smoking rates (deLeon & Diaz, 2005), increased nicotine dependence (Williams et al. 2005), and reduced success in smoking cessation (Williams & Hughes, 2003). While Shiffman (1993) states that studying motives for smoking is important because smoking patterns are heterogeneous, studies examining motives to smoke in schizophrenia have been limited by assessment measures with poor
psychometric properties. The primary objective of this study was to examine differences between motives to smoke among smokers with and without schizophrenia as measured by the WISDM-68 scale (Piper et al., 2006).

As part of a secondary data analysis of three existing datasets, we sought to examine motives for smoking in eighty individuals with schizophrenia (SCZ) or schizoaffective disorder (SA) as compared to 463 control smokers (CON) without any mental illness. All participants with SCZ/SA were enrolled in mental health treatment and stable on antipsychotic medications. All diagnoses were confirmed with the Structured Clinical Interview for DSM-IV (SCID; Spitzer, 1985). Smokers with and without SCZ/SA were well matched on number of cigarettes per day (CPD) and age, though smokers with SCZ/SA scored significantly higher than control smokers on the Fagerstrom Test for Nicotine Dependence (FTND) (6.83 vs. 6.27; t (541) = 2.81, p = 0.005).

Multivariate analysis of covariance (MANCOVAs) adjusting for sociodemographic factors, CPD and FTND total score revealed that smokers with SCZ/SA scored significantly higher on 4 of 13 WISDM-68 subscales. These data indicate that like smokers in the general population, smokers with SCZ/SA report multidimensional drives for smoking. As compared to controls, smokers with schizophrenia may be more likely to smoke for a stimulation effect (Positive Reinforcement (F(1,95) = 5.00, p = .001)). This finding is consistent with studies of substance abuse in schizophrenia which often show higher use of stimulants (amphetamines, cocaine, caffeine, and nicotine) compared to other psychiatric patients or to those without any mental illness (Schneier & Siris, 1987). Additionally, individuals with schizophrenia may be more likely to smoke in order to ameliorate a variety of negative internal or aversive states, including negative affect, and nicotine withdrawal (Negative Reinforcement subscales (F(1,95) = 5.23, p = .023)) as compared to control smokers.

Smokers with schizophrenia were also more likely than control smokers to feel strongly attached to their cigarettes and to find cigarettes as an outlet and stress reliever (Affiliative Attachment (F(1,95) = 4.70, p = .001)). This strong connection to cigarettes may contribute to their report of smoking despite environmental limitations, negative consequences, and/or the lack of other options or reinforcers (Behavioral Choice Melioration (F(1,95) = 4.63, p = .003)).

In contrast to other scales, control smokers reporting being more likely to smoke without awareness or intention than did those with schizophrenia (Automaticity (F(1,95) = 4.88, p = 0.03)). Individuals with schizophrenia may be much more deliberate in smoking their cigarettes. In addition, smoking may be so important to individuals with SCZ/SA, that it is never done automatically, but always with awareness.

These data indicate that like smokers in the general population, smokers with SCZ/SA report multidimensional drives for smoking although they may be more sensitive to positive effects, have greater emotional attachment to cigarettes, and smoke despite negative consequences. Our research validates previous findings that demonstrate individuals with schizophrenia to smoke because they are addicted (40%), to help them relax (20%), for enjoyment (15%), to pass the time (12%), and for use as a crutch (e.g., to help with coping) (8%) (Forchuk., 2002).

Because individuals with schizophrenia have a higher incidence of smoking it is imperative to understand motives for smoking across multiple dimensions. Our findings indicate that individuals with schizophrenia or schizoaffective disorder may smoke for different reasons than those without serious mental illness. Such data could be of great significance for future research and may help guide future tobacco dependence cessation treatments in this group.

**Introduction:** Smoking is the leading preventable cause of morbidity and mortality in the United States, but this burden is not distributed equally among smokers. Women, Blacks, and people with low socioeconomic status are especially vulnerable to the health risks of smoking and are less likely to quit.

**Methods:** This research examined cessation rates and treatment response among 2,850 participants (57.2% women, 11.7% Blacks, and 9.0% with less than a high school education) from two large cessation trials evaluating: nicotine patch, nicotine lozenge, bupropion, bupropion + lozenge, and nicotine patch + lozenge.

**Results:** Results revealed that women, Blacks, and smokers with less education were less likely to quit smoking successfully than men, Whites, and smokers with more education, respectively. Women did not appear to benefit more from bupropion than from nicotine replacement therapy, but women and smokers with less education benefited more from combination pharmacotherapy than from monotherapy.

**Discussion:** Women, Blacks, and smokers with less education are at elevated risk for cessation failure, and research is needed to understand this risk and develop pharmacological and psychosocial interventions to improve their long-term cessation rates.

**Objective:** The present research examined the relation of psychiatric disorders to tobacco dependence and cessation outcomes. Method: Data were collected from 1,504 smokers (58.2% women; 83.9% White; mean age = 44.67 years, $SD = 11.08$) making an aided smoking cessation attempt as part of a clinical trial. Psychiatric diagnoses were determined with the Composite International Diagnostic Interview structured clinical interview. Tobacco dependence was assessed with the Fagerström Test of Nicotine Dependence (FTND) and the Wisconsin Inventory of Smoking Dependence Motives (WISDM). Results: Diagnostic groups included those who were never diagnosed, those who had ever been diagnosed (at any time, including in the past year), and those with past-year diagnoses (with or without prior diagnosis). Some diagnostic groups had lower follow-up abstinence rates than did the never diagnosed group ($ps < .05$). At 8 weeks after quitting, strong associations were found between cessation outcome and both past-year mood disorder and ever diagnosed anxiety disorder. At 6 months after quitting, those ever diagnosed with an anxiety disorder ($OR = .72, p = .02$) and those ever diagnosed with more than one psychiatric diagnosis ($OR = .74, p = .03$) had lower abstinence rates. The diagnostic categories did not differ in smoking heaviness or the FTND, but they did differ in dependence motives assessed with the WISDM. Conclusion: Information on recent or lifetime psychiatric disorders may help clinicians gauge relapse risk and may suggest dependence motives that are particularly relevant to affected patients. These findings also illustrate the importance of using multidimensional tobacco dependence assessments.
Context: Little direct evidence exists on the relative efficacies of different smoking cessation pharmacotherapies, yet such evidence is needed to make informed decisions about their clinical use.

Objective: The primary objective of this research was to assess the relative efficacies of five smoking cessation pharmacotherapy interventions using placebo-controlled, head-to-head comparisons.

Design: This was a randomized double-blind, placebo-controlled clinical trial.

Setting: Smokers were recruited from the community at two urban research sites.

Patients: Participants were 1504 adult smokers who smoked at least 10 cigarettes per day during the past 6 months and reported being motivated to quit smoking. Participants were excluded if they reported: using any form of tobacco other than cigarettes; current use of bupropion; having a current psychosis or schizophrenia diagnosis; or having medical contraindications for any of the study medications.

Interventions: Participants were randomized to one of six treatment conditions: nicotine lozenge, nicotine patch, bupropion SR, nicotine patch + nicotine lozenge, bupropion + nicotine lozenge or placebo. In addition, all participants received six individual counseling sessions.

Main Outcome Measures: The main outcome measures were biochemically-confirmed 7-day point-prevalence abstinence assessed at 1 week post-quit, end of treatment (8 weeks post-quit) and 6 months post-quit. Other outcomes were initial cessation, number of days to lapse, number of days to relapse, and latency to relapse after the first lapse.

Results: All pharmacotherapies differed from placebo when examined without protection for multiple comparisons (OR’s = 1.63–2.34). With such protection, only the nicotine patch + nicotine lozenge (OR = 2.34, p < .001) produced significantly higher abstinence rates at 6-months post-quit than did placebo.

Conclusions: While the nicotine lozenge, bupropion, and bupropion + lozenge produced effects that were comparable to those reported in previous research, the nicotine patch + lozenge produced the greatest benefit relative to placebo for smoking cessation.