

APPENDIX I

Definition of components in hypothesized model of traffic safety culture (Figure 1).

Values	
<i>Definition</i>	Ideals to which we aspire (Joffe, 2003) that define the goals for our behavioral choices (e.g., “I must protect my family,” “I desire a life without stress”) and direct the formation of our belief systems (i.e., what is salient to us in our environments).
<i>Role in the Model</i>	Values influence the formation of our belief systems (Spates 1983). Values such as “personal freedom” versus “collective safety” may result in very different beliefs (and attitudes) about traffic safety issues.
Behavioral Beliefs	
<i>Definition</i>	Expectations about the physical and social consequences of a behavior (e.g., “If I speed, I will likely get an expensive fine,” “If I drink and drive, my friends will exclude me”).
<i>Role in the Model</i>	Behavioral beliefs inform and predict attitudes (Fishbein and Ajzen 2009). Since attitudes are an important predictor of willingness and intention, it is important to understand the beliefs that precede attitudes. Also, understanding behavioral beliefs informs interventions to change beliefs and attitudes.
Normative Beliefs	
<i>Definition</i>	Beliefs about (1) what behaviors are most common in a group (e.g., “All my friends speed”); (2) what important people in that group expect (e.g., “My parents expect me to wear a seat belt”); and (3) what are the shared characteristics of people perceived to typically engage (or abstain) in that behavior.
<i>Role in the Model</i>	Normative beliefs inform and predict perceived norms (Fishbein and Ajzen 2009). Normative beliefs are defined relative to a specific referent group (“coworkers at my facility”) or individual (“my spouse”). When combined across many different referent groups, normative beliefs form perceived norms. Measuring normative beliefs reveals which referent groups dominate perceived norms and thus informs intervention design.
Control Beliefs	
<i>Definition</i>	Beliefs about my ability to engage or not engage in the behavior based on factors that are either internal or external to oneself (e.g., “Crashes are determined by fate,” “I am comfortable not speeding even if everyone around me is”).
<i>Role in the Model</i>	Control beliefs inform and predict perceived control. Control beliefs provide more detailed information about what increases and decreases an overall sense of control (e.g., perceived control). Control beliefs examine the impact of a certain factor or scenario on intention to engage in the behavior.
Attitudes	
<i>Definition</i>	Subjective evaluation of an object or behavior in terms of emotional reaction (e.g., “Speeding is exciting”) and perceived utility (e.g., “Seat belts are useless”).
<i>Role in the Model</i>	Attitudes predict intention (Fishbein and Ajzen 2009) and willingness (Gerrad et al. 2008). Measuring attitudes reveals how people feel about a certain behavior and thus informs interventions.
Prototypical Image	
<i>Definition</i>	The stereotype of people perceived to typically engage in the behavior (e.g., “People who speed are cool”).
<i>Role in the Model</i>	Prototype image predicts willingness and intention (Gerrad et al. 2008). People are motivated and inhibited to engage in certain behaviors based on their perceptions of the typical person who engages (and doesn’t engage) in the behavior. Understanding motivating (and inhibiting) prototypical images is important for designing interventions.
Perceived Norms	
<i>Definition</i>	The behavior believed to be common and expected in each context (e.g., wearing a seat belt when driving with parents).
<i>Role in the Model</i>	Perceived norms predict intention (Fishbein and Ajzen 2009) and willingness (Gerrad et al. 2008). Often perceived norms may be inaccurate whereby risky behaviors are perceived as normal and protective behaviors as atypical.
Perceived Control	
<i>Definition</i>	Perception of our ability to determine our own behaviors (e.g., “I can choose my own speed in traffic”).
<i>Role in the Model</i>	Perceived control informs and predicts intention (Fishbein and Ajzen 2009) and willingness (Gerrad et al. 2008). For some behaviors (typically, those that are more complex), individuals may have supportive attitudes and perceived norms but are unable to engage in the behavior because they perceive they are not in control.

Appendix II

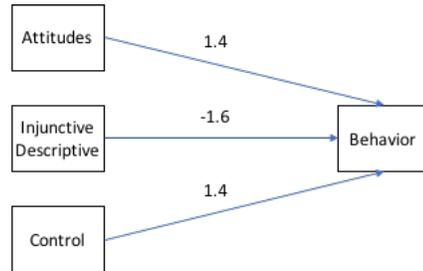
National Opinion Survey Designed to Measure DUIC Culture.¹ The brackets identify which component of the model the item measures (these identifiers were not present in the survey instrument).

<p>This survey is designed to measure your experience and beliefs about cannabis. Here, we are referring to any form of cannabis consumption (smoking, edibles, etc.). Although you may never have used cannabis, we still want to hear about your beliefs about this drug.</p> <p><i>Even if you are not sure, give your best guess.</i></p>	<p>What is your answer to this statement?</p>
<p>1. In the past six months, I have driven within 4 hours of using cannabis. <i>[Behavior]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>2. In the next six months, I intend to drive within 4 hours of using cannabis. <i>[Intention]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>3. I am willing to drive within 4 hours of using cannabis. <i>[Willingness]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>4. Driving after using cannabis is enjoyable. <i>[Attitude]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>5. People who drive after using cannabis are cool. <i>[Prototypical Image]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>6. People who are important to me would be disappointed if I drove after using cannabis. <i>[Perceived Norm (injunctive)]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>7. I think most people who use cannabis drive after using it. <i>[Perceived Norm (descriptive)]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>8. It's up to me whether I drive or not after using cannabis. <i>[Perceived Control]</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>

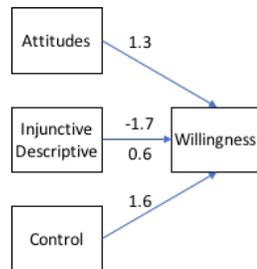
¹ The original wording of survey used "marijuana" instead of "cannabis".

APPENDIX III

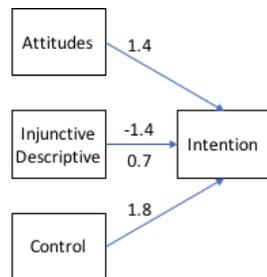
Significant regression coefficients ($p < .05$) for analysed paths in each step of the analysis to assess medating effects of willingness and intention between traffic safety culture and DUI behavior. Note that the cultural factor of the Prototype Image is excluded from this figure given that it was not statistically significant in any of the analysis steps.



Step 1: Direct Effect of Culture on Behavior ($R^2_{adj} = 20.8\%$).



Step 2: Direct Effect of Culture on Willingness ($R^2_{adj} = 19.6\%$).

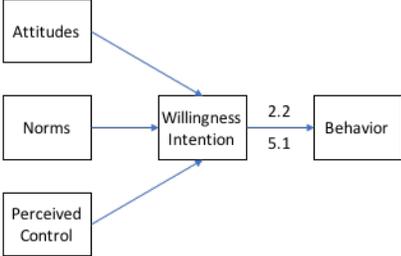


Step 2: Direct Effect of Culture on Intention ($R^2_{adj} = 21.6\%$).



Step 3: Direct Effect of Willingness and Intention on Behavior ($R^2_{adj} = 64.1\%$).

Driving Under the Influence of Cannabis



Step 4: Combined Effect of Culture with Willingness and Intention on Behavior ($R^2_{adj} = 65\%$).