



Letter to the Editors

Reasons for smoking among individuals with schizophrenia

As compared to smokers in the general population, smokers with schizophrenia have increased smoking rates (de Leon & Diaz, 2005), increased nicotine dependence (Williams et al. 2005), and reduced success in smoking cessation (Williams & Hughes, 2003). While Shiffmann (1993) states that studying motives for smoking are important because smoking patterns are heterogeneous, studies examining motives to smoke in schizophrenia have been limited by the 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 and Williams, 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 (Table 1). 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 report 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

Table 1
WISDM-68 Subscale Scores (SCZ/SA vs. CON Smokers).***

Measure ^a significance	Schizophrenia	Control	
	(n = 80)	(n = 463)	
	Mean	Mean	
Affiliative attachment	4.70	3.05	<.001
Automaticity	4.43	4.88	0.029
Behavioral choice – melioration	4.63	3.24	0.003
Cognitive enhancement	3.94	3.20	0.599
Loss of control	5.34	5.26	0.494
Craving	5.65	5.04	0.790
Cue-exposure – associative processes	5.19	4.61	0.732
Negative reinforcement	5.23	4.13	0.023
Positive reinforcement	5.00	3.64	<.001
Social – environmental goals	5.03	3.86	0.514
Taste and sensory properties	4.86	4.22	0.083
Tolerance	5.82	5.34	0.636
Weight control	3.36	2.82	0.721
Total WISDM	63.23	53.33	0.078

*** GLM multivariate analysis – Wilks' Lambda ($F = 3.084; p < 0.001$).

^a Adjusted for age, race/ethnicity, gender, employment, education, cigarettes per day, and FTND summary score.

(15%), to pass the time (12%), and for use as a crutch (e.g., to help with coping) (8%) (Forchuk et al., 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.

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Magdalena Galazyn*

Marc L. Steinberg

Kunal K. Gandhi

Jill M. Williams

UMDNJ, Robert Wood Johnson Medical School, United States

*Corresponding author. Research Teaching Specialist,

Department of Psychiatry, Division of Addiction Psychiatry,

UMDNJ, Robert Wood Johnson Medical School,

317 George St, Suite 105, New Brunswick,

NJ 08901, United States.

Tel.: +1 732 235 4600.

E-mail address: galazyma@umdnj.edu (M. Galazyn).

Marc L. Steinberg

Kunal K. Gandhi

Jill M. Williams

UMDNJ, School of Public Health, United States

Megan Piper

University of Wisconsin-Madison School of Medicine

and Public Health, United States

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