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Smokers' Expectancies for Abstinence: Preliminary Results from Focus Groups

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Abstract

Smokers' expectancies regarding the effects of cigarette use are powerful predictors of smoking motivation and behavior. However, studies have not investigated the consequences that smokers expect when they attempt to quit smoking: abstinence-related expectancies. The primary goal of this qualitative study was to gain initial insight into smokers' expectancies for abstinence. Eight focus groups were conducted with 30 smokers diverse with respect to age, gender, and ethnoracial background. Content analyses indicated that smokers anticipate a variety of outcomes from abstinence. The most frequently reported expectancies included pharmacologic withdrawal symptoms, behavioral withdrawal symptoms, decreased monetary expense, and immediate improvement of certain aspects of physical functioning and health. Additional expectancies concerned weight gain, improved attractiveness, enhanced social functioning/self-esteem, long-term health outcomes, and loss of relationships. Finally, a number of relatively unheralded expectancies were revealed. These involved NRT effectiveness, alcohol and other drug use, vigilance to cue reactivity, cessation-related social support, aversion to smoking, and "political process" implications. This study provides a preliminary step in understanding smokers' expectancies for abstinence from cigarettes.

Keywords

tobacco; smoking; abstinence; cessation; expectancies

Smoking-related outcome expectancies remain among the most widely-examined constructs in studies of tobacco use (e.g., Hendricks & Brandon, 2008; Kirchner & Sayette, 2007). They predict the onset and trajectory of smoking (e.g., Cohen, McCarthy, Brown, & Myers, 2002; Wetter et al., 2004), are associated with current smoking behavior (e.g., Cepeda-Benito & Ferrer, 2000; Jeffries et al., 2004), predict the magnitude of smoking withdrawal symptoms (Wetter et al., 1994), and predict both short- and long-term treatment outcome (e.g., Wahl, Turner, Mermelstein, & Flay, 2005; Gwaltney, Shiffman, Balabanis, & Paty, 2005). They have primarily been measured by self-report instruments, such as the Smoking Consequences Questionnaire (SCQ; Brandon & Baker, 1991) and the Smoking Consequences Questionnaire-Adult (SCQ-A; Copeland, Brandon, & Quinn, 1995).

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Despite the research focus on smoking-related outcome expectancies, no prior study has directly examined smokers' expectancies for abstinence. That is, no previous investigations have directly explored the effects that smokers anticipate when they attempt to cease cigarette use. Several studies have appraised smokers' reasons for quitting. The most commonly offered motives for cessation comprise concerns about the effects of smoking on physical functioning and health, including the effects of secondhand tobacco smoke on others; the financial disincentive of cigarette use; pressure to quit from family, friends, and society at large; and the desire to improve one's appearance and self-esteem (e.g., Hyland et al., 2004; Myers & MacPherson, 2008; West, McEwen, Bolling, & Owen, 2001). Additional research has assessed smokers' perceived barriers to successful cessation. Frequently noted barriers include pharmacologic and behavioral withdrawal symptoms, including weight gain and urge/craving to smoke; the notion that quitting represents the loss of a key enjoyable activity; social pressure to return to smoking; and among alcohol-dependent smokers, concerns that quitting will compromise sobriety (e.g., Macnee & Talsma, 1995; Martin, Rohsenow, Mackinnon, Abrams, & Monti, 2006; West et al., 2001). The Perceived Risk and Benefit Questionnaire (PRBQ; McKee, O'Malley, Salovey, Krishnan-Sarin, & Mazure, 2005) assesses many of the abovementioned positive and negative outcomes associated with cessation. Finally, some studies have examined cessation-related cognitions (e.g., "perceptions," "beliefs") among special populations of smokers (e.g., Schmitt, Tsoh, Dowling, & Hall, 2005; Thompson, Thompson, Thompson, Fredickson, & Bishop, 2003). The results of these investigations are largely consistent with research on reasons for quitting and perceived barriers to care.

While these findings are relevant to smokers' expectancies for abstinence, they do not capture the specific if-then contingencies embodied by the expectancy construct. Indeed, abstinence-related expectancies have not been fully mapped. This is noteworthy because these expectancies represent areas of smokers' cognition that can be directly addressed by public health campaigns and individual treatments, thereby enhancing the efficacy of these interventions.

In the present study we explored abstinence-related expectancies among tobacco smokers. A central objective of this investigation was to inform an abstinence-related expectancy measure now in the early stages of development: the Smoking Abstinence Questionnaire (SAQ). However, the current investigation has significance for other reasons. It will be the first to address a gap in the empirical literature, advancing a more comprehensive understanding of a key smoking-related construct. Furthermore, it may have meaningful implications for the development of smoking interventions. Finally, it can direct the development of other abstinence-related expectancy instruments and augment existing measures that have conceptual overlap with the SAQ (e.g., the PRBQ). Because scant research exists on smokers' expectancies for abstinence, we felt that a qualitative approach was most appropriate at this stage of investigation. Indeed, qualitative research can provide a wealth of information for unattended areas of study (e.g., Nichter, Nichter, Thompson, Shiffman, & Moscicki, 2002)

Data were collected through a series of open-ended focus group interviews with current cigarette smokers. This qualitative method allowed participants to generate their own responses across the range of abstinence-related expectancies. While we had no specific hypotheses, we expected participants to articulate a wide spectrum of expectancies for abstinence covering multiple topic areas.

Methods

Participants

A sample of 30 smokers was recruited from the San Francisco Bay area through flyers and internet advertisements to participate in eight focus groups consisting of three to five

individuals each. Data were collected in somewhat smaller groups than typical practice to provide members the opportunity to fully express their expectancies for abstinence. Participants were required to speak English, be at least 18 years of age, have a smoking rate of at least 15 cigarettes per day, and have a breath carbon monoxide (CO) of at least 10 ppm at intake. While participants were not formally stratified with regard to demographic and smoking-related variables (e.g., gender, age, number of quit attempts, tobacco dependence), recruitment efforts were closely monitored and modified as necessary to ensure adequate representation among participants across the range of such variables.

Measures

Demographic and smoking history questionnaires—On the demographic questionnaire, participants self-reported a number of demographic variables such as age, gender, ethnicity, and education. On the smoking history questionnaire, participants provided self-report on several smoking variables such as cigarettes smoked per day, years smoked, and number of quit attempts. This instrument included the Fagerström Test of Nicotine Dependence (FTND; Heatherton, Kozlowski, Frecker, & Fagerström, 1991).

Semi-structured interview—Standardized interview questions were designed to facilitate discussion and elicit contributions from each participant. Questions provided participants the freedom to formulate their own responses (i.e., they were open-ended), and all responses were explored to ensure that each participant had the opportunity to fully express his or her expectancies for abstinence. Interviews were preceded by an explanation of the expectancy concept, smoking-related outcome expectancies, and the lack of existing information on abstinence-related expectancies among smokers.

Questions were framed to assess the spectrum of consequences anticipated from smoking cessation. Example queries include the following: What kind of things would you expect if you were to stop smoking and attempt to give up cigarettes for good? What kind of things would you expect in the short-term? What kind of things would you expect in the long-term?

Procedure

Participants who met the screening criteria during a telephone interview were provided with an overview of the study and scheduled for a one-hour focus group session to be held in a conference room at the University of California, San Francisco. Over a recruitment period of six weeks, 40 smokers met inclusion criteria and were scheduled for a focus group session; of these, 30 (75%) attended the focus group meeting.

Before the initiation of the focus group session, participants completed an informed consent form, provided a CO sample, and completed the demographic and smoking information questionnaires. The semi-structured interview was then administered by the principal investigator, who is a clinical psychologist with training in facilitating group discussion. Research assistants accompanied the principal investigator and helped administer assessment tools and document sessions via audiorecording and note-taking. Each participant engaged in group discussion, yielding a response rate of 100%. Upon completion of the focus group session, participants were debriefed and paid $20 for their participation.

Analysis of Qualitative Data—Focus group sessions were audiorecorded with a digital voice recorder and transcribed verbatim to an electronic word processing file. These data were analyzed using the five-stage framework approach to deductive content analysis, which has been described in detail elsewhere (e.g., Pope, Ziebland, & Mays, 2000; Ritchie & Spencer, 1993). First, transcripts were compared with audiorecordings to ensure accurate and complete documentation of focus group interviews. Transcripts were then reviewed to provide for a

familiarization with the manner in which participants expressed expectancies for abstinence, as well as with the range of expectancies conveyed. Second, all key expectancy concepts were identified, and a comprehensive collection of expectancy concept categories was developed by which all responses could be coded. This stage of the analysis resulted in the identification of 16 distinct expectancy concepts. Third, two independent raters coded participant responses from each of the eight focus groups according to the 16 expectancy categories with the use of a coding manual. Interrater agreement for this task was high (κ = .98), with disagreements being resolved by discussion. Fourth, data from each of the eight focus groups was converged so that each of the 16 expectancy concepts contained the coded responses for all participants. Fifth, and finally, expectancy concepts were defined and clarified with the goal of providing concise and comprehensible results. Data were also analyzed by counting the number of participants who generated verbal responses that corresponded to each of the expectancy concepts (e.g., counting analysis; Krueger, 1998). The purpose of this portion of the analysis was to gain insight regarding the degree to which certain outcomes may be associated with abstinence from smoking.

Results

Table 1 describes demographic and smoking history characteristics of the sample. Table 2 contains the results from the counting analysis.

Expectancy Concept 1: Pharmacologic Withdrawal

The premise of this expectancy concept was that quitting would result in the characteristic smoking withdrawal syndrome. For example, one participant said, “I’d have some mood swings.” Another participant stated, “I’d be anxious, very anxious.”

Expectancy Concept 2: Behavioral Withdrawal

This concept was marked by the expectancy that abstinence would result in the loss of an important tool to cope with negative affect (see Baker, Japuntich, Hogle, McCarthy, & Curtin, 2006). One participant said, “I would be completely lost without cigarettes. It’s a home for me, a familiar, comforting friend.” Another participant said, “I’m scared to death of life without cigarettes. I call them security sticks.”

Expectancy Concept 3: Decreased Monetary Expense

The theme of this expectancy concept was that quitting would result in decreased financial burden. For example, one participant noted, “I’d save a couple thousand dollars a year.”

Expectancy Concept 4: Immediate Physical Functioning and Health

The common theme of this expectancy concept was that abstinence would result in conspicuous improvements in physical functioning and health shortly after the last cigarette. For example, one participant said, “I would run better, having more oxygen capacity … and also not having to be worried about getting colds or other types of respiratory infections.” Another participant stated, “My sense of smell would get a lot better and taste of food would get better.”

Expectancy Concept 5: Weight Gain

The basic principle of this concept was that abstinence would occasion weight gain. One participant expressed, “I would just start eating … and gain nine-hundred pounds.”

Expectancy Concept 6: Improved Attractiveness

The common theme of this category was that quitting smoking would result in the improvement of one’s attractiveness. Participants often illustrated this expectancy by describing the

detrimental effects that smoking currently has on their presentation to others. For instance, one participant said, “Someone may not want to kiss me because of how my breath smells or tastes.” Another participant endorsed the expectation that she would “smell better,” and that her “teeth wouldn’t get stained.”

Expectancy Concept 7: Enhanced Social Functioning/Self-esteem

Respondents commented that abstinence would enhance interpersonal relationships and self-esteem. Participants indicated that this would occur because smoking is a salient social stigma. Several participants indicated that they would look forward to no longer being treated like an “outcast” upon ceasing cigarette use. Some participants noted that quitting smoking would improve self-esteem because it represents a significant accomplishment. For example, one participant said, “I would have some sense of self-control and self-discipline if I quit.”

Expectancy Concept 8: Long-term Health Outcomes

Participants endorsed the expectancy that quitting would improve their long-term health outcomes. For example, one participant stated, “Health would improve. As the time goes on, basic health improvements would long extend your life.” A minority of participants expressed doubt that quitting would have a positive impact on their long-term health outcomes. These participants stated that because they have used cigarettes for such a long period of time, they anticipated that it would be “too late” for abstinence to have a beneficial effect on their health.

Expectancy Concept 9: Loss of Relationships

This concept was marked by the expectancy that quitting would have a negative impact on certain relationships that center on smoking behavior. One participant stated, “I’ve been introduced to people by just hanging around the ashtray … so there would be a certain blow to your social life or business life.” Another participant said, “You’re gonna be not able to click with the rest of the group … you’ll be the odd one.”

Expectancy Concept 10: Loss of Positive Reinforcement

The common theme of this category was that quitting smoking would represent the loss of an important pleasurable activity. Participants took care to mention the specific aspects of the act of smoking that they would miss. For example, one participant indicated, “I would probably miss the taste.” Another mentioned, “I would still miss something, the hand to mouth, and the nicotine.”

Expectancy Concept 11: Nicotine Replacement Therapy (NRT) Effectiveness

The principle of this concept was that NRT represents a valuable aid to smoking cessation. Participants reported that NRT would control cravings to smoke and increase the likelihood of a successful quit attempt. For instance, one participant said, “If I was having a nicotine fit, the gum would calm me down and it would help.” However, one participant stated that NRT would have little bearing on the outcomes of abstinence.

Expectancy Concept 12: Alcohol and Other Drug Use

This concept was marked by the expectancy that alcohol or other psychoactive substances would be used to compensate for the absence of smoking. For example, one participant said, “I’d expect to smoke more marijuana … as a crutch to get over smoking.” Another participant stated, “[I would drink more] coffee. It’s like a trip, going from one addiction to another … to make up for what you did.”

Expectancy Concept 13: Cue Reactivity

The central theme of this category was the expectancy that, upon quitting, certain smoking-related cues (e.g., locations or activities) would elicit urges to smoke. Participants illustrated this expectancy by describing the motivational influence of environmental "triggers." For instance, one participant said, "For me to see somebody light up a cigarette, oh boy that looks like the best … the next thing I know, I'm grabbing a pack."

Expectancy Concept 14: Cessation-related Social Support

The expectancy expressed by this category was that family, friends, and co-workers would be supportive of a quit attempt. For example, one participated noted, "People would support me by not smoking around me." However, one participant stated, "I'd like to hear some positive feedback and support from those people when I quit smoking, but … I don't feel like there's enough of that." Thus, not all participants indicated that their social network would facilitate their quit attempt.

Expectancy Concept 15: Aversion to Smoking

The theme of this expectancy concept was that smoking would lose its appeal over the course of abstinence and would eventually elicit automatic feelings of disgust. For instance, one participant indicated that as a consequence of abstinence, the smell of a cigarette would induce nausea.

Expectancy Concept 16: "Political Process" Implications

The general notion of this expectancy category was that quitting is associated with certain sociopolitical implications. For example, one participant indicated that quitting would be a welcomed opportunity to "stick it to Big Tobacco." Another participant stated that, despite quitting smoking, he would continue to support the right to use cigarettes: "Everywhere I go you shouldn't smoke … that's all I get. [But] it's all up to you. If you want to smoke and if you're able to smoke, do it."

Discussion

The principal aim of this study was to gain an initial understanding of smokers' expectancies for abstinence. As this was a previously uncharted topic of investigation, we made use of qualitative methodology to extract the range of anticipated outcomes. Consistent with our expectations, participants held a variety of expectancies spanning a number of diverse subject matters. The most commonly reported abstinence-related expectancies comprised pharmacologic withdrawal, behavioral withdrawal, decreased monetary expense, and prompt upturn of some features of physical functioning and health. Interestingly, these expectancies appeared to surround immediate consequences of abstinence. Thus, consistent with contemporary expectancy theory, smokers' expectancies for cessation may be especially oriented toward the here and now versus the long term (see Goldman, 2002).

Many of our results were presaged by previous literature (e.g., McKee et al., 2005). However, a number of expectancies not fully tapped by prior studies were uncovered in the current research. These were expectancies for NRT effectiveness, alcohol and other drug use, cue reactivity, cessation-related social support, aversion to smoking, and "political process" implications.

With regard to NRT effectiveness, some participants endorsed the expectancy that NRT would allay withdrawal symptoms and increase the probability of maintaining abstinence. However, one participant indicated the expectancy that NRT is inconsequential to cessation outcomes.

These findings parallel research indicating that while smokers expect NRT to regulate craving, their positive expectancies for smoking do not extend to NRT (Juliano & Brandon, 2004).

Previous investigations have examined smoking-related cognitions among those in treatment for addiction to alcohol and other drugs (e.g., Martin et al., 2006). The current study expands this line of research and suggests that some smokers expect abstinence to result in the increased consumption of psychoactive substances. Although it was unknown if participants in the current investigation were addicted to other drugs, it is possible that this expectancy generalizes to smokers without problematic patterns of substance use.

With regard to cue reactivity, some participants reported the expectancy that environmental smoking cues would elicit urges to smoke. This expectancy is consistent with the empirical literature. For example, the presence of smoking-related cues tends to precede cigarette use in the natural environment (e.g., Shiffman et al., 2002).

Social support is an additional important determinant of quitting success (Cohen & Lichtenstein, 1990). Previous research indicates that heavy smokers are generally aware of this notion (Thompson et al., 2003). Our results extend these findings and indicate that some smokers may anticipate that their family and friends will influence cessation outcome, for better or worse.

Expectancies for aversion to smoking and “political process” implications were largely unheralded by the extant literature. However, they are consistent with anecdotal reports from clinicians. Furthermore, public health messages have highlighted the role of the tobacco industry as the driving force behind the smoking epidemic (Ibrahim & Glantz, 2007). Nevertheless, because expectancies are formed by a lifetime of learning history, the source of these anticipated outcomes is difficult to ascertain.

Future Directions & Limitations

Novel treatment modalities have been developed to modify or “challenge” both alcohol-related (Darkes & Goldman 1993, 1998; Lau-Barraco & Dunn, 2008) and smoking-related (Copeland & Brandon, 2000) outcome expectancies. No such modalities exist for smoking-related abstinence expectancies. However, our results provide preliminary indication regarding which abstinence-related expectancies could be addressed by public health campaigns and individual treatments to improve the efficacy of these interventions.

The relatively small sample size of the current investigation may have precluded data saturation. Indeed, the low endorsement rate of some of the expectancy concepts may indicate that not all expectancy domains were revealed. Note, however, that the counting analysis did not quantify nonverbal communication, including indicators of agreement that were common during focus group meetings. It is therefore likely that the proportion of participants holding the expectancies revealed in the current study was greater than indicated by the counting analysis. Still, future qualitative investigations may be warranted to examine for expectancies not revealed by the current study. Conversely, the low endorsement rates of some domains suggest that these expectancies characterize idiosyncratic responses. Psychometric analyses will determine if these concepts are represented in the final version of the SAQ.

Expectancies represent “shifting targets” that can vary with context (see Kirchner & Sayette, 2007) and experience with tobacco (see Copeland et al., 1995). The expectancies delineated in the present study should therefore not be considered conclusive. For instance, unique sets of abstinence-related expectancies may exist for the various cessation methods (e.g., “cold turkey,” NRT). Moreover, lighter smokers may hold a different array of expectancies for abstinence. These topics merit additional research.

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Table 1

Demographic and Smoking History Characteristics of the Sample

Variable	M (SD; range)
Age, years	39.2 (11.7; 20–63)
Number of years smoking regularly	18.9 (13.0; 2–48)
Cigarettes smoked per day	16.8 (2.7; 15–25)
Fagerström Test of Nicotine Dependence score	3.7 (1.8; 1–7)
Carbon monoxide level, parts per million	18.9 (13.0; 10–45)
Quit attempts of at least 24 hours	9.3 (12.5; 0–50)
Quit attempts of at least seven days	3.5 (4.8; 0–20)
Longest quit attempt, days	315.9 (540.0; .5–1825)
Variable	**Number of participants (%)**
Female	16 (53.3)
Ethnoracial category	
White	18 (60.0)
Black/African-American	8 (26.6)
Multiracial	2 (6.6)
Asian	1 (3.3)
Other	1 (3.3)
Hispanic/Latino (assessed across all ethnoracial categories)	6 (20.0)
Educational level achieved	
Some high school	3 (10)
High school graduate	9 (30)
Some college	13 (43.3)
College graduate	4 (13.3)
Graduate degree	1 (3.3)

Table 2

Counting Analysis of Expectancy Concepts

Expectancy Concept	Response	N (%) of participants who endorsed response
Pharmacologic Withdrawal	--The characteristic symptoms of smoking withdrawal would occur.	22 (73)
Behavioral Withdrawal	--A coping tool for negative affect would be lost.	19 (63)
Decreased Monetary Expense	--The financial burden of cigarette use would be removed.	17 (57)
Immediate Physical Functioning and Health	--Certain aspects of physical functioning and health would immediately improve.	17 (57)
Weight Gain	--Weight gain would occur.	15 (50)
Improved Appearance	--Appearance would improve.	14 (47)
Enhanced Social Functioning/Self-esteem	--Interpersonal functioning and self-esteem would be enhanced.	13 (43)
Long-term Health Outcomes	--Long-term health outcomes would improve.	9 (30)
	--There would be no effect on long-term health outcomes.	2 (7)
Loss of Relationships	--Relationships centered on smoking would be lost.	9 (30)
Loss of Positive Reinforcement	--An enjoyable activity would be lost.	6 (20)
NRT effectiveness	--NRT would be a helpful cessation aid.	4 (13)
	--NRT would not be a helpful cessation aid.	1 (3)
Alcohol and Other Drug Use	--The use of alcohol or other psychoactive substances would increase.	4 (13)
Cue Reactivity	--Smoking cues would elicit urges to smoke.	4 (13)
Cessation-related Social Support	--Others would be supportive of the quit attempt.	3 (10)
	--Others would not be supportive of the quit attempt.	1 (3)
Aversion to Smoking	--Smoking would become aversive.	2 (7)
“Political Process” Implications	--There would be sociopolitical implications.	2 (7)

Note. NRT = Nicotine Replacement Therapy