Comparing injunctive marijuana use norms of salient reference groups among college student marijuana users and nonusers

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ABSTRACT

Marijuana is the most commonly used illicit drug among college students and has the potential for various negative outcomes. Perceptions of what constitutes typical approval/acceptability of a reference group (i.e. injunctive social norms) have been shown to have strong utility as predictors of health-risk behaviors in the college context, yet this construct remains significantly understudied for marijuana use despite its potential for use in social norms-based interventions. The current research evaluated individuals' marijuana approval level and their perceptions of others' marijuana approval level (i.e. injunctive norms) for various reference groups (typical student on campus, one's close friends, and one's parents) as a function of individual user status (abstainers, experimenters, occasional users, and regular users). A diverse sample of 3553 college students from two universities completed an online survey. Among all user status groups, individual approval yielded mean scores paralleling that of perceived close friends' approval and all groups were relatively uniform in their perception of typical students' approval. Higher levels of marijuana use tended to produce higher endorsements of individual approval, perceived close friends' approval, and perceived parental approval. Among occasional and regular users, there were no differences between one's own approval level for use and the perceptions of close friends' approval, nor did they think the typical student was more approving than themselves. Abstainers and experimenters, however, perceived typical students and close friends to have more permissive attitudes than themselves. Implications and future directions for research regarding the role of injunctive marijuana use norms in the development of social norms intervention are discussed.

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1. Social norms and marijuana

Social norms theory (see Berkowitz, 2004; Perkins, 2003) asserts that indirect peer influence, in the form of perceptions, acts on an individual's own behavior regardless of the accuracy of the perceived norm. The construct of perceived approval or attitude of others (i.e. injunctive norm; Cialdini, Reno, & Kallgren, 1990) has been used in frameworks for understanding a wide range of behaviors (see review by Ajzen, 1991) including substance use (e.g., Conner, Warren, Close, & Sparks, 1999; Norman & Conner, 2006). Yet the functionality and influence of injunctive norms have been understudied in marijuana users. In one study assessing a sample of high school graduates during the summer prior to attending college, the authors found a unique and positive relationship between both descriptive and injunctive norms on marijuana use (Neighbors, Geisner, & Lee, 2008). Given the paucity of extant research and potential applicability of findings for use in prevention and intervention efforts, including how to best focus such efforts to specific user types, the present study focused exclusively on injunctive marijuana norms.

1.1. Specificity of normative referents

Recent evidence (Borsari & Carey, 2003; Larimer et al., 2009; Neighbors et al., 2010; Neighbors, Lee, Lewis, Fossos, & Walter, 2009) supports several theoretical perspectives (i.e., Social Comparison, Festinger, 1954; Social Impact Theory, Latané, 1981; and Social Identity Theory, Hogg, Abrams, Otten, & Hinkle, 2003; Terry & Hogg, 1996) suggesting that the reference groups to which individuals are closely connected by proximity or identification are more relevant and have greater influence on individual behavior and attitudes than reference groups to which individuals are remotely connected. Because injunctive norms define the social approval by important others, the endurance and influence of these norms on marijuana use may differ according to the level of proximity of the normative referent. Therefore, a necessary step to extend normative research on injunctive norms and marijuana use requires first identifying what types of perceptions different users have of different reference groups, relative to their own approval level. Secondly, it is important to compare the perceptions of the different reference groups by individual user status, to garner a sense of the strength of similarity or dissimilarity between perceptions, as a function of how frequently the individual actually uses marijuana. These two components provide data that can then help to answer an important question in

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social norms research: what types of normative education are appropriate and effective, for which health-risk behaviors, and for whom (Mattern & Neighbors, 2004).

1.2. Study aims and hypotheses

The current study evaluated individuals' marijuana approval level and their perceptions of others' marijuana approval level for various reference groups (typical student on campus, one's close friends, and one's parents) as a function of individual user status (abstainers, experimenters, occasional users, and regular users). It was generally anticipated that higher levels of individual marijuana use would also reflect progressively higher levels of individual approval and perceptions of others' approval. We also hypothesized that individual approval levels would be most closely aligned to perceived close friend approval and that regardless of user status, students would perceive the typical student to hold more permissive attitudes than themselves. Finally, we expected perceived parental approval to obtain the lowest approval score regardless of individual user status.

2. Materials and methods

2.1. Participants

Participants were 3553 (61% female) students at two west-coast campuses, one a large public university and the other a private mid-sized university. They had a mean age of 19.88 years ($SD = 1.36$) and were 54.7% Caucasian, 18.5% Asian, 12.7% Hispanic/Latino, 6.8% Multiracial, 3.0% African American, and 4.3% other.

2.2. Design and procedure

During the first two weeks of the fall semester, 7000 randomly selected students received invitations to participate in an online survey. Upon indicating their consent on an IRB-approved form and entering their unique pin number, they were routed to the confidential survey. Participants received $20 for completing this 30 min baseline survey.

2.3. Measures

Measures relevant to the current study included demographics, perceived injunctive marijuana norms, and individual marijuana use.

2.3.1. Individual attitudes and injunctive norms

Participants were first asked about their own approval of four items regarding the frequency of marijuana use: (1) abstaining from marijuana use, (2) trying marijuana once or twice, (3) smoking marijuana occasionally, and (4) smoking marijuana regularly. Response options were on a Likert scale ranging from 1 (*strongly disapprove*) to 7 (*strongly approve*).

Injunctive norms were assessed by asking participants about their perceptions of how much a typical student on their campus, their close friends, and their parents approved of the same four items, using the same Likert-type response scale. Item 1 (referring to abstaining from use) was reversed scored. Composites were then computed for the actual/self approval ($\alpha = .77$), perceived typical student approval ($\alpha = .69$), perceived close friend approval ($\alpha = .80$), and perceived parental approval ($\alpha = .69$).

2.3.2. Marijuana use

The frequency of marijuana use was assessed via the following question: "In the past year, how many occasions did you use marijuana?" Response options were on a Likert scale ranging from 0 (*never*) to 6 (*40 or more times*).

3. Results

3.1. Classification of marijuana user status

For the purpose of the investigation, the following categorization was applied to define the four user status groups, based on the prevalence of use in the past year: abstainers (0 times; $n = 2134$), experimenters (1–2 times; $n = 470$), occasional users (3–19 times; $n = 588$), and regular users (20+ times; $n = 361$). Thus, 40.0% of the sample used marijuana at least once in the past year.

3.2. Repeated-measures analytic model

A 4×4 between- and within-subjects ANOVA model was conducted to examine differences in self/actual marijuana approval as well as perceived approval of the various referent groups as a function of respondent user status. Respondent marijuana user status (abstainers, experimenters, occasional users, and regular users) was specified as the between-subjects factor. Marijuana approval measures (self/actual approval, perceived typical student approval, perceived close friends' approval, and perceived parental approval) served as the within-subjects factor.

Results revealed highly statistically significant main effects for marijuana user status, $F(3, 3549) = 488.71$, $p < .001$, and for marijuana approval, $F(3, 10,647) = 1999.91$, $p < .001$. A marijuana user status × marijuana approval interaction also emerged, $F(9, 10,647)$, $p < .001$. Mean scores for each approval measure, as a function of marijuana user status, are graphed in Fig. 1.

3.3. Decomposition of the interaction via pair-wise differences

The statistically significant interaction was decomposed in a series of follow-up between-subjects and within-subjects t-tests. Results are presented in Table 1. Specific between-subjects differences were initially examined. The four status groupings of marijuana usage differed statistically, in all possible comparisons, on self/actual approval, perceived close friends' approval, and perceived parental approval, $ps < .001$. Experimenters and occasional users each reported significantly higher means on perceptions of typical student approval than abstainers ($ps < .001$), but no other differences were discovered on typical student approval.

Next, specific within-subjects effects were examined. In both the abstainer and experimenter groups, mean differences were evidenced on all four of the marijuana approval composites in all comparisons.
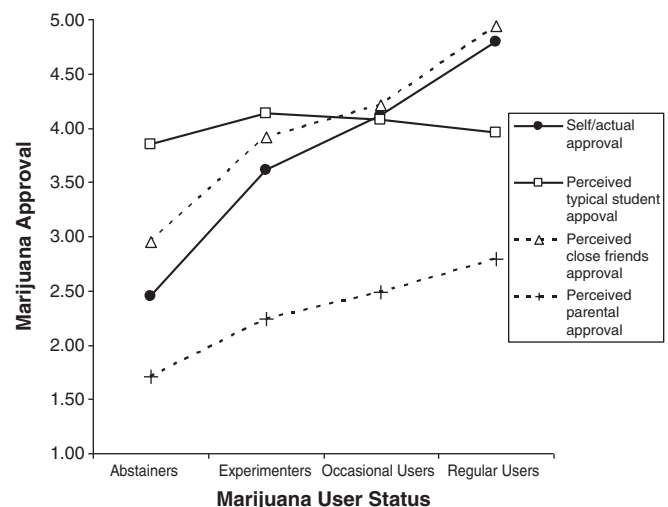

Fig. 1. Self/actual marijuana approval and perceived marijuana approval of referent groups as a function of user status.