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Social Facilitation Expectancies for Smoking:

Psychometric Properties of a New Measure

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ABSTRACT

Objective: Expectancies about social outcomes for smoking are relevant to college student smokers, who frequently report "social smoking." A new measure, the Social Facilitation Expectancies (SFE) scale, was developed to assess these beliefs. **Participants:** The SFE was administered to undergraduate college student smokers (N=1096; study completed in May 2011). **Methods:** Items were scored on a five-point scale with a summed total score. The sample was randomly split and principle axis factoring and confirmatory factor analysis applied to determine scale structure. The structure was tested across sex and smoking groups and validation analyses were conducted. **Results:** A nine-item, one-factor scale was replicated within each group. Higher SFE scores were observed among those with greater smoking experience and higher scores were associated with greater endorsement of other smoking related beliefs. **Conclusions:** These preliminary findings provide support for the sound psychometric properties of this measure for use with young adult college students.

Keywords: college students; expectancies; social facilitation; tobacco use; smoking; questionnaire development

Results from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC) indicate the prevalence of cigarette use is highest among young adults aged 18-24.[1] Among college students in the United States, approximately twenty percent report cigarette use in the past month.[2] Additionally, a substantial portion of smokers initiates smoking or may progress to regular smoking and nicotine dependence during young adulthood and college specifically.[3-5] High rates of young adult tobacco use are cause for concern given the paucity of effective interventions developed for this population[3,6] and the risks smoking poses for future health, even at very low levels, as is common among college students.[7-9] Identifying the important influences on young adult smoking, especially related to uptake and progression, is key for intervention development. The social factors that contribute to tobacco use may be particularly relevant to smoking among college students.[9] Although expectancies (i.e., beliefs about the consequences of engaging in a particular behavior) are a well-known contributor to smoking,[10] little research has specifically addressed cognitions related to perceived social aspects of smoking.

Social Influences

The few examinations of interpersonal factors in young adult smoking indicate their importance,[9,11] which is corroborated by the tobacco industry's internal emphasis on this topic for both research and marketing efforts.[12] Tobacco product branding is developed with specific young adult social activities as targets.[12] For example, businesses and events catering to college students and the general population of young adults are typical sites for tobacco promotions,

such as sponsorship of musical concerts or distribution of free cigarettes at bars or nightclubs.[13,14]

Non-industry research similarly highlights the importance of social influences by demonstrating that young adults' smoking often mirrors their close friends' smoking[15] and social consequences of smoking and perceived peer norms regarding smoking may be particularly salient to young adults.[16,17] A large number of college students self-identify as "social smokers"[9,11,18,19] and report cigarette use primarily in social situations.[20,21] Qualitative research has revealed that college students interpret social contexts and parties as "permission" to use tobacco,[22] indicating a cognitive component to the link between social situations and smoking.

Adolescent tobacco use research has suggested peers and social contact may provide direct pressure to smoke, influence subjective estimates of smoking prevalence, provide a positive image for smoking, increase access to tobacco, and facilitate social cohesion.[23] Yet, how peers and social context influence young adult smoking is not clear. Further research is needed on the effect of interpersonal influences on young adult tobacco use; beliefs about positive social effects from smoking may be particularly relevant.

Cognitive Influences

There is substantial evidence that substance use expectancies affect use and that greater positive outcome expectancies are associated with higher levels of use.[10, 24-28] Expectancies about the anticipated positive and negative effects of both smoking and cessation have been shown to affect young adults' tobacco use behaviors. For example, young adults' expectancies about the reinforcing effects of smoking cigarettes have been shown to influence and be influenced by the initiation of smoking.[29,30]

There is some evidence tobacco use expectancies may function differentially for occasional smokers than heavier smokers. Positive reinforcement expectancies have been shown to predict increased smoking among light or occasional smokers, but not daily smokers[31] and greater negative reinforcement expectancies for smoking are associated with smoking progression and development of nicotine dependence.[29,31] Cognitions regarding the positive social effects of smoking may be an important component to understanding the mechanism linking social context and smoking behavior, particularly among young adult college students who smoke on a less than daily or intermittent basis. Consistent with this assertion, studies of early smoking experiences of adult smokers have highlighted the role of social context in initial tobacco use[32,33] and, from the adolescent tobacco use literature, social approval has been shown to be a key motive for smoking initiation.[34] Additionally, when asked to complete the sentence "Smoking makes one ___" college students generated such terms as "fun," "sociable," "socially acceptable," and "cool."[35]

Although multiple measures of tobacco use expectancies exist, none were specifically created to measure expectancies regarding social facilitation properties for smoking.[10,35,36] The original version of the Smoking Consequences Questionnaire (SCQ)[10] is a 50-item questionnaire developed for measuring college students' cigarette smoking expectancies. The SCQ includes two items related specifically to social facilitation expectancies.[10] To our knowledge, there have been no investigations of how these items function independent of the other items. The SCQ is the most widely used measure of tobacco use expectancies and has been adapted and validated in diverse samples.[29, 37-46] Although Copeland and colleagues'[29] modification of the SCQ for use with more experienced adult smokers led to the inclusion of three additional social facilitation items, none of the modifications isolated the social facilitation expectancies, with the most

commonly used short version of the SCQ eliminating social facilitation expectancies items altogether.[37] Another measure of smoking outcome expectancies, the Smoking Effects Questionnaire (SEQ)[36] was designed to measure both positive and negative tobacco use expectancies. The SEQ includes five items (of 33 total items) measuring social facilitation expectancies. This measure was developed for use with the general adult population of smokers - the validation sample's median age was 42 and mean level of smoking was 24 cigarettes per day - to measure future smoking and likelihood for cessation.[36] Notably, the authors did not find a correlation between the positive social effects scale and number of previous quit attempts, and the correlation between anticipated positive social effects and current smoking level was small. A possible explanation for this is that expectancies for positive social outcomes from smoking are most relevant during initiation and smoking uptake, and, although they may persist for heavier or more established smokers, their influence may be lesser than other anticipated effects of smoking (e.g., negative reinforcement expectancies) in continuation or cessation of smoking behavior.

Current Study

The current study examines the psychometric properties of a new measure of social facilitation expectancies for smoking (SFE). The factor structure of the SFE was derived in a sample of college-attending young adults. The structure was then tested for invariance across relevant groups, including sex and lifetime smoking experience. Although smoking expectancies have been shown to increase with smoking experience and smoking rates have been shown to differ by sex, the content of the expectancy scale items is designed to apply to all levels of smoking, including never smokers, and so no differences in factor structure were hypothesized across groups. Invariance tests were followed by a preliminary assessment of the concurrent and

construct validity and internal consistency of the scale. Consistent with existing research on expectancies and on the social role of smoking among young adults, we hypothesized social facilitation expectancies for smoking would be positively associated with stronger endorsement of beliefs regarding negative social consequences of quitting smoking, greater expected difficulty of resisting a cigarette offer in a social situation, and with greater exposure to cigarette smoking.

METHODS

Participants

The sample consisted of 1096 current college students participating in a cross-sectional study of smoking self-change efforts. Participants were aged 18-24 years old (M = 20.02, SD = 1.64), 63.9% were female and 30.2% were Hispanic/Latino, 24.5% were non-Hispanic White/Caucasian, 23.0% were Asian/Asian-American, 1.7% were African-American, and 5.1% identified as Mixed, 1.4% identified as Other, and 14.1% declined to state their race/ethnicity. The eligibility criteria for the parent study were: age between 18-24 years old, have smoked at least one cigarette in the last 30 days at the time of survey completion, and current enrollment at one of two large public universities in the San Diego area.

Procedure

Students completed the SFE as part of an anonymous cross-sectional online survey for which they received a credit in an undergraduate psychology or cognitive science course. Students in participating courses were recruited via a university-managed online posting system for research studies. After indicating their interest in the study, students were provided with the link to a website with the study consent form. Those who provided electronic consent then completed the 30-40 minute online study battery that included the SFE, in addition to demographic information and questionnaires measuring smoking attitudes and experiences. Following study completion,

participants were taken to a separate web page where they provided their student identification number, in order to receive credit for completion. Student ID was not linked to study responses. Data collection was completed in 2011. The universities' Institutional Review Boards approved the studies.

Measures

Demographics

Collected demographic information included age, sex, and race/ethnicity.

Social Facilitation Expectancies for Smoking

The SFE was designed to measure beliefs regarding the expected social benefits of cigarette smoking. Ten items initially selected for inclusion in the scale were adapted from existing instruments that include social-facilitation-related expectancy items: a smoking expectancy questionnaire developed for adult smokers,[36] and a young adult measure of alcohol-related expectancies.[25] Response options for the 10 SFE items were on a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The SFE items were initially administered to undergraduate students (n=28), approximately half nonsmokers and half current smokers (smoked at least on a weekly basis) who provided written feedback on item wording, clarity of instructions, and appropriateness of the response options. This feedback was incorporated into the scale used in subsequent analyses. For reliability and validity analyses following factor structure assessments, a total scale score was computed by summing the responses to each of the five items.

Cigarette Use

Participants' recent and lifetime cigarette use was assessed. Participants provided the number of days they smoked in the last month and the average number of cigarettes smoked per smoking

day scored on ordinal scales, with responses ranging from once to daily for frequency and one to more than 20 for quantity. Regarding lifetime smoking, participants indicated whether they had smoked at least 100 cigarettes in their lifetimes (yes/no), a level commonly used to delineate those who are more experienced smokers from those who are not yet established smokers.[47] These items were used to describe the sample, to test for invariance across smoking groups, and for establishing concurrent validity.

Social Consequence of Quitting Smoking

Participants responded to a scale of items designed to assess perceived consequences of quitting (CQSE), of which one ("It will hurt my social life," rated on a five point scale from 1 = *strongly disagree* to 5 = *strongly agree*) assessed a subjective social effect of quitting cigarette smoking. This single item was chosen as a measure of construct validity to indicate the extent to which individuals anticipated negative social consequences of quitting smoking.

Temptation Coping Expectancies

The Temptation Coping Questionnaire (TCQ)[48] was administered to assess perceived ability to cope (i.e., not smoke) in a tempting social situation. One item from this measure ("How difficult would it be to abstain in this situation: It's Saturday night, you're hanging out with a few friends that you usually smoke around at a party. Everyone is socializing and having some drinks. The friends you're talking with are smoking cigarettes and someone offers you a smoke," rated on a five point scale from 1 = *not at all* to 5 = *very*) assessed perceived difficulty of not smoking in a social situation and was used in validation analyses for establishing construct validity.

Social Exposure to Cigarette Smoking

Social exposure to cigarette smoking was assessed via one item indicating the percentage of the participant's friends (0-100) who smoked cigarettes. This item was chosen as a measure for construct validity.

Scale Structure Analyses

Data from the full sample (n=1096) were randomly split into two groups. Participants were assigned to either exploratory factor analysis (EFA) or confirmatory factor analysis (CFA) to examine the structure and internal reliability of the SFE. For the exploratory factor analysis principal axis factoring was applied using SPSS statistical software package version 21. Loadings greater than .30 for any particular item were considered acceptable and emergent factors were investigated for theoretical consistency. The derived factor structure was then confirmed within the other half of the sample using CFA with maximum likelihood estimation in the MPlus statistical software package version 7.[49] Model fit was determined by consulting the Comparative Fit Index (CFI; 0-1 range, values >. 90 indicate acceptable fit and $\geq$ .95 indicate excellent fit)[50] the Standardized Root Mean Square Residual (SRMR; 0-1 range, values $\leq$ .05 indicate good fit)[51] and the Chi-square test, as recommended by Hu and Bentler.[50]

Multiple Group Analyses

To determine the reliability of the SFE factor structure across groups, multiple group analysis (MGA) with confirmatory factor analysis (CFA) was applied to the data, also using MPlus statistical software Version 7.[49] Following the initial scale structure analyses, the fit of the retained structure of the SFE was compared between male and female college students. Then, this structure was compared between those who had smoked less than 100 cigarettes and those who smoked 100 or more cigarettes in their lifetime.

Each of the two group comparisons proceeded in steps. In the first step, factor structures were compared between groups to determine configural invariance (i.e., the same number of factors and loading patterns across groups), while factor loadings were allowed to differ. The next step tested a metric invariance model by constraining model parameters to equivalence between groups. The same model fit criteria were used as described above for the initial CFA. To empirically determine improvements in model fit between steps, Chi-square difference tests were conducted. The alpha level was set at a conservative $p = .01$ level for evaluating significant differences between models.[52]

RESULTS

Participant Cigarette Use

Detailed smoking characteristics of the sample are presented in Table 1. The majority of participants reported they had smoked fewer than 100 cigarettes in their lifetimes. More than 70% had smoked three or fewer times in the preceding month, with the largest proportion reporting having smoked only once. Over 80% of participants reported smoking one to two cigarettes per smoking day.

Exploratory factor analysis

Results of the EFA (n=559) yielded one factor with an initial eigenvalue of 7.02 that accounted for 67.03% of the variance. All ten items loaded on the single factor with high loadings (range: .72-.89) with inter-item correlations between .54-.80. All items were retained for further analyses.

Confirmatory factor analysis

The CFA (n=524) revealed the single factor structure fit the data well [$\chi^2 (35) = 270.91$, $p <$ .001; CFI = 0.95; SRMR = 0.03] and the R^2 values for each item ranged from .58 to .80.

Modification indices suggested substantial overlap (WITH statement MI = 90.64) in item content from the residual covariances for two items, "I would have an easier time meeting new people" and "I would feel more confident in social situations." Coupled with the strong correlation between these two items (.80) and similar item mean scores (M=2.71 SD = 1.27) and (M=2.66 SD = 1.28), respectively, the decision was made to exclude one item and rerun the model. The second item was chosen for deletion, given that another item also used the word confident ("I would be more confident approaching someone I didn't know"), and the two items considered for deletion were similar in factor loadings and in the effect they would yield in reliability when deleted. The nine-item scale had excellent fit to the data [χ^2 (27) = 170.11, p < .001; CFI = 0.96; SRMR = 0.03] and demonstrated improved fit over the 10-item scale. The final version of the questionnaire is shown in Table 2.

Multiple group analyses

Sex comparisons

To establish configural invariance, the fit of the one-factor model with nine observed variables was examined across sex groups. This model fit very well statistically and descriptively in both groups, Men [χ^2 (27) = 127.94, p < 0.0001; CFI = .96; SRMR = 0.03] and Women [χ^2 (27) = 276.74, p < 0.0001; CFI = .95; SRMR = 0.03] and factor loadings in both groups were large and statistically significant (see Table 2). Next, to determine whether the scale differed between groups, all factor loadings (parameters) were constrained to equivalence. The metric invariance model also fit the data very well [χ^2 (70) = 420.46, p < 0.0001; CFI = 0.96; SRMR = 0.03]. A χ^2 difference test revealed the metric invariance model was not significantly different from the configural invariance model ($\Delta\chi^2$ (16) = 15.77, p > 0.01) so the metric invariance model

was considered the more parsimonious and better fitting model (i.e., the same structure can be assumed across sexes).

Smoking experience group comparisons

A second multiple group CFA was conducted to examine model fit across smoking experience groups (i.e., comparing those who had and had not smoked 100 lifetime cigarettes). While it is more common to draw comparisons between daily and nondaily smokers than between groups based upon lifetime smoking experience, we chose this approach because the current sample contained a very small proportion of daily smokers (7.9%). Additionally, using a cumulative indicator of lifetime smoking, rather than an indicator of current smoking, is consistent with a primary goal of developing a measure to examine the influence of social facilitation expectancies on the initial stages of smoking uptake and progression. Establishing invariance across lifetime smoking groups is consistent with past research suggesting a reciprocal relationship between expectancies and behavior;[53] social facilitation expectancies may develop over time such that more experience smoking in social situations may serve to strengthen or modify beliefs. To establish configural invariance, the fit of the one factor model with nine observed variables was tested. This model fit well among both groups, those who had smoked < 100 lifetime cigarettes [χ^2 (27) = 243.31, p < 0.0001; CFI = 0.96; SRMR = 0.03] and those who had smoked $\geq$ 100 lifetime cigarettes [χ^2 (27) = 167.42, p < 0.0001; CFI = 0.93; SRMR = 0.05] and factor loadings in both groups were large and statistically significant (see Table 2). Next, to determine whether the questionnaire items functioned differently between groups, parameters were constrained to equivalence. The metric invariance model fit the data adequately [χ^2 (70) = 480.81, p < 0.0001; CFI = 0.95; SRMR = 0.05]. A χ^2 difference test revealed the metric invariance model was significantly different from the configural invariance

model ($\Delta\chi^2$ (16) = 70.09, p < 0.001) so the configural invariance model was considered the better fitting model. This suggested one or more items were interpreted differently across groups. To identify the item or items, and explore the possibility of partial metric invariance, the factor loading equivalence restraints for each of the items was sequentially released and resulting model fit was examined. Parameters for two items [If I were smoking a cigarette] "It would help my social life" and "I would be less likely to feel left out of the group" differed between groups. While the factor loadings were high for both groups (see Table 2) the values were lower among those who had smoked > 100 cigarettes. Parameter value equality can be assumed for all other items, suggesting the partial metric invariance model best fit the data.

Reliability and Construct Validity of the SFE

Utilizing the full sample, reliability and construct validity of the 9-item measure retained from scale structure analyses were explored. Total scores for the SFE ranged from 9 to 45 with a mean of 24.03 (SD = 9.85). The scores were normally distributed, although slightly positively skewed, and internal consistency of the measure was high (Cronbach's alpha = .95). Greater social facilitation expectancies were endorsed among those with greater smoking experience. Those who had smoked at least 100 cigarettes in their lifetime had significantly higher mean social facilitation expectancies [M (SD) = 25.44 (8.55)] than those who had smoked < 100 lifetime cigarettes [M (SD) = 23.43 (10.27); t (1094) = -3.20, p = .001], indicating discriminative construct validity. The correlation between social facilitation expectancies and perceived negative social consequences of quitting smoking was statistically significant (r = .38, p < .001), as was the correlation between social facilitation expectancies and perceived difficulty of not smoking in a social situation (r = .23, p < .001), providing further evidence for construct validity. However, the relationship between social facilitation expectancies and peer smoking

[Percent of friends who smoke: Range = 10-100; M = 38.16 (21.01), positively skewed], while significant, was small in magnitude (Spearman's ρ = .13, p < .001).

COMMENT

Substance use expectancies have been well established as an important influence on substance use behaviors.[54,55] Although widely used, existing measures of cigarette smoking expectancies provide limited assessment of perceived social facilitation benefits, which may be particularly important for young adult uptake and progression. The current study examined the psychometric properties of a new measure of cigarette smoking social facilitation expectancies among an ethnically diverse sample of young adult college students. The content of the questionnaire was selected to assess agreement with anticipated social benefits of cigarette smoking among young adults, consistent with research in this area.[22,35] The new measure yielded one factor pertaining to this construct. Previous research has suggested expectancies may become more differentiated with more experience[29,36] and there is evidence that substance use expectancies are not static over time and may be subject to multiple influences such as initiation, continuation, or cessation of the behavior.[30,56,57] The single emergent factor in the SFE may reflect that the development sample was comprised of less experienced smokers and indicate the measure may be most appropriate for studies of early smoking.

We found support for the psychometric properties of the SFE through multiple steps investigating the reliability of the factor structure and establishing construct and content validity. Findings from exploratory and confirmatory factor analyses supported good to excellent fit of a nine-item single-factor measure across sexes and smoking experience groups. Additional findings provided initial support for hypotheses regarding construct validity of the SFE,

specifically that social facilitation expectancies are significantly associated with smoking cessation and abstinence related cognitions, and current smoking level.

We hypothesized the same factor structure would hold for both males and females and for those who had smoked < 100 vs. > 100 cigarette in their lifetimes. The structure was consistent across sex, while seven of the nine items remained stable across smoking experience groups, with two items endorsed more strongly by those who had smoked more than 100 lifetime cigarettes, supporting use of the SFE with a young adult college student population. That the response patterns partially differed between less and more experienced smokers, contrary to our hypotheses, may indicate more refined definition of these beliefs with greater smoking experience.

These findings again lend support to the particular utility of this measure in studies of early smoking. One study investigated the use of a short form of the adult version of the SCQ among college students, comparing daily and nondaily smokers, with the authors concluding there may be a need for measures specifically developed for occasional smoking college students.[40] The SFE provides a tool for investigations of the role of social facilitation expectancies in early smoking. Studies of risk for continued smoking require measures of this type, created specifically for the construct and population, rather than broad measures developed for use with the general adult population of smokers.

Subsequent analyses provide initial support for the validity of the SFE, evident from the significant, although modest, associations between the SFE and other smoking related beliefs. These findings have implications for smoking progression. Greater social facilitation expectancies are associated with greater anticipated difficulty not smoking in social situations when offered a cigarette and with greater endorsement of the belief that quitting smoking would

adversely affect one's social life. As smoking is common in social situations in college,[9,20,22] and college students report "peer pressure" to smoke[58] and may be provided with cigarettes via tobacco promotions,[12] potential for being offered a cigarette is high. Therefore greater expectancies that smoking will enhance social interactions are likely linked with lower rates of refusal or sustained ability to refrain from smoking and higher vulnerability for continued use; however, the cross sectional data of the current study preclude testing of these hypotheses.

Surprisingly, while social facilitation expectancies and peer smoking were significantly and positively related, the strength of the association was small. A possible interpretation of this finding is that subjective anticipated social benefits from smoking may be more strongly related to other contextual and environmental factors (e.g., alcohol use[59]) than to the influence of individuals. Another consideration is that proportion of friends who smoke was a current rating, whereas expectancies likely incorporate and reflect prior exposure to smoking in various contexts. As stated above, expectancies are not stable over time and are influenced by changes in individuals' behavior; however, they are formed based on prior experiences and contact with smokers as well as other images of smoking, consistent with social learning theory.[60]

Limitations

The current study provided preliminary support for excellent psychometric properties of the SFE. However, the current findings should be interpreted in light of a number of limitations. The sample included only recent smoking students; how this measure performs among nonsmokers and whether these cognitions contribute significantly to smoking initiation are areas for future research. Students were included in the study who have smoked < 100 cigarettes given the potential relevance of smoking facilitation expectancies to early smoking experiences, however, the Centers for Disease Control and Prevention (CDC) considers a smoker to be someone who

has smoked > 100 cigarettes in their lifetime. Therefore, by this definition, not all participants would be considered current smokers. Lastly, we utilized cross-sectional survey data; this limited the variables available for validation analyses and precluded an exploration of the predictive utility of the SFE. Further research is needed to establish the ability of this measure to predict continued smoking.

Conclusions

The SFE fills a gap in smoking expectancy measurement among college students; social factors are key influences on young adult smoking behavior[9] and we were not able to identify an existing measure of anticipated social benefits of cigarettes smoking. The SFE was tailored to measure the perceived social facilitation effects of cigarette smoking among college students, particularly those early in their smoking career or who smoke on a less than daily basis. The content of the scale, including the directions and the item wording, was selected to apply to individuals who currently smoke, as well as those who have never smoked a cigarette. The smoking rate of the current sample reflected the aim to develop this scale for use with those who may be vulnerable to smoking progression. The majority of the current sample smoked on a less than daily basis and had smoked fewer than one hundred cigarettes in their lifetime, which represents a lower level of smoking than nationwide college smoking statistics.[2] The potential for use of the SFE in studies of smoking uptake is particularly important, given the high rates of smoking initiation during college. Studies indicate early stages of use are common among college students[61-63] and the college environment has been implicated as being a powerful influence on smoking uptake in particular.[64] Therefore, young adulthood, and college matriculation specifically, represents a susceptible period for the initiation or progression of cigarette smoking, possibly due to changes in environment such as increased access and

exposure to tobacco, increased alcohol use, and reduced supervision.[4,65] However, few studies have examined the contributing factors to initiation in college. The SFE will allow for investigations into the mechanisms leading to smoking intake and progression among young adults, particularly related social smoking.

Based on the current study, a new measure of social facilitation expectancies for smoking has been established for assessing this construct among light or occasional smoking college attending young adults. This measure has sound psychometric properties and was developed using a large, ethnically diverse sample. The present results suggest social facilitation is linked to smoking behavior and other social aspects of smoking. Future research with the SFE could contribute to the literature on smoking initiation and progression in college, understudied areas of research and may provide direction for campus policies and development of content targeting these beliefs in programs aimed at preventing tobacco use.

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Table 1. Smoking characteristics (lifetime experience, recent smoking frequency and quantity) of the sample, college student current smokers (smoked at least one cigarette in the past 30 days)

Smoking characteristic	Current Smokers
	N = 1096
Smoked ≥ 100 cigarettes (n, % yes)	354 (32.3)
Smoking frequency in the past 30 days (n, %)	
Once	451 (41.1)
2-3 times	333 (30.4)
1-2 times per week	122 (11.1)
3-4 times per week	67 (6.1)
5-6 times per week	36 (3.3)
Every day	87 (7.9)
Number of cigarettes/smoking day in the past 30 days (n, %)	
1-2	906 (82.7)
3-5	139 (12.7)
6-10	32 (2.9)
11-15	8 (.7)
16-20	9 (.8)
more than 20	2 (.2)

Table 2. Factor loadings for the one-factor nine-item Social Facilitation Expectancies questionnaire across groups.

	Items	Male	Female	< 100 cigs	≥ 100 cigs
1	I would have an easier time meeting new people.	.760	.799	.797	.751
2	I would like the way that I have something to do with my hands while I am in a group.	.750	.763	.779	.700
3	I would feel more included in social situations.	.853	.819	.858	.749
4	I would feel more relaxed when I am with other people.	.881	.891	.901	.850
5	It would help my social life.	.776	.789	**.827**	**.681**
6	I would feel like one of the more sophisticated members of the group.	.821	.844	.855	.788
7	It would be an enjoyable activity to do with my friends.	.848	.859	.874	.810
8	I would be less likely to feel left out of the group.	.707	.734	**.767**	**.609**
9	I would be more confident approaching someone I didn't know.	.769	.808	.812	.756

Note. Factor loading invariance was established between males and females and for seven of the nine items between lifetime smoking groups. Loadings in bold differed between lifetime smoking groups

Note 2. Items are preceded by the text: "The following questions ask what you would expect to happen if you were smoking CIGARETTES. If you have **never** smoked, answer according to your personal beliefs about smoking. Using the scale below, please rate how much you agree or disagree with each statement, depending on whether you think that smoking a cigarette would have that effect for you."