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Personal Attitudes and Perceptions of Driving Under the Influence of Alcohol, Driving Under the Influence of Marijuana, and Driving Under the Influence of Both Marijuana and Alcohol in Relatin to Sensation-Seeking

Rachel Hentnick

Abstract

The goal of this study was to increase understanding of college students' personal attitudes and perceived peer approval of driving under the influence of alcohol (DUI-A), driving under the influence of marijuana (DUI-M), and driving under the influence of alcohol and marijuana (DUI- MA). In addition, the current study aimed to investigate the relationship between college students' personal attitudes and perceived peer approval of DUI in relation to the sensation- seeking personality trait. The current study involved 657 Millersville University undergraduate students who completed an online survey. The survey consisted of questionnaires related to perceived approval of DUI, personal attitudes of DUI, and frequency of DUI and use of alcohol and marijuana, as well as a variation of Zuckerman's Sensation-Seeking Scale. Statistical analyses indicated significant results for a majority of the proposed hypotheses. The results revealed that participants personally approved of and perceived peers approved of DUI-M the most and DUI-MA the least, that there is a sex difference in personal attitudes towards DUI, and that there is a correlation between sensation-seeking and both personal approval of DUI and perceived peer approval of DUI-M. These findings support the outcomes of previous research on college students' perceptions of DUI.

Driving under the influence of alcohol (DUI-A) and driving under the influence of marijuana (DUI-M) are persistent issues and threatening public health among emerging U.S. adults (Li, Simons-Morton, Gee & Hingson, 2016). In 2014, alcohol-impaired driving fatalities accounted for 31% of all driving fatalities (Alcohol Facts, 2017). In addition, Salomonsen- Sautel, Min, Sakai, Thurstone and Hopfer (2014) investigated fatal motor vehicle crashes before and after commercialization of marijuana in Colorado, and found a positive trend in the proportion of drivers in fatal motor vehicle crashes who had marijuana in their body

after commercialization. Even though more than half of the states in the U.S. have legalized medicinal marijuana and eight states and Washington D.C. have legalized adult-recreational use of marijuana, the results of Salomonsen-Sautel et al.'s (2014) study could apply to other states as well (Wallace, 2016). Furthermore, both alcohol and marijuana are commonly used in society. In 2016, 57.1% of people aged 18 to 25 reported alcohol use and 20.8% reported marijuana use, within the last month (National Survey, n.d.). Due to the fatal outcomes of DUI-A and DUI-M as well as the prevalence of alcohol and marijuana use in society, it is pertinent to investigate perceived approval and personal attitudes towards DUI-A, DUI-M and DUI-MA.

Kenney, LaBrie and Lac (2013) identified factors that may influence a college student's likelihood to engage in DUI-A. Those factors include sensation-seeking personality, convenience of DUI-A, perception of risk of DUI-A, and knowledge of campaigns against DUI-A. For the purpose of this study, the personality trait of sensation-seeking was chosen for further examination to see if there was a relationship between sensation-seeking and personal attitudes and perceived approval of DUI-A, DUI-M, and DUI-MA. Zuckerman described sensation- seeking as "a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experiences" (as cited in Jonah, Thiessen & Au-Yeung, 2001, p. 679).

Current Study

The aim of the current study was to increase knowledge on perceived peer perceptions and personal attitudes toward DUI-A, DUI-M and DUI-MA in relation to sensation-seeking. The results of this study could help determine the need for specific prevention programs to raise awareness of DUI-M and DUI-MA and hopefully decrease approval of engaging in these risky driving behaviors. The Millersville Center for Health Education and Promotion (CHEP) currently has many creative programs to prevent and raise awareness about DUI-A (Center for Health, n.d.). However, in the fall 2017 semester, there were no programs specifically addressing DUI-M or DUI-MA. Adding information about the impacts of marijuana and alcohol and marijuana combined on driving to the DUI-A events could be beneficial in reducing college student personal and perceived approval in the future. Based on previous studies and research, the following hypotheses were proposed.

H1a: Personal approval of DUI-M will receive the highest rating, personal approval of DUI-A will receive the second highest rating, and personal approval of DUI-MA will receive the lowest rating.
H1b: Perceived peer approval of DUI-M will receive the highest rating, perceived peer approval of DUI-A will receive the second highest rating, and perceived peer approval of DUI- MA will receive the lowest rating.

H2a: There will be a sex difference in approval of DUI-A, DUI-M, and DUI-MA. Specifically, males will personally approve of DUI-A, DUI-M, and DUI-MA more than females.

H2b: Males will perceive that peers approve of DUI-A, DUI-M, and DUI-MA more than females.

H3a: Participants who score higher on the sensation-seeking questionnaire will personally approve of DUI-A, DUI-M, and

DUI-MA more than participants who score lower on the sensation-seeking questionnaire.

H3b: Participants who score higher on the sensation-seeking questionnaire will perceive that peers approve of DUI-A, DUI-M, and DUI-MA more than participants who score lower on the sensation-seeking questionnaire.

Method

The link to the Qualtrics survey was emailed to professors who sent the link to their students. Participants were free to complete the survey on any device and in any location that allowed access to the Qualtrics link. Upon opening the link, participants were asked to read and click a button indicating they have read and understood the Informed Consent Form. Next, the participants completed the three approval questionnaires, the Personal Attitudes Questionnaire, and the Sensation-seeking Scale (SSS). The previously listed questionnaires were counterbalanced in order to avoid any effect based on the order of the presentation of the questionnaires. The participants then completed the Frequency and Past Use Questionnaire and the Demographic Sheet, in that order. After completing all of the questionnaires, the Debriefing Form appeared on their screen. In order to receive extra credit, participants clicked the button at the bottom of the screen to indicate they have read and understood the Debriefing Form and to be redirected to the Extra Credit Survey. The answers for the extra credit survey were not connected to the answers of the initial survey, therefore anonymity was maintained. After data collection was completed, the researcher created lists of names of participants who completed the survey for participating professors. These lists were then emailed to professors so that participants could receive credit for their participation. The original sample consisted of 715 Millersville University students. Fifty-eight participants were eliminated from the sample: 54 for incomplete data and 4 for being under 18 years old. The final sample consisted of 485 females and 172 males, with a mean age of 19.96 years.

Results

Many of the stated hypotheses were supported by the data from the current study. Hypothesis 1 was based on the results of McCarthy et al.'s (2007) study. Parts a and b of hypothesis 1 stated that participants would personally approve of and perceive that peers approve of DUI-M the most and DUI-MA the least and approval of DUI-A would fall in the middle. In McCarthy et al.'s (2007) study, the researchers found that participants perceived their peers as being more accepting of DUI-M than DUI-A. Similar results emerged in the current study, with personal approval of DUI- M (*Mdn* =35) being ranked first, personal approval of DUI-A after three drinks (*Mdn* =20) ranked second and DUI-MA (*Mdn* =2) ranked last. Additionally, perceived general peer approval of DUI-M (*Mdn* =58) was ranked first, perceived peer approval of DUI-A after three drinks (*Mdn* =38) was ranked second and perceived general peer approval of DUI-MA (*Mdn* =17) was ranked last. Higher scores indicated greater approval.

Hypothesis 2 was motivated by the findings of Kenney et al.'s (2013) study as well as the results of McCarthy et al.'s (2007) study. Although Kenney et al.'s (2013) study did not compare perceptions and approval of males and females directly, the examination of sex difference in general inspired investigation of a sex difference between males and females and their perceived peer approval and personal

attitudes towards DUI. Conversely, McCarthy et al. (2007) found that males perceived their peers approved of DUI-A and DUI-M more than females. However, the results of the current study do not directly coincide with the results of McCarthy et al. (2007). The current study found that males personally approved of DUI more than females. Significant differences were found between personal approval of DUI-A after three drinks for males (*Mdn* =29) and personal approval of DUI-A after three drinks for females (*Mdn* =19) (p= 0.001), personal approval of DUI-M for males (*Mdn* =48.5) and personal approval of DUI-M for females (*Mdn* =30) (p= 0.012), and personal approval of DUI-MA for males (*Mdn* =5) and DUI-MA for females (*Mdn* =2) (p= 0.019). No significant differences were found between male and female perceived peer approval of DUI.

Hypothesis 3 was loosely inspired by the results of Jonah et al.'s (2001) study. The findings of Jonah et al.'s (2001) study revealed a positive correlation between sensation-seeking and risky driving behavior. Whereas the results of the current study found significant differences between personal approval of DUI-A after three drinks for low sensation-seeking scores (=17.5) and personal approval of DUI-A after three drinks for high sensation-seeking scores (=25) ($p < 0.001$), personal approval of DUI-M for low sensation-seeking scores (*Mdn* =25) and personal approval of DUI-M for high sensation-seeking scores (=50) ($p < 0.001$), and for personal approval of DUI-MA for low sensation-seeking scores (=1) and personal approval of DUI-MA for high sensation-seeking scores (*Mdn* =5) ($p < 0.001$). Additionally, the results revealed a significant difference between perceived peer approval of DUI-M for low sensation- seeking scores (*Mdn* =51) and perceived peer approval of DUI-M for high sensation-seeking scores (*Mdn* =61) ($p < 0.001$). However, sensation-seeking was not related to perceived peer approval of DUI-A and DUI-MA.

Discussion

The results of this study illustrate that Millersville University students personally approve of and perceive general students' approval of DUI-M the most, compared to DUI-A and DUI- MA. Even though CHEP already has several programs raising awareness of DUI-A, there are no programs related to DUI-M or DUI-MA specifically. These findings suggest that it may be beneficial to create programs about DUI-M or include DUI-M in already existing DUI-A prevention programs. Although DUI-MA received the lowest approval rating, it would still be beneficial to include information about the risks of DUI-MA to create awareness of driving under both of these substances. Generating awareness of the dangers of DUI-M and DUI-MA through prevention programs could possibly decrease college students' perceived and personal approval of these behaviors in the future. Consequently, reduced approval of DUI, due to the creation of campaigns regarding DUI-A, DUI-M and DUI-MA on campus could decrease the occurrence of students engaging in DUI. Additionally, if these DUI-A, DUI-M and DUI-MA campaigns could reach beyond universities, they could increase awareness and decrease approval of DUI on a broader scale. The subsequent increase in awareness and decrease in approval of DUI due to these campaigns could contribute to a possible reduction in the occurrence of DUI in relation to these substances, which would lead to safer driving conditions for society as a whole.

Methodological shortcomings of this study include self-made questionnaires that consisted of vague questions and did not have reliability or validity. These ambiguities could have made answering some questions more difficult and confusing for participants and led to inaccurate data. Additionally, all questions related to DUI-A on each questionnaire were not analyzed; examining each question could have revealed different results. Based on these methodological shortcomings, future studies should try to use previously validated scales to measure perceived perceptions and personal attitudes. If it is not possible to find scales that fulfill these needs, future studies should utilize concrete questions to avoid uncertainty and confusion.

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