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Perceived harm as a mediator of the relationship between social norms and marijuana use and related consequences among American Indian youth

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Abstract

Background—American Indian (AI) youth are at increased risk for marijuana use with marijuana use rates on or near reservations 1.6–4.8 times higher compared to non-AI youth in the same regions (Stanley et al., 2014). One outcome of the changing social and legal acceptance of marijuana is a decrease in perceived risk among adolescents. It is unknown whether these changes in perceptions of marijuana-related harm will presage higher rates of use among AI youth. Perceptions of others use (i.e., descriptive norms) and approval (i.e., injunctive norms) are consistent predictors of marijuana use and consequences. Moreover, large scale surveys have shown that gender is an important moderator of the relationship between norms and marijuana use in AI samples.

Method—The current study is a large epidemiologic study of 7th–12th grade self-identified American Indian students (N = 3050). We examined the direct relations between descriptive and injunctive norms and marijuana use/consequences among AI youth, as well as the mediating role of perceived harm and the moderating role of gender.

Results—Results of a multi-group path analysis revealed a similar pattern of findings for males and females. In addition, there were direct effects for descriptive but not injunctive norms on marijuana use/consequences, and the sequential pathway from norms to use/consequences via perceived harm held.

Discussion—Findings suggest that normative perceptions and perceived harm are antecedents of marijuana use/consequences and are prime targets for large scale interventions on AI reservations.

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Conflict of interest
No conflict declared.

Contributors

Mark A. Prince developed the research question, undertook the statistical analyses, drafted the analysis plan, results section, created tables and figures, and provided edits to the final document. Randall C. Swaim wrote the first draft of the introduction and provided edits to the final document. Linda R. Stanley wrote the first draft of the methods section, created Table 1, and provided edits to the final document. Bradley T. Conner wrote the first draft of the discussion section and provided edits to the final document. All authors contributed to and have approved the final manuscript.

Keywords

American Indian; Adolescent; Marijuana; Perceived harm; Social norms

1. Introduction

Large scale survey studies report that American Indian (AI) adolescents who reside on reservations are at exceptionally high risk for marijuana use where rates of marijuana use can be from 1.6 to 4.8 times higher for last month use compared to white students residing in the same locations (Stanley et al., 2014). When comparing U.S. students in general to AI students, Johnston et al. (2016) found that 16.4% of 8th graders in the general population reported using marijuana, while Stanley et al. (2017) found that 56.2% of AI 8th graders reported using marijuana. Throughout high school, the gap between AI and general population youth decreased with regard to marijuana use, but remained pronounced with 43.8% of 12th grade general population youth reporting marijuana use and 67.9% of 12th grade AI youth reporting marijuana use. These substantially higher rates of use on or near reservations make AI youth vulnerable to the many harmful outcomes related to the use of marijuana.

In 2017, the National Academy of Sciences conducted a comprehensive review of the health effects of marijuana (NAS, 2017). This group found evidence for a myriad of negative consequences including worsening respiratory symptoms (e.g., chronic cough, bronchitis), dependence on cannabis and other substances, and increased risk for developing social anxiety, schizophrenia or other psychoses (NAS, 2017). Further, NAS reported that impairments in learning, memory, and attention, as well as increased risk of motor vehicle accidents when driving under the influence result from acute intoxication. Similar consequences are reported for AIs, including progression to use of other drugs, substance use disorders, and anti-social behaviors (Ehlers et al., 2007; Novins and Barón, 2004; Novins and Mitchell, 1998; O'Connell et al., 2011). However, of note, Gilde et al. (2006) found no relationship of marijuana dependence to anxiety, affective, and psychotic disorders among a sample of Southwest California American Indian adults, suggesting there may be tribal variation for these relations. Together, the high prevalence and deleterious effects of excessive marijuana use among AI and general population youth highlight the need to understand the distal and proximal antecedents of problematic use.

The legal and social acceptance of marijuana use are changing despite its known negative consequences that can result from marijuana use. Among adolescents, substantial reductions in the perceived harmfulness of marijuana were reported by national 12th graders in 2015 (Johnston et al., 2016). The reduction in perceived harm among adolescents has been seen as a leading indicator of rises in use one or two years later (Johnston et al., 2016). Further, Berg et al. (2015) found among a large sample of college students that compared to various tobacco products, marijuana was viewed as the least harmful and most socially acceptable substance. While perceived harms associated with marijuana use are declining, it is unknown whether these changes will presage higher rates of use among AI youth, who already use at higher rates than the general population.

One lens through which to view higher rates of use among AI youth is social norms. Social norms are decisional shortcuts that guide decision making. Cialdini et al. (1991) define two types of social norms that define beliefs about how much others are engaging in a behavior (i.e., Descriptive Norms) and beliefs about others approval of engaging in a behavior (i.e., Injunctive Norms). Each of these factors has been reported to operate independently and directly on substance use (Borsari and Carey, 2003; Larimer et al., 2004; Lee et al., 2007). Other studies have found that norms related to marijuana use were associated not only with levels of use, but with marijuana-related problems (Neighbors et al., 2008; Kilmer et al., 2006). Regarding AI youth, Swaim et al. (2013) showed that AI youth reported higher descriptive norms and lower injunctive norms about marijuana use compared to non-AI youth residing in the same locations. While to some degree these normative perceptions match the prevalence rates reported in epidemiology studies, these perceptions may create a positive feedback loop with beliefs about higher prevalence of use and greater acceptability of use fueling higher rates of personal use. Indeed, Stanley et al. (2017) reported that descriptive and injunctive (disapproval) norms each related directly to lifetime, current, and heavy marijuana use among reservation AI youth. One benefit of the stable link between social norms and substance use and consequences is that social norms are amenable to intervention (Kilmer et al., 2006; Spoth et al., 2008). Examining the pattern of relationships between descriptive and injunctive norms among AI youth will help best design social norms campaigns to be delivered on or near reservations.

Appropriately targeting interventions involves understanding important moderators of the relationships between key antecedents and use. Gender has been identified as an important moderator in the substance use field with males typically using more substances than females. Specifically related to marijuana use, males have higher prevalence, rate, and frequency of marijuana use during adolescence (Johnston et al., 2014; SAMSHA, 2013; Crane et al., 2015), and females increase marijuana use during young adulthood resulting in gender differences in marijuana use being diminished by adulthood (Mahalik et al., 2013). Further, males report more marijuana-related consequences compared to females (Ecker and Buckner, 2014). There are also known gender differences in marijuana social norms. Adolescent females (both AI and non-AI) report higher descriptive norms compared to males. Among adolescents, 8th grade males report higher injunctive norms and 12th grade females report higher injunctive norms. There is currently no research on potential gender differences in perceived harm of marijuana.

The current study expands our investigation of marijuana and norms with an elaborated model that includes perceived harm as a potential mediator of both descriptive and injunctive norms and both marijuana user status and marijuana-related consequences (see Fig. 1). While perceived harm of marijuana use may be shifting, i.e., seen as less risky among adolescents, it remains a prevention target amenable to change and its role in relation to norms is important. Whether it operates as an indirect influence between norms and marijuana use and consequences is an important question to be answered. Further, gender is treated as a moderating variable of the mediational model described above. We are aware of no study that considers the potential interaction between gender, perceived harm, and social norms in AI youth. Parsai et al. (2009) found that among Mexican and Mexican-American adolescents, the effects of parental injunctive norms and peer and friend descriptive norms

for marijuana were stronger for male compared to female students. Moreover, the trend toward a lowering of perceived harm for marijuana use among adolescents (Johnston et al., 2016) makes this factor potentially key in understanding how social norms impact use. As described earlier, substance use consequences have been studied previously in the general population, but no study to date has examined both perceived harm and marijuana-related consequences within a single model, or among AI adolescents. Based on the foregoing review of past literature, we studied the following hypotheses:

- H₁** Student beliefs about others' marijuana use (Descriptive Norms) and student perceptions of acceptability of marijuana use (Injunctive Norms) will be related to marijuana user status and marijuana-related consequences.
- H₂** The effects of normative beliefs (Descriptive and Injunctive) on marijuana user status and marijuana-related consequences will be indirectly related through the effects of perceived harm.
- H₃** The effects in H₂ will be moderated by gender.

2. Method

2.1. Sample and participants

This study uses survey data from 3050 7th to 12th grade self-identified American-Indian students (49.5% female) in 46 schools surveyed across four academic years (2009–2012). These data are part of an ongoing epidemiologic study of AI youth living on or near reservations. Schools on or near reservations with at least 20% AI students enrolled were identified and stratified according to six geographic regions (Northwest, Northern Plains, Northeast, Southeast, Southern Great Plains, and Southwest). Schools within this sampling frame were then sampled, with recruitment in each region approximating the percentage of AIs in that region based on 2000 U.S. Census data for designated AI areas. When a sampled school declined to participate, another school from that region was drawn. Depending on the year, approximately 20–40% of schools sampled agreed to participate, and on average, 80% of enrolled students (with a range of 66%–100%) took the survey. No schools in the Northeast chose to participate in the survey; however, only about 3% of American Indians living on reservations or tribal lands reside in this region. The Southwest and the Northern Plains have the greatest numbers of AIs living on reservations and tribal lands, relative to the other regions. The current sample included the following regional distribution of students: Northwest 3.3%, Northern Plains 51%, Southeast 3.6%, Southwest 30.7%, Upper Great Lakes 11.4%.

Specific identities of tribes and reservations are kept confidential. However, 60% of schools were located in areas where the poverty level was more than twice the national rate and where the median household income was less than 60% of the national level. Schools received a comprehensive report of findings and \$500 compensation for participating.

2.2. Procedure

Permission for surveying was obtained prior to data collection from tribal authorities and/or the school board. All students in grades 7–12 in sampled schools were eligible for

participation in the survey. Passive parental consent was obtained as parents were notified of survey administration via a media release and a letter mailed to all parents by the school that explained how to opt their child out of the survey. Fewer than one percent of students did not complete the survey due to lack of parental consent. The survey was administered during normal classroom hours by either a teacher or school staff member trained in human subjects procedures. No identifying information was collected from the students, and students could leave any question blank that they did not wish to answer. All procedures were approved by the university Institutional Review Board.

2.3. Measures

Self-report data were collected with The American Drug and Alcohol Survey™. This survey has been shown to be reliable and valid with both ethnic minority and majority youth (Oetting and Beauvais, 1990).

2.3.1. Marijuana outcome variables—A marijuana-related consequences variable was created by summing 12-consequence items (e.g., got arrested; got into trouble at school; damaged a friendship). The original items had the following response options: no, 1–2 times, 3–9 times, 10+ times. Marijuana user status was assessed with an item that read “In using marijuana are you a...”, with response options: non-user, very light user, light user, moderate user, heavy user, very heavy user. As a validity check, we examined the correlation between the marijuana user status variable and marijuana use frequency. Results indicated that marijuana user status was multi-collinear with both 12-month ($r = 0.87$) and 30-day frequency ($r = 0.80$).

2.3.2. Perceived harm—Perception of harm about marijuana use was assessed with the following item, “How much do you think people harm themselves if they use marijuana regularly?”, with 4 response categories (no harm, very little harm, some harm, a lot of harm).

2.3.3. Normative perceptions—Descriptive norms were measured with one item (How many of your classmates use marijuana at least once per month?) with 5 response categories (none, a few, less than half, more than half, almost all).

Adult injunctive norms was measured with one item (Most adults think it is wrong for students to use marijuana) with responses on a 5-point scale (strongly agree, agree, neutral, disagree, strongly disagree). The injunctive norms item was reverse scored so that higher values indicate stronger disapproval against use.

2.3.4. Moderator variable—Gender was coded as a dichotomous variable with male as the reference group (male = 0, female = 1)

Table 1 gives means and standard deviations of the outcome and independent variables for 3 grade groups: 7th – 8th, 9th – 10th, and 11th – 12th.

2.4. Analysis plan

A path model is presented in Fig. 1. A multi-group path analysis was conducted to test the study hypotheses. All non-dichotomous variables were normally distributed. Analyses were conducted using Mplus 7.4 (Muthén and Muthén, 1998–2015), with the data specified as complex to account for non-independence due to nesting of students within schools. This approach allows for estimation of the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR), but not the chi-square test of model fit due to the estimation of replicate weights. To evaluate overall model fit, we used model fit criteria suggested by Hu and Bentler (1999) for $RMSEA < 0.06$, and $SRMR < 0.08$. All parameters were allowed to freely vary across gender. Model fit criteria were used to compare two path analyses. The first model allowed all paths to freely vary by gender, the second constrained all paths to be equal across gender.

Atemporal mediation analyses (Winer et al., 2016) were conducted due to the cross-sectional nature of our data. Atemporal mediation partials out the relation between the predictor and the mediator from the predictor-outcome relation. This approach precludes evidence for a causal chain, but provides information about the relation between the predictor and outcome variables when accounting for the shared relation among all variables in the model. The term “indirect effects” is used to report on atemporal mediation effects.

The primary challenge in making appropriate determinations regarding the strength of an indirect effect is that the product of two regression slopes is not normally distributed. The violation of the normality assumption results in a loss of statistical power for many traditional approaches to testing mediation (e.g., the Sobel Test). In order to circumvent this issue, the best practices approach is to assess asymmetrical confidence intervals (ACIs) that best represent the true distribution of the product of coefficients. ACIs that do not contain zero are considered to be statistically significant. We examined the indirect effects of each predictor variable on outcomes using bias-corrected bootstrapped estimates (Efron and Tibshirani, 1993) based on 1000 bootstrapped samples which provides a powerful test of mediation (Fritz and MacKinnon, 2007) and asymmetrical confidence intervals. Statistical significance was determined by 95% bias-corrected bootstrapped confidence intervals that did not contain zero.

3. Results

3.1. Description of the sample

The sample of American Indian youth was 50.5% male, with an average age of 14.76 ($SD = 1.70$). Table 1 presents means and standard deviations for outcome and predictor variables for 3 grade groups. Approximately 44% of the sample reported ever being drunk; 54% reported ever using cigarettes (32% smokeless tobacco); 20% reported having sniffed/huffed glue to get high, 4% reported having used LSD with 12% reporting using a psychedelic other than LSD, 7% reported using ecstasy, and 6% or less reported using each of the following other substances assessed: cocaine, tranquilizers, barbiturates, stimulants, crack, heroin, methamphetamine, oxycontin, legal stimulants, and steroids.

3.2. Overall model fit

Both path analyses resulted in excellent model fit. Overall fit indices for the freely estimated model were all in the excellent range (RMSEA = 0.006 [.000, 0.045], $p = 0.98$; SRMR = 0.007). For comparison, the overall fit indices for the constrained model were also excellent (RMSEA = 0.029 [.014, 0.045], $p = 0.99$; SRMR = 0.022). Although both models fit the data well, we report on the model with freely estimated parameters as it had better model fit and allowed for an examination of gender differences in our mediational path model. R^2 values for the freely estimated model were in the medium to large range for both male and female segments of the model (Male: Marijuana-Related Consequences $R^2 = 0.15$, Marijuana use $R^2 = 0.28$, Perceived Harm $R^2 = 0.10$; Female: Marijuana-Related Consequences $R^2 = 0.19$, Marijuana use $R^2 = 0.24$, Perceived Harm $R^2 = 0.07$).

Table 2 presents the standardized and unstandardized estimates, standard errors, and 95% bias-corrected bootstrapped confidence intervals for the multi-group path analysis.

3.3. Males

3.3.1. Direct effects—Among males, marijuana user status and descriptive norms significantly and positively predicted marijuana-related consequences, but injunctive norms did not. Marijuana use was significantly positively predicted by descriptive norms, significantly negatively predicted by injunctive norms, and significantly negatively predicted by perceived harm. Perceived harm was significantly negatively predicted by descriptive norms and significantly positively predicted by injunctive norms.

3.3.2. Indirect effects—Among males, examination of the bias-corrected bootstrapped confidence intervals revealed that all four indirect effects were statistically significant.

3.4. Females

3.4.1. Direct effects—Among females, marijuana user status and descriptive norms significantly and positively predicted marijuana-related consequences, but injunctive norms did not. Marijuana use was significantly positively predicted by descriptive norms and significantly negatively predicted by perceived harm, but was not predicted by injunctive norms. Perceived harm was significantly negatively predicted by descriptive and negatively predicted by injunctive norms.

3.4.2. Indirect effects—Among females, examination of the bias-corrected bootstrapped confidence intervals revealed that all four indirect effects were statistically significant.

4. Discussion

Results of the current study indicate that perceived harm is an important variable in the multivariate model describing the role of descriptive and injunctive norms on marijuana use and consequences in American Indian youth. The analysis of direct and indirect effects of norms and perceived harm on marijuana use and related consequences among American Indian males and females revealed partial support for study hypotheses. There were both significant direct negative effects of perceived harm on marijuana use and significant

indirect effects from norms to marijuana use and consequences via perceived harm. These relationships held for both males and females. The direct negative effect of perceived harm on marijuana use indicates that those who report lower perceived harm also report more marijuana use. There were no direct effects of injunctive norms on marijuana-related consequences for either group. When comparing the results across groups, the pattern of findings were similar. The one path that was significant for males but not for females was from injunctive norms to marijuana use. When those paths were constrained to be equal there was a decrement in model fit; however, given the specifications we were using (e.g., type = complex), we were not able to statistically test if the decrement was significant. However, based on the overall magnitude and direction of the effects, it does not appear that gender significantly moderated the relations among any of the variables in the model, with the possible exception of the link between injunctive norms and marijuana use.

The importance of perceived harm in these models could portend risk for long-term increases in marijuana use rates nationally, as recent research indicates that as legal status of recreational marijuana use changes, perceived harm decreases (Cerdá et al., 2017). While there is, as of yet, no comparable legalization on reservations, findings from recent legalization of recreational use in two states is of interest. The effect of perceived harm is not consistent across States, as the effects reported by Cerdá and colleagues were found in Washington state but not in Colorado. More specifically, when recreational marijuana was implemented in Washington state there was a decrease in perceived harm and an increase in frequency and quantity of marijuana consumed. In Colorado, there were no decreases in perceived harm and no increases in frequency of quantity of marijuana use. However, perceived harm was already lower in Colorado compared to Washington State, which may suggest that the longer chain of the effects from norms to perceived harm and then harm on use/consequences is important. While perceived harm is decreasing across the nation, it may be the case that perceived harm decreases more quickly in states that are legalizing recreational marijuana use. Thus, by passing laws that legalize recreational marijuana use, legislators may unknowingly be signaling to the general public that marijuana is not harmful. As reservations continue to look at legalization of marijuana as a potential economic development tool, this is an important consideration given the already alarmingly high rates of adolescent use for this substance. Tribal leaders should consider the potential effects of legalization on perceived harms of marijuana as they make decisions about legalization of marijuana on reservations.

There were also significant direct effects of both descriptive and adult injunctive norms on use and consequences among the AI youth in this study. Descriptive norms were directly positively predictive of use and consequences for both male and female AI youth. This information is important as it underlies the theory that lowering descriptive norms should lower use and its associated consequences. The picture for injunctive norms is less clear in the AI youth sample. Adult injunctive norms directly negatively predicted use for AI males, but not for AI females. Injunctive norms were not a significant predictor of consequences in either group of AI youth. This may indicate that, for AI youth using marijuana, changing descriptive norms is more likely to reduce marijuana use directly, but changing adult injunctive norms will only result in reductions in use if the intervention also changes

perceptions of marijuana-related harm. Another consideration that should be investigated in future research is the comparative influence of adult versus peer injunctive norms.

In addition to the direct effects, there were significant indirect effects from injunctive and descriptive norms through perceived harm on marijuana use and through both perceived harm and use on marijuana-related consequences among American Indian youth. These indirect effects do not imply a causal chain, but rather help describe the patterns of shared associations among these variables. Importantly, the relations between injunctive norms and use and consequences were inconsistently significant when accounting for the shared association with perceived harm, especially among females. We recommend assessing the perceived harm of marijuana use as a potential predictor of marijuana use and related consequences among American Indian youth.

The results of the present study must be understood in the context of some limitations. Data were cross-sectional, which does not permit analysis of specific cause and effect relations between predictors and outcomes. Additionally, the sample is limited to American Indian youth living on or near reservations in the United States. It is unclear if these findings will generalize beyond this subsample of the population. As this is one of the first studies to examine the relations among the variables of interest, it will be important to determine if study findings can be replicated in other samples of American Indian youth, for example, those residing in urban locations. Additionally, it will be of interest to compare the results reported herein with similar results from the broader population of adolescents and young adults to determine if perceived harm plays a similar role between norms and marijuana use and consequences.

4.1. Implications

Research has shown that perceived harm of marijuana has been decreasing over time and that, as states enact laws that loosen restrictions on marijuana use including the legalization of recreational marijuana use in eight states and Washington D.C., this decrease is accelerating. Findings reported herein indicate that perceived harm is important in predicting marijuana use (i.e., lower perceived harm → higher marijuana use) and indirectly predicting consequences associated with marijuana use. Additionally, perceived harm accounts for some or all of the impact of normative information on both marijuana use and related consequences among American Indian youth. This is a population that is at increased risk for both marijuana use and problems related to that use (Stanley et al., 2014); thus, it is important to intervene with this population to ensure that they understand harms associated with marijuana use and their consequences.

Large scale social norms interventions are being successfully implemented on college campuses throughout the country (Elliott et al., 2014). Based on the results of the current study, social norms campaigns should be developed to be delivered on reservations specifically. These interventions should be designed to help re-educate American Indian youth about the true use patterns of marijuana use and attitudes towards marijuana use of those living on or near reservations. Importantly, they should also be designed to increase awareness about the actual harms associated with marijuana use. Helping youth understand the true risks and benefits associated with marijuana should facilitate better/more informed

decision making, which may result in decreases in marijuana use and consequences among American Indian youth.

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Fig. 1.
Multigroup path analysis diagram depicting the sequential pathway from social norms to marijuana use and consequences via perceived harm.
Note: All paths were free to vary by gender.

Table 1

Means and Standard Deviations for Outcome and Predictor Variables for 3 Grade Groups.

	7th – 8th	9th – 10th	11th – 12th
Outcomes Variables	M (SD)	M (SD)	M (SD)
Marijuana User Level	2.37 (1.62)	2.63 (1.77)	2.62 (1.77)
Range: 1–6			
Marijuana-Related Consequences	13.33 (2.94)	13.22 (3.00)	13.36 (3.34)
Range: 12–48			
Predictors			
Descriptive Norms	2.44 (1.34)	3.06 (1.30)	3.27 (1.29)
Adult Injunctive Norms	4.17 (1.26)	4.18 (1.18)	4.16 (1.14)
Perceived Harm	2.53 (1.15)	2.52 (1.17)	2.52 (1.19)
Female	47.6%	50.1%	52.1%
N ^a	1256	1008	786

Note: M = mean; SD = Standard Deviation.

^aDue to missing values, some calculations are based on fewer observations.

Table 2

Multi-group path analysis parameter estimates.

Direct Effects	b	SE	CI	β
Male				
Marijuana Related Consequences				
Marijuana Use	0.63	0.08	(0.48, 0.79) ^a	0.35
Descriptive Norms	0.21	0.08	(0.08, 0.38) ^a	0.09
Injunctive Norms	0.03	0.07	(- 0.10, 0.17)	0.01
Marijuana Use				
Descriptive Norms	0.47	0.04	(.39, 0.55) ^a	0.36
Injunctive Norms	- 0.16	0.04	(- 0.25, - 0.08) ^a	- 0.12
Perceived Harm	- 0.43	0.04	(- 0.52, - 0.36) ^a	- 0.28
Perceived Harm				
Descriptive Norms	- 0.08	0.03	(- 0.14, - 0.03) ^a	- 0.10
Injunctive Norms	0.26	0.02	(0.22, 0.31) ^a	0.28
Female				
Marijuana Related Consequences				
Marijuana Use	0.72	0.06	(0.61, 0.85) ^a	0.42
Descriptive Norms	0.12	0.05	(0.02, 0.21) ^a	0.06
Injunctive Norms	- 0.00	0.09	(- 0.21, 0.15)	- 0.00
Marijuana Use				
Descriptive Norms	0.32	0.04	(0.25, 0.40) ^a	0.26
Injunctive Norms	- 0.06	0.04	(- 0.15, 0.02)	- 0.04
Perceived Harm	- 0.52	0.05	(- 0.63, - 0.42) ^a	- 0.37
Perceived Harm				
Descriptive Norms	- 0.09	0.03	(- 0.15, - 0.04) ^a	- 0.11
Injunctive Norms	0.24	0.04	(0.16, 0.32) ^a	0.24
Indirect Effects	b	SE	CI	
Male				
DN-PE-Use	0.04	0.01	(0.01, 0.07) ^a	
IN-PE-Use	- 0.11	0.01	(- 0.15, - 0.09) ^a	
DN-PE-Use-MRC	0.02	0.01	(0.01, 0.05) ^a	
IN-PE-Use-MRC	- 0.07	0.01	(- 0.11, - 0.05) ^a	
Female				
DN-PE-Use	0.05	0.02	(0.02, 0.08) ^a	
IN-PE-Use	- 0.13	0.03	(- 0.19, - 0.08) ^a	
DN-PE-Use-MRC	0.04	0.01	(0.01, 0.06) ^a	
IN-PE-Use-MRC	- 0.09	0.02	(- 0.13, - 0.07) ^a	

Note: b = unstandardized regression coefficient; SE = standard error; CI = 95% bias-corrected confidence interval; β = standardized regression coefficient; DN = Descriptive Norms; IN = Injunctive Norms; PE = Perceived Harm; Use = Marijuana User Status; MRC = Marijuana-Related Consequences.

^a Confidence interval does not include 0.

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