

# **Guidance on Messaging to Avoid Reactance and Address Moral Disengagement**

Task 2 Report: Survey Development

Prepared by:

Jay Otto, M.S. and Kari Finley, Ph.D.

Center for Health and Safety Culture

Western Transportation Institute

Montana State University

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# 1 INTRODUCTION

Traffic safety professionals are tasked with the complexities of finding ways to change behavior. Significant progress has been made in addressing several risky behaviors like not wearing a seat belt and driving aggressively resulting in fewer people engaging in these behaviors. However, a small portion of the population (i.e., about 10 percent) still does not wear a seat belt and regularly speeds (one form of aggressive driving). To reach our toward zero deaths goals, novel approaches and strategies are needed to engage the small group of people engaging in risky traffic behaviors and those most resistant to change. This project seeks to better understand if two psychological phenomena (psychological reactance and moral disengagement) are more prevalent among individuals engaging in the risky behaviors of not wearing a seat belt and aggressive driving and how messaging might be adjusted to mitigate these phenomena thereby improving traffic safety.

The project includes four major tasks:

1. Complete a review of published literature and select scales.
2. Develop and implement surveys.
3. Develop message guidance based on the results of the surveys.
4. Create resources and complete a final report.

This report summarizes Task 2 of this project. The purpose of Task 2 is to:

- Develop two surveys to determine if the prevalence of psychological reactance and moral disengagement are higher among adult drivers who never or rarely wear their seat belts or who drive aggressively (i.e., speed, follow too closely, and pass excessively) compared to adults who do not engage in these risky behaviors.
- Make comparisons of psychological reactance and moral disengagement between those who rarely wear a seat belt and those who always or usually wear a seat belt.
- Make comparisons between those who regularly drive aggressively and those who rarely or never drive aggressively.
- Explore differences in psychological reactance and moral disengagement among various demographic indicators including age, sex, education attainment, and geography (i.e., urban, suburban, or rural setting).

## 2 BACKGROUND

### 2.1 Psychological Reactance

#### 2.1.1 Brief Overview

Psychological reactance is “an unpleasant motivational arousal that emerges when people experience a threat to or loss of their free behaviors” (Steindl, Jonas, Sittenthaler, Traut-Mattausch, & Greenberg, 2015, p. 205). To understand how psychological reactance is initiated and how it influences a person’s thoughts, feelings, attitudes, and actions, it can be helpful to understand psychological reactance theory. Psychological reactance theory assumes that individuals like to have choices among various options (Quick & Stephenson, 2007). When one’s freedom to choose is threatened or lost, for example, by rules or restrictions, reactance is elicited, thereby motivating the individual to reestablish their freedom (Quick & Stephenson, 2007; Dillard & Shen, 2005). Psychological reactance theory (Brehm & Brehm, 1981) explains “how individuals respond when a freedom has been threatened or lost” (Rains, 2013, p. 48).

#### 2.1.1.1 Psychological Reactance Theory

There are four elements in psychological reactance theory: freedom, threat to freedom, reactance, and restoration of freedom (Dillard & Shen, 2005). Freedom includes an individual’s “beliefs about the ways in which one can behave” (Quick, Shen, & Dillard, 2013, p. 167). Freedoms are defined subjectively, which means that if a person perceives they have a freedom and believes they can exercise that freedom, then the freedom exists for that person (Brehm & Brehm, 1981). In other words, knowledge that a specific freedom exists and the belief that the person can exercise that free behavior are prerequisites to having a freedom (Brehm & Brehm, 1981; Quick et al., 2013; Shen, 2015). Anything that is perceived to make it more difficult for an individual to exercise their free behaviors is considered a threat (Dillard & Shen, 2005). A threat to freedom is typically induced when an individual’s autonomy is restricted or there is a perception that it could be restricted or lost.

Reactance is a “counterforce motivating the person to reassert or restore the threatened or eliminated freedom” (Brehm & Brehm, 1981, p. 37). Reactance was initially conceptualized as “a motivational state that cannot be measured directly” (Brehm & Brehm, 1981, p. 37). When psychological reactance was first conceptualized, it was viewed in terms of what it caused, or what effect it had (Quick et al., 2013). However, since its inception in the 1960’s, researchers have conceptualized reactance in ways that are more direct and measurable and that can help us understand “why and when persuasion fails” (Shen, 2015, p. 975). Dillard and Shen (2005) identified four ways to characterize reactance: as a cognitive process, as an emotion, as both emotion and cognition, and as emotion and cognition intertwined.

As a cognitive process, it is believed that a “persuasive message generates cognitions that can be in agreement or disagreement with the message” (Rains, 2013, p. 49). From a cognitive frame, reactance is operationalized as counterarguing (Dillard & Shen, 2005). Counterarguing in traffic safety might look like disagreeing with traffic safety campaign messages, intending not to engage in

the traffic safety behavior being promoted, or intending to engage in the risky traffic behavior being discouraged (Dillard & Shen, 2005). Characterizing reactance as an emotion operationalizes reactance as “varying degrees of anger (e.g., irritation, annoyance, and rage)” (Dillard & Shen, 2005, p. 147). The third and fourth characterizations of reactance view it as both emotion and cognition. While one characterization suggests the effects of cognition and emotion are separate and distinct, the other views reactance as an intertwining of both cognition and emotion where the effects cannot be separated (Dillard & Shen, 2005). Several research studies have supported the intertwined conceptualization where reactance is counterarguing and anger intertwined (Dillard & Shen, 2005; Rains, 2013; Shen, 2015; Quick & Stephenson, 2007; Quick & Considine, 2008).

When a person’s freedoms are threatened or lost, they experience reactance, which, in turn, prompts behaviors, thoughts, emotions, and attitudes that seek to reestablish or restore those freedoms (Dillard & Shen, 2005). In some situations, this may mean the individual does the opposite of what was advocated; this is called a “direct restoration” (Brehm & Brehm, 1981; Dillard & Shen, 2005). For example, in response to a traffic safety campaign that advocates for seat belt use, reactance may prompt an individual to refuse to wear a seat belt. Other, indirect attempts to restore freedom might look like downplaying the need for seat belts, discrediting the traffic safety agencies behind the campaign messages, or deciding to wear a seat belt but exercising the right to speed (or another freedom) to gain an alternative sense of control over something else (Brehm & Brehm, 1981; Dillard & Shen, 2005; Quick et al., 2013).

Psychological reactance has been conceptualized as a “situational response to a specific threat to freedom” (Miron & Brehm, 2006, p. 7). However, researchers have also acknowledged that reactance is a trait and that some people are more prone to than others (Hong & Faedda, 1996; Brehm & Brehm, 1981; Dowd, Milne, & Wise, 1991). Psychological reactance, conceptualized this way, is not situational but is an enduring characteristic of the individual.

#### *2.1.1.1 Situational Factors Influencing Reactance*

When and how strong a person’s reactance is to a specific threat varies based on several situational factors. Situational factors that influence reactance include:

- how firmly a person believes they have a freedom or control over an outcome,
- the perceived importance of the freedom that is threatened,
- the number of freedoms that are threatened (threatening a single freedom should elicit less reactance than something that threatens multiple freedoms), and
- the implementation for one’s future freedoms (Brehm & Brehm, 1981).

These situational factors influence the magnitude of reactance that is elicited and provide insight into why the small group of people engaging in risky behaviors like not wearing a seat belt or driving aggressively may be more reactive to current traffic safety intervention strategies than the large group of people who have responded positively to the current intervention strategies employed by traffic safety professionals.

## 2.1.2 Measuring Psychological Reactance

A literature review was conducted in Task 1 to better understand how to measure psychological reactance. Questions and response formats identified in the literature review were used to develop the surveys and to understand this phenomenon for seat belt use and aggressive driving.

### 2.1.2.1 Measuring Freedom Threat

To assess perceived threats to freedom, a common four-item scale has been used (Dillard & Shen, 2005; Cho & Sands, 2011; Shen, 2015; Miller, Lane, Deatrick, Young, & Potts, 2007). The items of this scale are found in Table 1.

*Table 1. Examples of Items to Measure Perceived Threat to Freedom*

Measurement Constructs	Response Formats	Source
The message threatened my freedom to choose	Five-point scales including: (1) strongly disagree, (2) disagree, (3) neutral/don't know, (4) agree, and (5) strongly agree.	Dillard & Shen, 2005; Cho & Sands, 2011; Shen, 2015; Miller et al., 2007
The message tried to make a decision for me		
The message tried to manipulate me		
The message tried to pressure me		

### 2.1.2.2 Measuring Emotion

A common four-item, self-report measure (see Table 2) has been used in many research studies to measure anger (Quick & Stephenson, 2007; Quick & Considine, 2008; Miller et al., 2007; Dillard & Shen, 2005).

*Table 2. Examples of Items to Measure Anger*

Measurement Constructs	Response Formats	Source
To what extent did the message that you just read make you feel...	Five-point scale ranging from (0) none of this feeling to (4) a great deal of this feeling	Dillard and Shen, 2005
Angry/irritated/annoyed/aggravated		

### 2.1.2.3 Measuring Perceived Effectiveness and Strength

Zhao, Strasser, Cappella, Lerman, and Fishbein (2011) used the measure in Table 3 to assess the perceived message strength.

*Table 3. Examples of Items to Measure Perceived Strength*

Measurement Constructs	Response Formats	Source
The statement is a reason for _____ that is believable.	Fill in the blanks with the target behavior for the persuasive argument. Use a 5-point Likert scale (strongly disagree to strongly agree) to score items 1–8. Use a 5-point Likert type scale (very weak to very strong) to score item 9. Subtract item 7) from item 6) to create a single thought favorability item and then convert the new item to a 5-point scale by dividing it by 2 and then adding a constant of 3.	Zhao et al., 2011
The statement is a reason for _____ that is convincing.		
The statement gives a reason for _____ that is important to me.		
The statement helped me feel confident about how best to.		
The statement would help my friends _____.		
The statement put thoughts in my mind about wanting to _____.		
The statement put thoughts in my mind about not wanting to.		
Overall, how much do you agree or disagree with the statement?		
Is the reason the statement gave for _____ a strong or weak reason?		

### 2.1.2.4 Measuring Reactance as a Trait

Various researchers have sought to measure reactance proneness. Hong and Page (1989) created the Hong Psychological Reactance Scale (HPRS). Table 4 provides items and response formats for the HPRS.

*Table 4. Examples of Items to Measure Reactance as a Trait*

Measurement Constructs	Response Formats	Source
<i>Hong's Psychological Reactance Scale (HPRS)</i>	5-point Likert Scale (1)=strongly disagree, (3)=neither agree nor disagree, and (5)=strongly agree.	Hong & Page, 1989
I become frustrated when I am unable to make free and independent decisions.		
I become angry when my freedom of choice is restricted.		
It irritates me when someone points out things which are obvious to me.		
The thought of being dependent on others aggravates me.		
Regulations trigger a sense of resistance in me.		
I find contradicting others stimulating.		
When something is prohibited, I usually think "that's exactly what I am going to do."		
I resist the attempts of others to influence me.		
It makes me angry when another person is held up as a model for me to follow.		
When someone forces me to do something, I feel like doing the opposite.		
It disappoints me to see others submitting to a society's standards and rules.		
I am content only when I am acting of my own free will.		
I consider advice from others to be an intrusion.		
Advice and recommendations induce me to do just the opposite.		

## 2.2 Moral Disengagement

### 2.2.1 Brief Overview

A person relies on a set of moral standards they have developed for what is right and wrong to guide and deter their behaviors in everyday life (Bandura, 2002). Normally, individuals behave in ways that are congruent with their set of moral standards (Bandura, 2002). They act in ways that are proactive and foster positive feelings of self-worth and wellbeing (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bandura, 2016). In general, a person's moral standards guide good behavior choices. Moral disengagement, originally proposed by Albert Bandura (Bandura et al., 1996), occurs when "individuals detach themselves from their usual self-regulatory processes or morality in order to behave in ways that run counter to their normal moral standards" (Cleary, Lennon, & Swann, 2016, p. 5).

People regulate their thoughts and behaviors through a self-regulation process (Bandura et al., 1996; Bandura, 2016). This self-regulation process consists of self-monitoring, evaluating behaviors and thoughts against a set of internal standards and the context in which the behaviors and thoughts occur, and self-reaction (Bandura, 2002; Bandura, 2016; Bandura et al., 1996). Self-reactions can be positive or negative. Positive self-reactions are judged to be in alignment with a person's internal set of standards (Bandura et al., 1996). In contrast, negative self-reactions occur when a person judges their behaviors and thoughts to be misaligned with their internal set of standards, and in these situations, a person applies self-sanctions to regulate their behaviors (Bandura et al., 1996). Self-sanctions for acting in incongruent ways seek to deter future transgressions by evoking feelings of "guilt, remorse, and self-criticism" and can provoke "attempts at restitution" (e.g., "I feel bad for acting this way and I will remember these feelings so I don't act this way again," or "I feel bad and will try to make things right") (Bandura, 2016, p. 4).

Bandura (2002) proposed that moral self-regulation is a process that can be selectively activated or disengaged. Activated self-regulation motivates moral conduct (Bandura et al., 1996). In contrast, through moral disengagement, "individuals are freed from the self-sanctions and the accompanying guilt that would ensue when behavior violates internal standards" thus allowing individuals to act in ways that are counter to their personal moral standards (Detert, Trevino, & Sweitzer, 2008, p. 375). In other words, disengaging from one's self-regulatory process "permits different types of conduct with the same moral standards" (Bandura et al., 1996, p. 364). Moral disengagement explains how "good people can behave badly" (Gini, Pozzoli, & Hymel, 2014, p. 57).

#### 2.2.1.1 Mechanisms to Activate Moral Disengagement

People employ different mechanisms to disengage from their moral standards, behave poorly, and at the same time maintain their self-image and sense of moral agency (Bandura, 2002).

These mechanisms include:

- moral justification,
- euphemistic labeling,

- advantageous comparison,
- displacement of responsibility,
- diffusion of responsibility,
- dehumanization, and
- attribution of blame (Bandura et al., 1996; Bandura, 2002).

These disengagement mechanisms operate at four focus areas in the self-regulation process to weaken moral control: behavior (changing the acceptability of the behavior), agency (distorting or minimizing one's role in the harm), outcome (distorting the consequences of the behavior), and victim (reducing one's identification with the recipient of the harmful act) (Bandura, 2016, Bandura, 2002; Detert et al., 2008; Gini et al., 2014). Activating these disengagement mechanisms is a gradual process that occurs over time (Bandura, 2002). Initially, a person starts with small transgressions. They act in ways that are slightly incongruent from their internal set of standards and experience mild self-sanctions that are a little uncomfortable but easy to overcome (Bandura, 2002). However, as a person repeatedly engages in negative behaviors that do not align with their set of standards, their self-regulation process is weakened, and bad behaviors become more easily initiated (Bandura, 2002).

#### *2.2.1.1 Individual and Situational Factors Influencing Moral Disengagement*

Researchers exploring moral disengagement have studied both individual and contextual factors. Individual factors associated with moral disengagement include social and emotional competence (Bandura et al., 1996; Detert et al., 2008; Bussey, Quinn, & Dobson, 2015), aggression (Gini et al., 2014), locus of control (Detert et al., 2008), trait cynicism (Detert et al., 2008; Vice, 2011), moral identity (Aquino, Reed, Thau, & Freeman, 2007; Detert et al., 2008), and guilt and shame (Johnson & Connelly, 2016; Tangney, Stuewig, & Mashek, 2006).

Contextual factors such as the situational and social context have also been studied. Moral disengagement is influenced by the situational and social context in which a person finds themselves (Hystad, Mearns, & Eid, 2014; White-Ajmani & Bursik, 2014; Pelton, Gound, Forehand, & Brody, 2004). Further, research has suggested that moral standards are developed through a process of socialization, thus moral disengagement is influenced by the cultural norms to which one is accustomed (Bandura et al., 1996).

### **2.2.2 Measuring Moral Disengagement**

A literature review was conducted in Task 1 to better understand how to measure moral disengagement. Questions and response formats identified in the literature review were used to develop the surveys to understand this phenomenon for seat belt use and aggressive driving.

#### **2.2.2.1 Measuring Moral Disengagement**

Many researchers have sought to measure moral disengagement by focusing on the eight mechanisms of moral disengagement. Swann, Lennon, and Cleary (2017) created a Driving Moral Disengagement Scale (DMDS) to understand moral disengagement in aggressive driving (see Table 5).

*Table 5. Examples of Items and Response Formats to Moral Disengagement in Driving*

The following statements refer to your thoughts and beliefs about different driving situations. Indicate how much you agree or disagree with each statement using a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

**Moral justification**

1. It's alright to deliberately hold someone up by going slow if it's for their own good.
7. It's ok to tailgate if it gets people to realize they are doing the wrong thing.
14. It's ok to yell at other drivers who put the lives of your passengers at risk.

**Euphemistic labelling**

2. Honking the horn loudly is just a way of letting off frustration.
8. Preventing others from passing is just part of the game.
15. Following too closely or cutting someone off is just a way of teaching someone a lesson they need.

**Advantageous comparison**

3. Tailgating is no big deal when you consider other people are deliberately running red lights.
9. Yelling at other drivers is pretty tame when compared to people that attack other drivers.
20. Speeding a little over the limit is not too serious compared to those that speed a lot over the limit.

**Displacement of responsibility**

10. If a driver is pushed into being rude to other drivers, they shouldn't be blamed for it.
21. People can't be blamed for intimidating another driver if their friend pressured them into it.

**Diffusion of responsibility**

4. You can't blame a single driver for going through an amber light if a whole group does it.
5. It's ok to go over the speed limit if it means you are keeping up with the rest of the traffic.
16. It's unfair to blame a driver for driving in the bus lane if everyone is doing it.

**Distortion of consequences**

11. Drivers don't mind being honked at because they know it just means 'hurry up.'
17. Flashing headlights to get someone to move over, doesn't really hurt anyone.
22. Tailgating other vehicles when the traffic is heavy isn't really dangerous.

**Attribution of blame**

13. If you are getting honked at while driving you probably deserve it.
19. Overly cautious drivers who are tailgated, deserve it because they are a risk to everyone on the road.
23. People who don't know how to drive, provoke bad driving in others.

**Dehumanization**

6. It's alright to abuse drivers who are behaving like "knobs."
12. A driver who is inconsiderate doesn't deserve to be treated like a normal person.
18. Some drivers deserve to be treated like the idiots they are.

### 3 MATERIALS AND METHODS

#### 3.1 Introduction

The project’s findings are based on the analyses of self-reported responses to two separate surveys about seat belt use and aggressive driving completed by two independent samples. The questions on the survey measure the key constructs represented by a behavioral model (Figure 1) based on the theory of reasoned action (Fishbein & Aizen, 2010), the prototype willingness model (Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008), and the role of values (Spates, 1983; Oreg & Katz-Gerro, 2006). Additional questions measure psychological reactance and moral disengagement. This section summarizes the questions used on the survey.

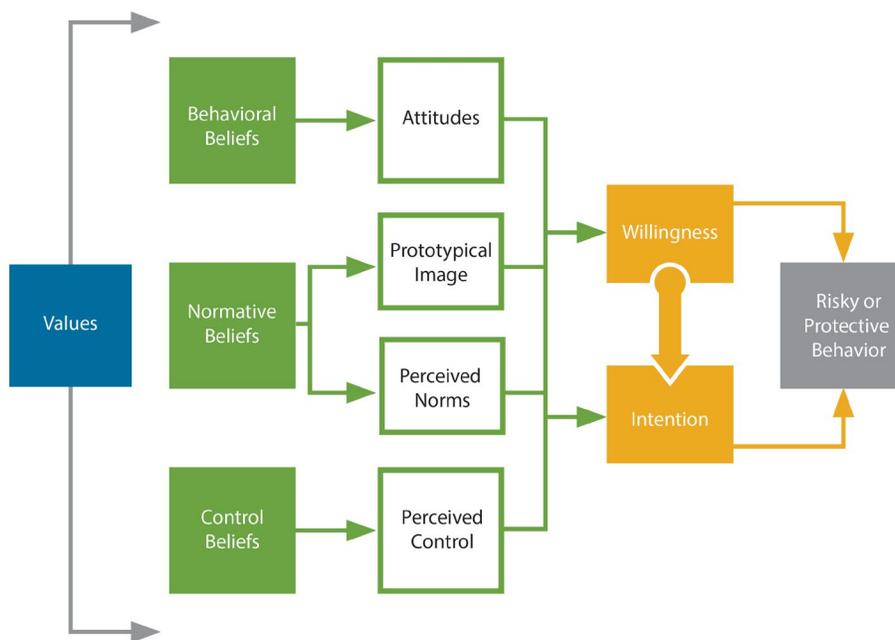


Figure 1. Behavioral Model

#### 3.2 Survey Components

Table 6 summarizes the definitions of the components in the behavioral model. When possible, multiple questions are used to assess each component. The literature review completed in Task 1 of this project guided the development of the questions to measure psychological reactance and moral disengagement. The complete surveys are included in Appendices 7.1 and 7.2.

**Table 6. Definitions of Components Used in Behavioral Model**

<b>Values</b>	Ideals to which we aspire that define the goals for our behavioral choices and direct the formation of our belief systems (e.g., “I must protect my family,” “I desire a life without stress”).
<b>Behavioral Beliefs</b>	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”).
<b>Attitudes</b>	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”).
<b>Normative Beliefs</b>	Beliefs about what behaviors are most common in a group (e.g., “All my friends speed”) and what important people in that group expect (e.g., “My parents expect me to wear a seat belt”).
<b>Perceived Norms</b>	The behavior believed to be common and expected in a given context (e.g., wearing a seat belt when driving with parents).
<b>Prototypical Image</b>	The stereotype of people perceived to typically engage (or not engage) in the behavior (e.g., “People who speed are cool”).
<b>Control Beliefs</b>	Beliefs about an individual’s 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”).
<b>Perceived Control</b>	Perception of our ability to determine our own behaviors (e.g., “I can choose my own speed in traffic”).
<b>Intention</b>	The deliberate decision to commit a behavior in an anticipated situation (e.g., “I intend to wear my seat belt every time I am in a vehicle”).
<b>Willingness</b>	The predisposition to commit a behavior if an unexpected situation arises (e.g., “I am more willing to speed if everyone else around me is speeding”).

### 3.2.1 Survey on Seat Belt Use

Seat belt use is measured using four questions: “How often do you use a seat belt... a) when you are driving within a few miles of your home? b) when you are driving many miles from your home? c) in general, driving during the day? d) in general, driving at night?” with the following answer choices: never, rarely, occasionally, sometimes, frequently, usually, and always.

Questions are included to assess intention, willingness, attitudes, behavioral beliefs, perceived injunctive norms, perceived descriptive norms, normative beliefs, perceived control, and control beliefs about seat belts as well as concern for traffic safety (see Appendix 7.1).

Proneness for psychological reactance is measured using Hong’s Psychological Reactance Scale (Hong & Page, 1989) which asks the respondent to indicate their level of agreement with 14 statements (Table 7).

Messages were developed to measure situational psychological reactance based on examples provided by Dillard and Shen (2005) and were tested during a pilot of the survey with a small number of respondents (approximately 55). In the pilot test, responses to the two messages were correlated with the proneness scale and seat belt use. The messages were presented one at a time in the order shown below in a larger font on the screen along with the associated questions. The

first message was designed to evoke lower levels of reactance; the second message was designed to evoke more reactance:

1. “You model healthy behaviors for the people you care about most. Buckling your seat belt only takes a few seconds, is easy, and models a critical lifesaving behavior for those you care about. Consider buckling up for the people you care about – your family, your friends, and your coworkers.”
2. “The truth is that using a seat belt is a lifesaving behavior and the smart and easy thing to do. No matter how much you don’t want your life to be regulated by others, everyone should always use a seat belt. Why be lazy? You can clearly see there is no other choice. Buckle up!”

*Table 7. Statements Used to Assess Proneness to Psychological Reactance*

- |   |
|---|
| <ol style="list-style-type: none"><li>1. I become frustrated when I am unable to make free and independent decisions.</li><li>2. I become angry when my freedom of choice is restricted.</li><li>3. It irritates me when someone points out things which are obvious to me.</li><li>4. The thought of being dependent on others aggravates me.</li><li>5. Regulations trigger a sense of resistance in me.</li><li>6. I find contradicting others stimulating.</li><li>7. When something is prohibited, I usually think “that’s exactly what I am going to do.”</li><li>8. I resist the attempts of others to influence me.</li><li>9. It makes me angry when another person is held up as a model for me to follow.</li><li>10. When someone forces me to do something, I feel like doing the opposite.</li><li>11. It disappoints me to see others submitting to a society’s standards and rules.</li><li>12. I am content only when I am acting of my own free will.</li><li>13. I consider advice from others to be an intrusion.</li><li>14. Advice and recommendations induce me to do just the opposite.</li></ol> |
|---|

After each message, the respondent is asked about their perceived threat to freedom (Dillard & Shen, 2005), their emotional reaction (Dillard & Shen, 2005), and the perception of the effectiveness and strength of the message (Zhao et al., 2011):

- Perceived threat is measured by asking the respondent to indicate their level of agreement with four statements: “the message threatened my freedom to choose,” “the message tried to make a decision for me,” “the message tried to manipulate me,” and “the message tried to pressure me.” Levels of agreement included seven choices ranging from strongly disagree to strongly agree.
- To assess their emotional reaction, respondents are asked to what extent the message made them feel angry, irritated, annoyed, and aggravated using seven choices ranging from none of this feeling to a great deal of this feeling.
- To assess their perception of the strength and effectiveness of each message, respondents are asked their level of agreement with eight statements (using five choices ranging from strongly disagree to strongly agree):
  1. The message is a reason for using a seat belt that is believable.
  2. The message is a reason for using a seat belt that is convincing.

3. The message gives a reason for using a seat belt that is important to me.
4. The message helped me feel confident about how best to use a seat belt.
5. The message would help my friends to use a seat belt.
6. The message put thoughts in my mind about wanting to use a seat belt.
7. The message put thoughts in my mind about not wanting to use a seat belt.
8. Overall, how much do you agree or disagree with the message?

Moral disengagement is measured by asking about the level of agreement with 16 statements (using seven choices ranging from strongly disagree to strongly agree):

1. Using a seat belt isn't necessary if you are a good driver.
2. It's ok to not use a seat belt if you are in a hurry to get somewhere and forget to buckle up.
3. My heroes don't use seat belts.
4. Not using a seat belt is just a way of letting the government know they aren't in control.
5. I might not use a seat belt, but at least I don't text and drive.
6. Not using a seat belt is no big deal when you consider that others are choosing more dangerous behaviors like drinking and driving.
7. You can't blame me for not using a seat belt; I have more important things to worry about.
8. My friends/family don't use seat belts; why should I?
9. I am not going to use a seat belt because others in the vehicle aren't either.
10. I don't need to use a seat belt because vehicles are so much safer today.
11. Not using my seat belt is okay because it doesn't impact anyone else.
12. We didn't have to use seat belts when I was young, and we turned out just fine.
13. If kids don't use a seat belt, it is their parents' fault.
14. If other people knew how to drive, people would not need to use a seat belt to protect themselves.
15. Telling people they have to use a seat belt is acting like people are stupid.
16. Making someone use a seat belt is treating them like less than a person.

Crash involvement is measured using two questions: "In the past year, how many vehicle crashes (even minor ones) have you been involved in that were NOT your fault?" and "In the past year, how many vehicle crashes (even minor ones) have you been involved in that you had some fault?" Answer choices included none, 1, 2, 3, 4, 5, 6 or more. Respondents are also asked about how many citations, tickets, or summons they have received for not using a seat belt in the past year.

Several questions are included to better understand who completed the survey including age, sex, race, ethnicity, education attainment, household income, geography (i.e., urban, suburban, rural), and state.

The complete survey is included in Appendix 7.1.

### 3.2.2 Survey on Aggressive Driving

On this survey, aggressive driving includes passing other vehicles going about the posted speed limit, following too closely, and speeding. These behaviors are assessed using four questions: “When driving, how often do you... a) pass a vehicle that is going about the posted speed limit? b) drive so close to the vehicle in front that it might be difficult to stop in an emergency? c) drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph? and d) drive more than 10 mph over the speed limit on roads with speed limits between 55 mph and 65 mph?” with the following answer choices: never, rarely, occasionally, sometimes, frequently, usually, and always.

Questions are included to assess intention, willingness, attitudes, behavioral beliefs, perceived injunctive norms, perceived descriptive norms, normative beliefs, perceived control, and control beliefs about aggressive driving as well as concern for traffic safety (see Appendix 7.2).

Proneness for psychological reactance is measured using Hong’s Psychological Reactance Scale (Hong & Page, 1989) which asks the respondent to indicate their level of agreement with 14 statements (Table 7).

Messages were developed to measure situational psychological reactance based on examples provided by Dillard and Shen (2005) and were tested during a pilot of the survey with a small number of respondents (approximately 200). In the pilot test, responses to the two messages were correlated with the proneness scale and aggressive driving. The messages were presented one at a time in the order shown below in a larger font on the screen along with the associated questions. The first message was designed to evoke lower levels of reactance; the second message was designed to evoke more reactance:

1. “Regardless of how others are driving, choosing to drive safely is a personal value that you and many others share. Driving safely includes behaviors like following the speed limit and keeping a safe distance between your vehicle and the one in front of you. Thank you for making safe driving a priority.”
2. “Think you can speed? You can’t. Passing every vehicle on the road? Not okay! Think you have the right to tailgate someone because they are annoying you? Don’t be a jerk. You share the road with others. Your unsafe driving puts others at risk of serious injuries and even death. You must do your part to keep everyone safe.”

After each message, the respondent is asked about their perceived threat to freedom (Dillard & Shen, 2005), their emotional reaction (Dillard & Shen, 2005), and the perception of the effectiveness and strength of the message (Zhao et al., 2011):

- Perceived threat is measured by asking the respondent to indicate their level of agreement with four statements: “the message threatened my freedom to choose,” “the message tried to make a decision for me,” “the message tried to manipulate me,” and “the message tried to pressure me.” Levels of agreement included seven choices ranging from strongly disagree to strongly agree.

- To assess their emotional reaction, respondents are asked to what extent the message made them feel angry, irritated, annoyed, and aggravated using seven choices ranging from none of this feeling to a great deal of this feeling.
- To assess their perception of the strength and effectiveness of each message, respondents are asked their level of agreement with eight statements (using five choices ranging from strongly disagree to strongly agree):
  1. The message is a reason for not driving aggressively that is believable.
  2. The message is a reason for not driving aggressively that is convincing.
  3. The message gives a reason for not driving aggressively that is important to me.
  4. The message helped me feel confident about how best to not drive aggressively.
  5. The message would help my friends to not drive aggressively.
  6. The message put thoughts in my mind about wanting to not drive aggressively.
  7. The message put thoughts in my mind about wanting to drive aggressively.
  8. Overall, how much do you agree or disagree with the message?

Moral disengagement is measured by asking about the level of agreement with 20 statements (using seven choices ranging from strongly disagree to strongly agree):

1. It's ok to tailgate if it gets people to realize they are doing the wrong thing.
2. It's ok to yell at other drivers who put the lives of your passengers at risk.
3. Honking the horn loudly is just a way of letting off frustration.
4. Following too closely or cutting someone off is just a way of teaching someone a lesson they need.
5. Tailgating is no big deal when you consider other people are deliberately running red lights.
6. Yelling at other drivers is pretty tame when compared to people that attack other drivers.
7. Speeding a little over the limit is not too serious compared to those that speed a lot over the limit.
8. If a driver is pushed into being rude to other drivers, they shouldn't be blamed for it.
9. People can't be blamed for intimidating another driver if their friend pressured them into it.
10. You can't blame a single driver for going through a yellow light if a whole group does it.
11. It's ok to go over the speed limit if it means you are keeping up with the rest of the traffic.
12. Drivers don't mind being honked at because they know it just means 'hurry up.'
13. Flashing headlights to get someone to move over doesn't really hurt anyone.
14. Tailgating other vehicles when the traffic is heavy isn't really dangerous.
15. If you are getting honked at while driving, you probably deserve it.
16. Overly cautious drivers who are tailgated deserve it because they are a risk to everyone on the road.
17. People who don't know how to drive provoke bad driving in others.
18. It's alright to abuse drivers who are behaving like jerks.
19. A driver who is inconsiderate doesn't deserve to be treated like a normal person.

20. Some drivers deserve to be treated like the idiots they are.

Thirteen of these items (2, 3, 6, 7, 8, 11, 13, 15, 17, 18, 19, 20) are from the Moral Disengagement Driving Scale (Swann et al., 2017).

Crash involvement is measured using two questions: “In the past year, how many vehicle crashes (even minor ones) have you been involved in that were NOT your fault?” and “In the past year, how many vehicle crashes (even minor ones) have you been involved in that you had some fault?” Answer choices included none, 1, 2, 3, 4, 5, 6 or more. Respondents are also asked about how many citations, tickets, or summons they have received for speeding in the past year.

Several questions are included to better understand who completed the survey including age, sex, race, ethnicity, education attainment, household income, geography (i.e., urban, suburban, rural), and state.

The complete survey is included in Appendix 7.2.

### **3.3 Sample**

#### **3.3.1 Seat Belt Use Survey**

A convenience sample of participants was recruited by Qualtrics to complete the survey online between November 15 and November 30, 2019. To participate in the survey, a respondent had to live in the U.S., be between the ages of 18 and 79, and drive most days or daily. Quotas were used to guarantee diversity: 50% male, 40% indicating using a seat belt rarely or never, and 40% indicating using a seat belt usually or always.

The final sample included 581 respondents living in 45 different states. Ages ranged from 18 to 78 (median: 40 years, mean: 42.8 years, standard deviation: 14.7 years). Education attainment included 28% with a high school diploma or less, 24% with some college, 38% with an Associate’s or Bachelor’s degree, and 10% with an advanced degree. Less than a third (30%) lived in an urban setting, 48% in suburban, and 22% rural. About one in ten (9.8%) indicated they were Hispanic. Most were white (79%) with 16% African American, 1% American Indian or Alaskan Native, and 4% Asian.

#### **3.3.2 Aggressive Driving Survey**

The sample for the aggressive driving survey was separate from the seat belt use survey. A convenience sample of participants was recruited by Qualtrics to complete the survey online between November 15 and November 20, 2019. To participate in the survey, a respondent had to live in the U.S., be between the ages of 18 and 79, and drive most days or daily. Quotas were used to guarantee diversity: 50% male, 40% indicating driving more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph rarely or never, and 40% indicating speeding on such roads usually or always.

The final sample included 750 respondents living in 49 different states. Ages ranged from 18 to 70 (median: 48 years, mean: 48.5 years, standard deviation: 16.3 years). Education attainment included 24% with a high school diploma or less, 23% with some college, 36% with an

Associate's or Bachelor's degree, and 16% with an advanced degree. Just less than a third (31%) lived in an urban setting, 46% in suburban, and 23% rural. Less than one in ten (9%) indicated they were Hispanic. Most were white (83%) with 11% African American, 2% American Indian or Alaskan Native, and 3% Asian.

## 4 RESULTS

This section summarizes the analyses used to address the objectives of this task, which are to:

- Make comparisons of psychological reactance and moral disengagement between those who rarely wear a seat belt and those who always or usually wear a seat belt.
- Make comparisons between those who regularly drive aggressively and those who rarely or never drive aggressively.
- Explore differences in psychological reactance and moral disengagement among various demographic indicators including age, sex, education attainment, and geography (i.e., urban, suburban, or rural setting).

Relative frequencies of the questions about behavior are provided to understand the seat belt use and aggressive driving behaviors of the respondents to the two surveys (relative frequencies for all questions are included in Appendix 7.3 and 7.4).

The means, standard deviations, and Cronbach's alphas of the various scales calculated in each survey are presented to summarize the results and show the internal reliability.

Correlation analyses and analysis of variance (ANOVA) were used to assess any meaningful relationship between psychological reactance and the risky driving behaviors (seat belt use and aggressive driving) and various demographic variables.

Correlation analyses, t-tests, and analysis of variance (ANOVA) were used to assess any meaningful relationship between moral disengagement and the risky driving behaviors (seat belt use and aggressive driving) and various demographic variables.

### 4.1 Relative Frequencies

Appendices 7.3 and 7.4 include the relative frequencies of responses to all questions for the seat belt use survey and the aggressive driving survey, respectively. Table 8 and Table 9 summarize seat belt use and aggressive driving behaviors, respectively, of the two samples.

It is important to keep in mind that the samples used for the surveys are not representative of the general public as quotas were used to guarantee participation by people who rarely or usually use a seat belt and people who rarely or usually drive aggressively.

*Table 8. Summary of Seat Belt Use Behaviors*

<b>"How often do you use a seat belt..."</b>	<b>Rarely or Never</b>	<b>Usually or Always</b>
when you are driving within a few miles of your home	31.7%	47.0%
when you are driving many miles from your home	22.4%	56.3%
in general, driving during the day	28.1%	48.0%
in general, driving at night	25.3%	52.2%

N= 581

*Table 9. Summary of Aggressive Driving Behaviors*

<b>“When driving, how often do you...”</b>	<b>Rarely or Never</b>	<b>Usually or Always</b>
pass a vehicle that is going about the posted speed limit	48.1%	13.3%
drive so close to the vehicle in front that it would be difficult to stop in an emergency	77.3%	8.0%
drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph	55.7%	14.1%
drive more than 10 mph over the speed limit on roads with speed limits between 55 mph and 65 mph	49.2%	16.0%

N= 750

## 4.2 Scales

Table 10 and Table 11 summarize the scales that measure the core components to assess crash involvement, seat belt use/aggressive driving, several measures of psychological reactance, and moral disengagement for the two surveys. Overall, the internal reliability of the scales is strong; all have a Cronbach’s alpha greater than 0.80. Cronbach’s alpha provides a measure of internal consistency of several items (three or more) used to measure a construct. It’s value ranges from 0 to 1. It is based on the number of items, the average covariance between the item pairs, and the average variance (Tavakol & Dennick, 2011).

*Table 10. Summary of Scales on Seat Belt Use Survey*

<b>Scale</b>	<b>Number of Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Internal Reliability (Cronbach’s alpha)</b>
Seat belt use	4	4.7	2.30	0.969
Crash involvement	2	1.3	0.89	*
Proneness to psychological reactance	14	4.1	1.17	0.914
Threat	4	3.1	1.66	0.923
Emotion	4	2.4	1.67	0.955
Perceived effectiveness	8	3.7	0.79	0.913
Moral disengagement	16	2.9	1.57	0.952

N= 581. \*Instead, the bivariate Pearson correlation of the two crash items is 0.829.

*Table 11. Summary of Scales on Aggressive Driving Survey*

<b>Scale</b>	<b>Number of Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Internal Reliability (Cronbach’s alpha)</b>
Crash involvement	2	1.2	0.69	*
Aggressive driving	4	2.8	1.62	0.920
Proneness to psychological reactance	14	4.0	1.19	0.911
Threat	8	3.0	1.62	0.921
Emotion	8	2.1	1.58	0.962
Perceived effectiveness	16	3.7	0.76	0.908
Moral disengagement	20	3.1	1.31	0.943

N= 750. \*Instead, the bivariate Pearson correlation of the two crash items is 0.810.

## 4.3 Psychological Reactance

### 4.3.1 Psychological Reactance and Behavior

Correlational analyses were used to explore the relationship between behavior, crash involvement, citations, and psychological reactance (see Table 12 for the seat belt use survey and Table 13 for the aggressive driving survey).

The seat belt use survey revealed that seat belt use is not statistically significantly correlated with psychological reactance proneness. However, seat belt use is meaningfully (and statistically significantly) correlated with the three indicators of situational psychological reactance (i.e., threat, emotion, and perceived effectiveness of the messages). The correlation coefficients range in magnitude from 0.28 to 0.51 showing a small to moderate relationship. Therefore, as respondents report less use of seat belts, they are more likely to perceive a threat from and have an emotional reaction to the messages about seat belt use and less likely to perceive the messages as effective.

Among respondents to the seat belt use survey, crash involvement is statistically significantly correlated with two of the three indicators of situational psychological reactance (threat and emotion). Receiving citations is statistically significantly correlated with proneness for psychological reactance and two of the three indicators of situational psychological reactance (threat and emotion). Therefore, as respondents report receiving more citations, they are more likely to be prone to psychological reactance and perceive a threat from and have an emotional reaction to the messages about seat belt use. All the associations are weak.

The aggressive driving survey revealed that aggressive driving behaviors are meaningfully (and statistically significantly) correlated with psychological reactance proneness as well as the three indicators of situational psychological reactance. The correlation coefficients range in magnitude from 0.26 to 0.50 showing a small to moderate relationship. Therefore, as respondents report engaging in more frequent aggressive driving behaviors, they are more likely to be prone to psychological reactance, more likely to perceive a threat from and have an emotional reaction to the messages about aggressive driving, and less likely to perceive the messages as effective.

Among respondents to the aggressive driving survey, crash involvement and receiving citations are meaningfully (and statistically significantly) correlated with reactance proneness and two of the three indicators of situational psychological reactance (threat and emotion). Therefore, as respondents report experiencing more crashes or receiving more citations, they are more likely to be prone to psychological reactance and more likely to perceive a threat from and have an emotional reaction to the messages about aggressive driving. All the associations are weak.

To further reveal the relationship between psychological reactance and behavior, the respondents were divided into two groups: those who never or rarely engaged in the behavior (either using a seat belt or driving aggressively) and those who engage in the behavior more often. Table 14 and Table 15 summarize the mean values and relative effect size of the difference for each of the indicators of psychological reactance for the two groups (for seat belt use and aggressive driving, respectively).

*Table 12. Spearman Correlation Coefficients for Seat Belt Use*

	<b>C</b>	<b>SB</b>	<b>Ci</b>	<b>P</b>	<b>T</b>	<b>Em</b>	<b>Ef</b>	<b>MD</b>
<b>Crash (C)</b>	1.00	NS	.47	NS	.11	.22	NS	.15
<b>Seat Belt Use (SB)</b>		1.00	NS	NS	-.31	-.28	.51	-.48
<b>Citation (Ci)</b>			1.00	.13	.13	.22	NS	.20
<b>Proneness (P)</b>				1.00	.41	.34	-.14	.35
<b>Threat (T)</b>					1.00	.69	-.54	.64
<b>Emotion (Em)</b>						1.00	-.50	.59
<b>Effective (Ef)</b>							1.00	-.48
<b>Moral Disengagement (MD)</b>								1.00

N= 581. NS= not statistically significant (all others significant to  $p < 0.01$ ). Crash (C) increases with more involvement in crashes. Seat belt use (SB) increases with more seat belt use. Citation (Ci) increases with more citations. Proneness (P) to psychological reactance increases as proneness increases. Threat (T) increases as perceived threat to a message increases. Emotional response (Em) to the message reflects more anger, irritation, annoyance, and aggravation with the message. Effective (Ef) increases with perceived effectiveness of the message. Moral disengagement (MD) increases with more agreement with moral disengagement statements.

*Table 13. Spearman Correlation Coefficients for Aggressive Driving*

	<b>C</b>	<b>A</b>	<b>Ci</b>	<b>P</b>	<b>T</b>	<b>Em</b>	<b>Ef</b>	<b>MD</b>
<b>Crash (C)</b>	1.00	.27	.46	.26	.23	.26	NS	.27
<b>Aggressive (A)</b>		1.00	.37	.41	.50	.48	-.26	.51
<b>Citation (Ci)</b>			1.00	.29	.32	.33	NS	.37
<b>Proneness (P)</b>				1.00	.42	.42	-.15	.44
<b>Threat (T)</b>					1.00	.66	-.38	.61
<b>Emotion (Em)</b>						1.00	-.41	.53
<b>Effective (Ef)</b>							1.00	-.29
<b>Moral Disengagement (MD)</b>								1.00

N= 737. NS= not statistically significant (all others significant to  $p < 0.01$ ). Crash (C) increases with more involvement in crashes. Aggressive (A) increases with more aggressive driving behaviors. Citation (Ci) increases with more citations. Proneness (P) to psychological reactance increases as proneness increases. Threat (T) increases as perceived threat to a message increases. Emotional response (Em) to the message reflects more anger, irritation, annoyance, and aggravation with the message. Effective (Ef) increases with perceived effectiveness of the message. Moral disengagement (MD) increases with more agreement with moral disengagement statements.

For seat belt use, analysis of variance (ANOVA) revealed that the means of the three indicators of situational psychological reactance are statistically significantly different ( $p < 0.001$ ) between those who rarely or never use a seat belt and those who usually or always use a seat belt (there is no statistically significant difference in proneness). Situational psychological reactance is higher among individuals who reported rarely or never using a seat belt (compared to those who usually or always use a seat belt). The effect sizes of the differences of the means are small (except for perception of message effectiveness which is moderate).

For aggressive driving, analysis of variance (ANOVA) revealed that the means of the four indicators of psychological reactance are statistically significantly different ( $p < 0.001$ ) between those who rarely or never drive aggressively and those who drive aggressively more frequently. Psychological reactance is higher among individuals who reported driving aggressively frequently (compared to those who rarely or never drive aggressively). The effect sizes of the

differences of the means are moderate (except for perception of message effectiveness which is small).

**Table 14. Comparison of Indicators of Psychological Reactance for Seat Belt Use**

Indicator of Psychological Reactance	Means		Effect Size
	Rarely or Never (N= 56)	Usually or Always (N= 131)	
Proneness	4.1	4.1	none ( $\eta^2= 0.000$ )
Threat	3.7	2.6	small ( $\eta^2= 0.086$ )
Emotion	2.7	2.0	small ( $\eta^2= 0.035$ )
Effective	3.1	4.1	moderate ( $\eta^2= 0.309$ )

No statistically significant difference between proneness. All other differences are statistically significant,  $p<0.001$ . Proneness to psychological reactance ranges from 1 to 7 and increases as proneness increases. Threat ranges from 1 to 7 and increases as perceived threat to a message increases. Emotional response to the message ranges from 1 to 7 and reflects more anger, irritation, annoyance, and aggravation with the message. Effective ranges from 1 to 5 and increases with perceived effectiveness of the message.

**Table 15. Comparison of Indicators of Psychological Reactance for Aggressive Driving**

Indicator of Psychological Reactance	Means		Effect Size
	Rarely or Never (N= 284)	About half the time or more often (N= 204)	
Proneness	3.6	4.7	moderate ( $\eta^2= 0.198$ )
Threat	2.2	4.1	moderate ( $\eta^2= 0.307$ )
Emotion	1.4	3.3	moderate ( $\eta^2= 0.293$ )
Effective	4.0	3.5	small ( $\eta^2= 0.079$ )

Differences are all statistically significant,  $p<0.001$ . Proneness to psychological reactance ranges from 1 to 7 and increases as proneness increases. Threat ranges from 1 to 7 and increases as perceived threat to a message increases. Emotional response to the message ranges from 1 to 7 and reflects more anger, irritation, annoyance, and aggravation with the message. Effective ranges from 1 to 5 and increases with perceived effectiveness of the message.

### 4.3.2 Psychological Reactance Based on Demographics

To better understand psychological reactance, the indicators were analyzed for associations based on sex, age, education attainment, and geography. Table 16 and Table 17 show the means of the four indicators of psychological reactance for males and females (from the seat belt use survey and aggressive driving survey, respectively).

In the seat belt use survey, the means of three indicators of psychological reactance were very similar for males and females (proneness, threat, and emotion), and one indicator was statistically significantly different (perception of message effectiveness). However, the effect size of the difference was very small.

In the aggressive driving survey, analysis of the variance revealed that the means of two indicators of psychological reactance were very similar for males and females (proneness and perception of message effectiveness), and two indicators were statistically significantly different (threat and emotion). However, the effect sizes of the differences were very small.

**Table 16. Comparison of Psychological Reactance for Seat Belt Use Based on Sex**

Indicator of Psychological Reactance	Means		Effect Size
	Males (N= 264)	Females (N= 309)	
Proneness	4.2	4.0	(no difference)
Threat	3.2	3.1	(no difference)
Emotion	2.6	2.3	(no difference)
Effective*	3.8	3.6	very small ( $\eta^2= 0.016$ )

\*Statistically significantly different,  $p=0.002$ . Proneness to psychological reactance ranges from 1 to 7 and increases as proneness increases. Threat ranges from 1 to 7 and increases as perceived threat to a message increases. Emotional response to the message ranges from 1 to 7 and reflects more anger, irritation, annoyance, and aggravation with the message. Effective ranges from 1 to 5 and increases with perceived effectiveness of the message.

**Table 17. Comparison of Psychological Reactance for Aggressive Driving Based on Sex**

Indicator of Psychological Reactance	Means		Effect Size
	Males (N= 369)	Females (N= 370)	
Proneness	4.0	4.0	(no difference)
Threat*	3.3	2.8	very small ( $\eta^2= 0.025$ )
Emotion*	2.4	1.9	very small ( $\eta^2= 0.022$ )
Effective	3.7	3.7	(no difference)

\*Statistically significantly different,  $p<0.001$ . Proneness to psychological reactance ranges from 1 to 7 and increases as proneness increases. Threat ranges from 1 to 7 and increases as perceived threat to a message increases. Emotional response to the message ranges from 1 to 7 and reflects more anger, irritation, annoyance, and aggravation with the message. Effective ranges from 1 to 5 and increases with perceived effectiveness of the message.

Correlation analyses were used to explore a relationship between age and psychological reactance. For the seat belt survey, age was statistically significantly correlated with all four indicators of psychological reactance: proneness ( $r= -0.19$ ,  $p<0.01$ ), threat ( $r= -0.10$ ,  $p<0.01$ ), emotion ( $r= -0.15$ ,  $p<0.01$ ), and perception of message effectiveness ( $r= 0.13$ ,  $p<0.01$ ). Therefore, older respondents exhibited less psychological reactance than younger respondents; however, the relationship is weak.

For the aggressive driving survey, age was meaningfully correlated with all four indicators of psychological reactance including proneness ( $r= -0.36$ ,  $p<0.01$ ), threat ( $r= -0.31$ ,  $p<0.01$ ), emotion ( $r= -0.31$ ,  $p<0.01$ ), and perception of message effectiveness ( $r= 0.23$ ,  $p<0.01$ ). Therefore, older respondents exhibited less psychological reactance than younger respondents.

Similarly, correlation analyses were used to explore a relationship between education attainment and psychological reactance. For the seat belt survey, education attainment was statistically significantly correlated with one of the indicators of psychological reactance: perception of message effectiveness ( $r= 0.15$ ,  $p<0.01$ ). Therefore, there is some evidence that situational psychological reactance may decrease with education attainment; however, the relationship is weak.

For the aggressive driving survey, education attainment was meaningfully correlated with two of the indicators of psychological reactance: threat ( $r= 0.16$ ,  $p<0.01$ ) and emotion ( $r= 0.13$ ,  $p<0.01$ ). Therefore, there is some evidence that psychological reactance may increase with education attainment; however, the relationship is weak.

Analysis of covariance was used to measure a relationship between geography and psychological reactance (while controlling for age). For the seat belt survey, there were no statistically significant ( $p<0.01$ ) associations between geography and any of the indicators of psychological reactance.

For the aggressive driving survey, threat and emotion were slightly higher among respondents who indicated they lived in urban settings compared to those in suburban or rural settings (mean threat: 3.3 vs. 2.9 and 2.8,  $p= 0.012$  and  $p= 0.011$ , respectively; mean emotion: 2.4 vs. 2.0 and 2.1,  $p= 0.008$  and  $p=0.176$ , respectively). After controlling for age, two indicators of psychological reactance appeared to be higher among urban populations than among suburban or rural populations (and two indicators showed no difference). The overall differences were very small.<sup>1</sup>

## **4.4 Moral Disengagement**

### **4.4.1 Moral Disengagement and Behavior**

Correlational analyses were used to explore the relationship between behavior, crash involvement, citations, and moral disengagement (see Table 12 for the seat belt use survey and Table 13 for the aggressive driving survey).

The seat belt use survey revealed that seat belt use behaviors are meaningfully correlated with moral disengagement. The correlation coefficient ( $r=-0.48$ ,  $p<0.01$ ) showed a moderate relationship. Therefore, as respondents report using a seat belt less frequently, they are more likely to disengage morally.

Among respondents to the seat belt use survey, crash involvement and receiving citations are statistically significantly correlated with moral disengagement ( $r= 0.15$ ,  $p<0.01$  and  $r= 0.20$ ,  $p<0.01$ , respectively). Therefore, as respondents report more crash involvement and receiving more citations, they are more likely to disengage morally. The associations are weak.

The aggressive driving survey revealed that aggressive driving behaviors are meaningfully correlated with moral disengagement. The correlation coefficient ( $r=0.51$ ,  $p<0.01$ ) showed a moderate relationship. Therefore, as respondents report engaging in more frequent aggressive driving behaviors, they are more likely to disengage morally.

Among respondents to the aggressive driving survey, crash involvement and receiving citations are statistically significantly correlated with moral disengagement ( $r= 0.27$ ,  $p<0.01$  and  $r= 0.37$ ,  $p<0.01$ , respectively). Therefore, as respondents report more crash involvement and receiving

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<sup>1</sup> After controlling for age, the partial  $\eta^2$  values for the effect size of geography on threat and emotion were 0.015 and 0.012, respectively.

more citations, they are more likely to disengage morally. The associations are weak to moderate.

To further reveal the relationship between moral disengagement and behavior, the respondents were divided into two groups: those who never or rarely engaged in the behavior (either wearing a seat belt or driving aggressively) and those who engage in the behavior more often. For the seat belt survey, a t-test revealed that the mean of moral disengagement is statistically significantly different between those who rarely or never use a seat belt (mean of moral disengagement= 3.5) and those who usually or always use a seat belt (mean= 2.2) ( $t(386)= 9.56, p<0.001$ ). Moral disengagement is higher among individuals who reported rarely or never using a seat belt (compared to those who usually or always use a seat belt). Analysis of variance of the means (ANOVA) revealed that the effect size of the difference is small ( $\eta^2= 0.16$ ).

For aggressive driving, a t-test revealed that the mean of moral disengagement is statistically significantly different between those who rarely or never drive aggressively (mean of moral disengagement= 2.5) and those who drive aggressively more frequently (mean= 4.1) ( $t(327)= -14.28, p<0.001$ ). Moral disengagement is higher among individuals who reported driving aggressively frequently (compared to those who rarely or never drive aggressively). Analysis of variance of the means (ANOVA) revealed that the effect size of the difference is moderate ( $\eta^2= 0.32$ ).

#### 4.4.2 Moral Disengagement Based on Demographics

To better understand moral disengagement, associations based on sex, age, education attainment, and geography were explored. In the seat belt survey, t-tests revealed that moral disengagement was not statistically significantly different among males or females ( $t(530)= 1.4, p=0.155$ ).

In the aggressive driving survey, t-tests revealed that moral disengagement was statistically significantly higher among males (mean= 3.4) than females (mean= 2.8) ( $t(685)= 6.32, p<0.001$ ). Analysis of variance of the means (ANOVA) revealed that the effect size of the difference is small ( $\eta^2= 0.051$ ).

Correlation analyses were used to measure a relationship between age and moral disengagement. For the seat belt survey, age was not statistically significantly correlated with moral disengagement. For the aggressive driving survey, age was meaningfully (and statistically significantly) negatively correlated with moral disengagement ( $r= -0.29, p<0.01$ ). Therefore, older respondents exhibited less moral disengagement than younger respondents.

Similarly, correlation analyses were used to measure a relationship between education attainment and moral disengagement. For the seat belt survey, education attainment was not statistically significantly correlated with moral disengagement. For the aggressive driving survey, education attainment was weakly correlated with moral disengagement ( $r= 0.08, p<0.05$ ). Therefore, there is some evidence that moral disengagement may increase with education attainment.

Analysis of covariance (ANCOVA) was used to measure a relationship between geography and moral disengagement (while controlling for age). For the seat belt survey, moral disengagement was not statistically significantly different between urban, suburban, or rural populations. For the

aggressive driving survey, moral disengagement was slightly higher among respondents who indicated they lived in urban settings compared to those in suburban or rural settings (mean 3.3 vs. 3.0 and 2.9,  $p= 0.002$  and  $p= 0.001$ , respectively). The overall differences were very small.<sup>2</sup>

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<sup>2</sup> After controlling for age, the partial  $\eta^2$  value for the effect size of geography on moral disengagement was 0.021.

## 5 CONCLUSIONS

Two surveys were developed and implemented (with independent samples) to explore the relationship between psychological reactance (proneness and situational) and moral disengagement with two behaviors associated with traffic safety: seat belt use and aggressive driving.

Those who rarely or never use a seat belt were found to exhibit more situational psychological reactance (in response to two messages about seat belt use) than people who usually or always use a seat belt. No differences in proneness to psychological reactance were found based on seat belt use. Among those responding to the seat belt use survey, psychological reactance decreased slightly with age and increased slightly based on education attainment (for one indicator of situational psychological reactance); however, no meaningful associations in situational psychological reactance were found based on sex or geography.

Similarly, people who rarely or never use a seat belt were found to exhibit more moral disengagement than people who usually or always wear a seat belt. Among those responding to the seat belt use survey, there were no statistically significant associations between moral disengagement and age, sex education attainment, or geography.

Those who frequently drive aggressively were found to exhibit more proneness and situational psychological reactance than people who rarely or never drive aggressively. Among those responding to the aggressive driving survey, psychological reactance decreased with age and increased with education attainment (for two indicators); however, no meaningful associations in psychological reactance were found based on sex or geography.

Similarly, people who frequently drive aggressively were found to exhibit more moral disengagement than people who rarely or never drive aggressively. Among those responding to the aggressive driving survey, males indicated more moral disengagement than females, and moral disengagement decreased with age. There were no meaningful associations between moral disengagement and education attainment or geography.

Based on these results, considering the impact of psychological reactance and moral disengagement is appropriate when developing messages to change the behaviors of those who rarely or never wear a seat belt or frequently drive aggressively.

The next task in this research project will explore how psychological reactance and moral disengagement are related to beliefs associated with seat belt use and aggressive driving. These findings will be used to inform guidance on messages to address these behaviors.

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## 7 APPENDIX

### 7.1 Seat Belt Survey

## Reactance Seat Belt Survey

*The purpose of this survey is to assess beliefs associated with seat belt use and to determine if psychological reactance is more prevalent among individuals who rarely or never use a seat compared to those who always use a seat belt. The sample will be recruited online from individuals across the U.S. and will screen for respondents who never or rarely use a seat belt.*

*The following is the text of the survey. The actual survey will be implemented online, and the questions will appear differently. Preliminary pilot tests indicate the survey will take about 15 minutes.*

-----  
The Center for Health and Safety Culture is conducting research about health and safety.

**We are asking for your participation in this important survey. This is not a marketing survey or to learn about selling a product. This is about improving health and safety. We know your time is valuable, and we appreciate your participation.**

Your participation is voluntary, and we will only share summary results. You can stop at any time. Your responses are confidential, anonymous, and cannot be associated with your identity. This study has been approved by the Montana State University Institutional Review Board. If you have questions or comments about the survey, please contact Jay Otto with the Center for Health and Safety Culture at [jayotto@montana.edu](mailto:jayotto@montana.edu).

Thank you for taking this survey!

Jay Otto  
[jayotto@montana.edu](mailto:jayotto@montana.edu)

**First, let us learn a little bit about you.**

1. What is your age?
2. In a typical month, how often do you operate a vehicle? (never to daily)
3. Thinking back over the past 30 days, how often did you use your seat belt? (never to always)
4. In a typical month, how often do you ride (as a passenger) in a vehicle? (never to always)

5. In what state do you currently reside?

6. What is your sex? (male, female, other, I prefer not to answer)

7. In the past year, how many vehicle crashes (even minor ones) have you been involved in that were NOT your fault? None, 1, 2, 3, 4, 5, 6 or more

8. In the past year, how many vehicle crashes (even minor ones) have you been involved that you may have had some fault? None, 1, 2, 3, 4, 5, 6 or more

9. In the past year, how many citations, tickets or summonses have you received for not using a seat belt? None, 1, 2, 3, 4, 5, 6 or more

*(The following is a validated scale to assess proneness to psychological reactance.)*

10. How much do you agree or disagree with each statement? (strongly disagree to strongly agree)

- a) I become frustrated when I am unable to make free and independent decisions.
- b) I become angry when my freedom of choice is restricted.
- c) It irritates me when someone points out things that are obvious to me.
- d) The thought of being dependent on others aggravates me.
- e) Regulations trigger a sense of resistance in me.
- f) I find contradicting others stimulating.
- g) When something is prohibited, I usually think "That's exactly what I am going to do."
- h) I resist the attempts of others to influence me.
- i) It makes me angry when another person is held up as a model for me to follow.
- j) When someone forces me to do something, I feel like doing the opposite.
- k) It disappoints me to see others submitting to a society's standards and rules.
- l) I am content only when I am acting of my own free will.
- m) I consider advice from others to be an intrusion.
- n) Advice and recommendations induce me to do just the opposite.

11. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) "I am very concerned about safety on our roads and highways."
- b) "I believe the only acceptable number of deaths and serious injuries on our roadways is zero."
- c) "I believe the only acceptable number of deaths and serious injuries among my family and friends on our roadways is zero."

**In this section, we want to learn how often you use a seat belt.**

12. How often do you use a seat belt... (never to always)

- a) when you are driving within a few miles of your home?
- b) when you are driving many miles from your home?
- c) in general, driving during the day?
- d) in general, driving at night?

13. Thinking of the next 30 days, how often do you intend to use your seat belt? (never to always)

14. How likely is it that you will drive WITHOUT using your seat belt in the next 30 days? (not at all likely to extremely likely)

15. How determined are you to use your seat belt every time you are in a vehicle in the next 30 days? (not at all determined to extremely determined)

16. Imagine you are in the following situations. How willing would you be to use your seat belt? (not at all willing to extremely willing)

- a) If children are in the vehicle
- b) You are by yourself in the vehicle
- c) You are driving on rural roads
- d) You are driving during the day

17. Now, we want to ask how you feel about using a seat belt. "To me, always using a seat belt feels..."

good: bad

foolish: wise

safe: dangers

unnecessary: necessary

uncomfortable: comfortable

18. How much do you agree or disagree with the following statements? (strongly disagree to strongly agree)

- a) I believe it is important to protect myself by always using a seat belt.
- b) I use a seat belt because I don't want to get a ticket.
- c) I use a seat belt because I want to set a good example for my children.
- d) People are less likely to be seriously injured or killed if they always use their seat belt.
- e) I believe local law enforcement should enforce seat belt laws.
- f) It is a driver's responsibility to comply with traffic laws.

19. How much do you agree or disagree: "People who care about me want me to always use a seat belt"? (strongly disagree to strongly agree)

**Now, we want to ask about how others would feel if you did NOT use a seat belt.**

20. Would most people important to you feel it was acceptable or unacceptable if you did NOT use your seat belt? (extremely unacceptable to extremely acceptable)

21. Would most people who are important to you approve or disapprove if you did NOT use a seat belt? (strongly disapprove to strongly approve)

**Again, this question asks about if you did NOT use a seat belt.**

22. In your opinion, would the following people feel it was acceptable or unacceptable if **you did NOT use your seat belt**? (extremely unacceptable to extremely acceptable, does not apply to me)

- a) Your spouse or partner
- b) Your children
- c) Your friends
- d) Your coworkers
- e) Most adults in your community

23. In general, how often do most people like you use their seat belts? (never to always)

24. How many people similar to you do you think always use their seat belt? (none to all)  
How common do you think it is for people like yourself to always use their seat belt? (not at all common to extremely common)

25. In your opinion, how often do the following people use their seat belts? (never to always)

- a) Your spouse or partner
- b) Your children
- c) Your friends
- d) Your coworkers
- e) Most adults in your community

26. How much do you agree or disagree: "I find it difficult to remember to always use a seat belt"? (strongly disagree to strongly agree)

27. If you wanted to, how easy or difficult would it be for you to always use a seat belt? (extremely difficult to extremely easy)

28. How confident are you that you could always use a seat belt if you wanted to? (not at all confident to extremely confident)

29. How much do you agree or disagree: "I am comfortable using my seat belt even if others in the vehicle are not." (strongly disagree to strongly agree)

30. "Even if I wanted to, I can't always use a seat belt because...
- a) my vehicle does not have a seat belt that works."
  - b) the seat belt does not fit me properly."
  - c) I have to get in and out of the vehicle too much to use a seat belt."

(strongly disagree to strongly agree)

31. Do you have a family rule about always using a seat belt? (yes, no, I don't know, I don't have a family)

32. Do you have a workplace rule about always using a seat belt? (yes, no, I don't know, I don't have a workplace)

*(These statements assess eight forms of moral disengagement about seat belts: moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, distortion of consequences, attribution of blame, and dehumanization. The following statements were narrowed from a longer list after pilot testing.)*

33. How much do you agree or disagree with the following statements? (strongly disagree to strongly agree)

- a) "Using a seat belt isn't necessary if you are a good driver."
- b) "It's ok to not use a seat belt if you are in a hurry to get somewhere and forget to buckle up."
- c) "My heroes don't use seat belts."
- d) "Not using a seat belt is just a way of letting the government know they aren't in control."
- e) "I might not use a seat belt, but at least I don't text and drive."
- f) "Not using a seat belt is no big deal when you consider that others are choosing more dangerous behaviors like drinking and driving."
- g) "You can't blame me for not using a seat belt; I have more important things to worry about."
- h) "My friends/family don't use seat belts; why should I?"
- i) "I am not going to use a seat belt because others in the vehicle aren't either."
- j) "I don't need to use a seat belt because vehicles are so much safer today."
- k) "Not using my seat belt is okay because it doesn't impact anyone else."
- l) "We didn't have to use seat belts when I was young, and we turned out just fine."
- m) "If kids don't use a seat belt, it is their parents' fault."
- n) "If other people knew how to drive, people would not need to use a seat belt to protect themselves."
- o) "Telling people they have to use a seat belt is acting like people are stupid."
- p) "Making someone use a seat belt is treating them like less than a person."

*(This section assesses psychological reactance by measuring the respondent's reaction to messages that are designed to foster a reaction. The questions used are based on published research to assess reactance. These messages and questions were pilot tested with an online sample of 160 adults).*

**Now we would like you to read a message and then answer some questions about the message.**

**Message A**

You model healthy behaviors for the people you care about most.

Buckling your seat belt only takes a few seconds, is easy, and models a critical lifesaving behavior for those you care about.

Consider buckling up for the people you care about – your family, your friends, and your coworkers.

34. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) The message threatened my freedom to choose
- b) The message tried to make a decision for me
- c) The message tried to manipulate me
- d) The message tried to pressure me

35. To what extent did the message that you just read make you feel... (none of this feeling to a great deal of the feeling)

- a) Angry
- b) Irritated
- c) Annoyed
- d) Aggravated

36. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) The message is a reason for using a seat belt that is believable.
- b) The message is a reason for using a seat belt that is convincing.
- c) The message gives a reason for using a seat belt that is important to me.
- d) The message helped me feel confident about how best to use a seat belt.
- e) The message would help my friends to use a seat belt.
- f) The message put thoughts in my mind about wanting to use a seat belt.
- g) The message put thoughts in my mind about not wanting to use a seat belt.
- h) Overall, how much do you agree or disagree with the message?

**Now we would like you to read another message and then answer some questions about the message.**

**Message B**

The truth is that using a seat belt is a lifesaving behavior and the smart and easy thing to do. No matter how much you don't want your life to be regulated by others, everyone should always use a seat belt.

Why be lazy?

You can clearly see there is no other choice. Buckle up!

37. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) The message threatened my freedom to choose
- b) The message tried to make a decision for me
- c) The message tried to manipulate me
- d) The message tried to pressure me

38. To what extent did the message that you just read make you feel... (none of this feeling to a great deal of the feeling)

- a) Angry
- b) Irritated
- c) Annoyed
- d) Aggravated

39. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) The message is a reason for using a seat belt that is believable.
- b) The message is a reason for using a seat belt that is convincing.
- c) The message gives a reason for using a seat belt that is important to me.
- d) The message helped me feel confident about how best to use a seat belt.
- e) The message would help my friends to use a seat belt.
- f) The message put thoughts in my mind about wanting to use a seat belt.
- g) The message put thoughts in my mind about not wanting to use a seat belt.
- h) Overall, how much do you agree or disagree with the message?

**Finally, we would like to learn a little more about you.**

40. What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- High school graduate (high school diploma or equivalent including GED)
- Some college but no degree
- Associate degree in college (2-year)
- Bachelor's degree in college (4-year)
- Master's degree
- Doctoral degree
- Professional degree (JD, MD)
- I prefer not to answer

41. What best describes where you live?

- Urban (population of 50,000 or more)
- Suburban (population between 2,500 and 50,000)
- Rural

42. Are you Spanish, Hispanic, or Latino or none of these? (yes, none of these, I prefer not to answer)

43. Choose one or more races that you consider yourself to be:

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other \_\_\_\_\_
- I prefer not to answer

44. What is your annual household income from all sources?

- Less than \$25,000
- \$25,000 to less than \$35,000
- \$35,000 to less than \$50,000
- \$50,000 to less than \$75,000
- \$75,000 or more
- I prefer not to answer

Thanks for completing this survey. Your participation will help improve traffic safety.

## 7.2 Aggressive Driving Survey

### Reactance Aggressive Driving Survey

*The purpose of this survey is to assess beliefs associated with aggressive driving (defined here as excessive passing, following too closely, and speeding) and to determine if psychological reactance is more prevalent among individuals who routinely drive aggressively compared to those who rarely or never do. The sample will be recruited online from individuals across the U.S. and will screen for respondents who routinely drive aggressively.*

*The following is the text of the survey. The actual survey will be implemented online, and the questions will appear differently. Preliminary pilot tests indicate the survey will take about 15 minutes.*

-----  
The Center for Health and Safety Culture is conducting research about health and safety.

**We are asking for your participation in this important survey. This is not a marketing survey or to learn about selling a product. This is about improving health and safety. We know your time is valuable, and we appreciate your participation.**

Your participation is voluntary, and we will only share summary results. You can stop at any time. Your responses are confidential, anonymous, and cannot be associated with your identity. This study has been approved by the Montana State University Institutional Review Board. If you have questions or comments about the survey, please contact Jay Otto with the Center for Health and Safety Culture at [jayotto@montana.edu](mailto:jayotto@montana.edu).

Thank you for taking this survey!

Jay Otto  
[jayotto@montana.edu](mailto:jayotto@montana.edu)

**First, let us learn a little bit about you.**

1. What is your age?
2. In a typical month, how often do you operate a vehicle? (never to daily)
3. How often do you drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph? (never to daily)

4. In what state do you currently reside?

5. What is your sex? (male, female, other, I prefer not to answer)

6. In the past year, how many vehicle crashes (even minor ones) have you been involved in that were NOT your fault? None, 1, 2, 3, 4, 5, 6 or more

7. In the past year, how many vehicle crashes (even minor ones) have you been involved in that you had some fault? None, 1, 2, 3, 4, 5, 6 or more

8. In the past year, how many citations, tickets or summons have you received for speeding? None, 1, 2, 3, 4, 5, 6 or more

*(The following is a validated scale to assess proneness to psychological reactance.)*

9. How much do you agree or disagree with each statement? (strongly disagree to strongly agree)

- a) I become frustrated when I am unable to make free and independent decisions.
- b) I become angry when my freedom of choice is restricted.
- c) It irritates me when someone points out things that are obvious to me.
- d) The thought of being dependent on others aggravates me.
- e) Regulations trigger a sense of resistance in me.
- f) I find contradicting others stimulating.
- g) When something is prohibited, I usually think "that's exactly what I am going to do."
- h) I resist the attempts of others to influence me.
- i) It makes me angry when another person is held up as a model for me to follow.
- j) When someone forces me to do something, I feel like doing the opposite.
- k) It disappoints me to see others submitting to society's standards and rules.
- l) I am content only when I am acting of my own free will.
- m) I consider advice from others to be an intrusion.
- n) Advice and recommendations induce me to do just the opposite.

**Next, we want to know what you think about traffic safety.**

10. How much do you agree or disagree with the following statements? (strongly disagree to strongly agree)

- a) I am very concerned about safety on our roads and highways.
- b) I believe the only acceptable number of deaths and serious injuries on our roadways is zero.
- c) I believe the only acceptable number of deaths and serious injuries among my family and friends on our roadways is zero.

**In this section, we want to learn about your driving.**

11. When driving, how often do you ... (never to always)

- a) pass a vehicle that is going about the posted speed limit?
- b) drive so close to the vehicle in front that it would be difficult to stop in an emergency?
- c) drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?
- d) drive more than 10 mph over the speed limit on roads with speed limits between 55 mph and 65 mph?

12. Thinking of the next week, how often will you... (never to always)

- a) pass a vehicle that is going about the posted speed limit?
- b) drive so close to the vehicle in front that it would be difficult to stop in an emergency?
- c) drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?
- d) drive more than 10 mph over the speed limit on roads with speed limits between 55 mph and 65 mph?

13. Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to pass a vehicle that is going about the posted speed limit? (not at all willing to very willing)

- a) There is very little traffic (few vehicles on the road)
- b) There is a lot of traffic (many vehicles on the road)
- c) You are late, and others are expecting you at home
- d) It is raining pretty hard
- e) There are others in the vehicle with you

14. Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to drive more than 10 mph over the posted speed limit? (not at all willing to very willing)

- a) There is very little traffic (few vehicles on the road)
- b) There is a lot of traffic (many vehicles on the road)
- c) You are late, and others are expecting you at home
- d) It is raining pretty hard
- e) There are others in the vehicle with you

**Next, we want to ask about your attitudes.**

15. "For me, passing a vehicle that is going about the posted speed limit feels..."

- a) useful: useless
- b) dangerous: safe
- c) foolish: smart
- d) efficient: wasteful
- e) exciting: not at all exciting
- f) harmful: beneficial

16. "For me, driving so close to the vehicle in front that it would be difficult to stop in an emergency feels..."

- a) useful: useless
- b) dangerous: safe
- c) foolish: smart
- d) efficient: wasteful
- e) exciting: not at all exciting
- f) harmful: beneficial

17. "For me, driving more than 10 mph over the posted speed limit feels..."

- a) useful: useless
- b) dangerous: safe
- c) foolish: smart
- d) efficient: wasteful
- e) exciting: not at all exciting
- f) harmful: beneficial

18. How much do you agree or disagree with the following statements? (strongly disagree to strongly agree)

- a) Driving the posted speed limit makes our roads safer.
- b) Passing a vehicle that is driving about the posted speed limit saves time.
- c) If I drive more than 10 mph over the posted speed limit, I am likely to get a speeding ticket.
- d) Driving closely to the vehicle in front of me is likely to make that driver speed up.
- e) Driving closely to the vehicle in front of me will upset the driver of that vehicle.

19. How much do you agree or disagree with the following statements? (strongly disagree to strongly agree)

- a) I believe local law enforcement should enforce speed limit laws.
- b) It is a driver's responsibility to comply with traffic laws.

**Now we want to ask you about how you think others feel.**

20. In your opinion, how acceptable would most people who are important to you feel it is to... (not at all acceptable to totally acceptable)

- a) pass a vehicle that is going about the posted speed limit?
- b) drive so close to the vehicle in front that it would be difficult to stop in an emergency?
- c) drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?

21. In your opinion, how acceptable or unacceptable would the following people feel it was for you to do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? (extremely unacceptable to extremely acceptable, does not apply to me)

- a) Your spouse or partner
- b) Your children
- c) Your friends
- d) Your coworkers
- e) Most adults in your community

22. In your opinion, how often do most people like you... (never to always)

- a) pass a vehicle that is driving about the posted speed limit?
- b) drive so close to the vehicle in front that it would be difficult to stop in an emergency?
- c) speed on roads with speed limits between 35 mph and 50 mph?

23. In your opinion, how often do the following people do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? (never to always)

- a) Your spouse or partner
- b) Your children
- c) Your friends
- d) Your coworkers
- e) Most adults in your community

24. How EASY or DIFFICULT is it for you to... (very easy to very difficult)

- a) NOT pass a vehicle that is driving about the posted speed limit?
- b) NOT drive so close to the vehicle in front that it would be difficult to stop in an emergency?
- c) NOT drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?

25. In general, how likely are you to find yourself driving in the following situations? (extremely unlikely to extremely likely)

- a) Being late to pick up someone (like children or other family members)
- b) Being late to an appointment, school, or work
- c) Feeling frustrated by traffic
- d) Feeling frustrated by other drivers
- e) Just feeling angry

26. Do you have a family rule about not speeding? (yes, no, I don't know, I don't have a family)

27. Do you have a workplace rule about not speeding? (yes, no, I don't know, I don't have a workplace)

*(These statements assess eight forms of moral disengagement about aggressive driving: moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, distortion of consequences, attribution of blame, and dehumanization. The following statements were narrowed from a longer list after pilot testing.)*

28. How much do you agree or disagree with each statement? (strongly disagree to strongly agree)

- a) It's ok to tailgate if it gets people to realize they are doing the wrong thing.
- b) It's ok to yell at other drivers who put the lives of your passengers at risk.
- c) Honking the horn loudly is just a way of letting off frustration.
- d) Following too closely or cutting someone off is just a way of teaching someone a lesson they need.
- e) Tailgating is no big deal when you consider other people are deliberately running red lights.
- f) Yelling at other drivers is pretty tame when compared to people that attack other drivers.
- g) Speeding a little over the limit is not too serious compared to those that speed a lot over the speed limit.
- h) If a driver is pushed into being rude to other drivers, they shouldn't be blamed for it.
- i) People can't be blamed for intimidating another driver if their friend pressured them into it.
- j) You can't blame a single driver for going through a yellow light if a whole group does it.
- k) It's ok to go over the speed limit if it means you are keeping up with the rest of the traffic.
- l) Drivers don't mind being honked at because they know it just means "hurry up."
- m) Flashing headlights to get someone to move over doesn't really hurt anyone.
- n) Tailgating other vehicles when the traffic is heavy isn't really dangerous.
- o) If you are getting honked at while driving, you probably deserve it.
- p) Overly cautious drivers who are tailgated deserve it because they are a risk to everyone on the road.
- q) People who don't know how to drive provoke bad driving in others.
- r) It's alright to abuse drivers who are behaving like jerks.
- s) A driver who is inconsiderate doesn't deserve to be treated like a normal person.
- t) Some drivers deserve to be treated like the idiots they are.

*(This section assesses psychological reactance by measuring the respondent's reaction to messages that are designed to foster a reaction. The questions used are based on published research to assess reactance. These messages and questions were pilot tested with an online sample of 200 adults).*

**Now we would like you to read a message and then answer some questions about the message.**

### **Message A**

Regardless of how others are driving, choosing to drive safely is a personal value that you and many others share.

Driving safely includes behaviors like following the speed limit and keeping a safe distance between your vehicle and the one in front of you.

Thank you for making safe driving a priority.

29. How much do you agree or disagree? (strongly disagree to strongly agree)

- e) The message threatened my freedom to choose
- f) The message tried to make a decision for me
- g) The message tried to manipulate me
- h) The message tried to pressure me

30. To what extent did the message that you just read make you feel... (none of this feeling to a great deal of the feeling)

- e) Angry
- f) Irritated
- g) Annoyed
- h) Aggravated

31. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) The message is a reason for not driving aggressively that is believable.
- b) The message is a reason for not driving aggressively that is convincing.
- c) The message gives a reason for not driving aggressively that is important to me.
- d) The message helped me feel confident about how best to not drive aggressively.
- e) The message would help my friends to not drive aggressively.
- f) The message put thoughts in my mind about wanting to not drive aggressively.
- g) The message put thoughts in my mind about wanting to drive aggressively.
- h) Overall, how much do you agree or disagree with the message?

**Here is one more message. Please read it and then answer a few questions about it.**

**Message B**

Think you can speed? You can't.

Passing every vehicle on the road? Not okay!

Think you have the right to tailgate someone because they are annoying you? Don't be a jerk.

You share the road with others.

Your unsafe driving puts others at risk of serious injuries and even death.

You must do your part to keep everyone safe.

32. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) The message threatened my freedom to choose
- b) The message tried to make a decision for me
- c) The message tried to manipulate me
- d) The message tried to pressure me

33. To what extent did the message that you just read make you feel... (none of this feeling to a great deal of the feeling)

- a) Angry
- b) Irritated
- c) Annoyed
- d) Aggravated

34. How much do you agree or disagree? (strongly disagree to strongly agree)

- a) The message is a reason for not driving aggressively that is believable.
- b) The message is a reason for not driving aggressively that is convincing.
- c) The message gives a reason for not driving aggressively that is important to me.
- d) The message helped me feel confident about how best to not drive aggressively.
- e) The message would help my friends to not drive aggressively.
- f) The message put thoughts in my mind about wanting to not drive aggressively.
- g) The message put thoughts in my mind about wanting to drive aggressively.
- h) Overall, how much do you agree or disagree with the message?

**Finally, we would like to learn a little more about you.**

35. What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- High school graduate (high school diploma or equivalent including GED)
- Some college but no degree
- Associate degree in college (2-year)
- Bachelor's degree in college (4-year)
- Master's degree
- Doctoral degree
- Professional degree (JD, MD)
- I prefer not to answer

36. What best describes where you live?

- Urban (population of 50,000 or more)
- Suburban (population between 2,500 and 50,000)
- Rural (less than 2,500)
- I prefer not to answer

37. Are you Spanish, Hispanic, or Latino or none of these? (yes, none of these, I prefer not to answer)

38. Choose one or more races that you consider yourself to be:

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other \_\_\_\_\_
- I prefer not to answer

39. What is your annual household income from all sources?

- Less than \$25,000
- \$25,000 to less than \$35,000
- \$35,000 to less than \$50,000
- \$50,000 to less than \$75,000
- \$75,000 or more
- I prefer not to answer

*Thanks for completing this survey. Your participation will help improve traffic safety.*

### 7.3 Relative Frequency Report of Seat Belt Survey Results

In a typical month, how often do you operate a vehicle?

N	Most days	Daily	100%
581	30.8%	69.2%	

Thinking back over the past 30 days, how often did you use your seat belt?

	Never			About half the time			Always	
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
581	15.8%	11.2%	4.8%	13.8%	5.5%	6.5%	42.3%	100%

In a typical month, how often do you ride (as a passenger) in a vehicle?

	Never	Rarely	Some days	About half	Often	Most days	Daily	
N								
581	10.8%	29.6%	27.0%	8.8%	10.7%	5.3%	7.7%	100%

What is your sex?

	male	female	other	I prefer not to answer	
N					
581	45.4%	53.2%	0.5%	0.9%	100%

In the past year, how many vehicle crashes (even minor ones) have you been involved in that were NOT your fault?

N	None	1	2	3	4	5	6 or more	
581	79.9%	10.8%	4.5%	2.2%	1.2%	0.7%	0.7%	100%

In the past year, how many vehicle crashes (even minor ones) have you been involved in that you may have had some fault?

N	None	1	2	3	4	5	6 or more	
581	85.0%	8.6%	2.2%	1.9%	1.0%	0.5%	0.7%	100%

In the past year, how many citations, tickets, or summonses have you received for not using a seat belt?

N	None	1	2	3	4	5	6 or more	
581	83.5%	9.3%	3.1%	1.4%	1.7%	0.3%	0.7%	100%

How much do you agree or disagree with each statement? - I become frustrated when I am unable to make free and independent decisions.

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	9.1%	4.0%	6.2%	15.1%	31.8%	12.9%	20.8%	100%

How much do you agree or disagree with each statement? - I become angry when my freedom of choice is restricted.

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	6.7%	4.1%	5.9%	13.9%	31.5%	12.0%	25.8%	100%

How much do you agree or disagree with each statement? - It irritates me when someone points out things that are obvious to me.

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
580	6.6%	5.2%	9.5%	23.8%	27.2%	11.6%	16.2%	100%

How much do you agree or disagree with each statement? - The thought of being dependent on others aggravates me.

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	6.0%	3.6%	8.6%	17.6%	33.0%	12.6%	18.6%	100%

How much do you agree or disagree with each statement? - Regulations trigger a sense of resistance in me.

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	11.9%	7.4%	16.2%	28.6%	18.2%	8.8%	9.0%	100%

How much do you agree or disagree with each statement? - I find contradicting others stimulating.

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
580	23.4%	9.7%	16.4%	26.7%	13.6%	5.3%	4.8%	100%

How much do you agree or disagree with each statement? - When something is prohibited, I usually think "That's exactly what I am going to do."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	27.8%	13.3%	14.0%	20.5%	14.0%	6.4%	4.1%	100%

How much do you agree or disagree with each statement? - I resist the attempts of others to influence me.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	7.9%	5.2%	8.8%	26.0%	27.6%	11.9%	12.6%	100%

How much do you agree or disagree with each statement? - It makes me angry when another person is held up as a model for me to follow.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	11.0%	7.4%	12.6%	29.1%	21.7%	8.3%	10.0%	100%

How much do you agree or disagree with each statement? - When someone forces me to do something, I feel like doing the opposite.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	13.4%	7.2%	11.2%	25.3%	25.6%	6.0%	11.2%	100%

How much do you agree or disagree with each statement? - It disappoints me to see others submitting to a society's standards and rules.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	15.3%	9.8%	14.1%	27.4%	18.1%	6.9%	8.3%	100%

How much do you agree or disagree with each statement? - I am content only when I am acting of my own free will.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	6.5%	6.2%	8.6%	22.4%	29.8%	11.9%	14.6%	100%

How much do you agree or disagree with each statement? - I consider advice from others to be an intrusion.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	20.3%	13.8%	22.0%	22.9%	12.4%	4.8%	3.8%	100%

How much do you agree or disagree with each statement? - Advice and recommendations induce me to do just the opposite.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	20.8%	15.5%	19.3%	24.3%	11.5%	4.6%	4.0%	100%

How much do you agree or disagree? - "I am very concerned about safety on our roads and highways."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	4.5%	0.9%	4.0%	10.7%	21.5%	20.1%	38.4%	100%

How much do you agree or disagree? - "I believe the only acceptable number of deaths and serious injuries on our roadways is zero."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	6.7%	3.1%	4.5%	14.1%	18.2%	14.3%	39.1%	100%

How much do you agree or disagree? - "I believe the only acceptable number of deaths and serious injuries among my family and friends on our roadways is zero."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	4.0%	1.9%	3.8%	14.6%	11.5%	11.2%	53.0%	100%

How often do you use a seat belt... - when you are driving within a few miles of your home?

N	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)	
581	24.8%	6.9%	4.6%	12.7%	4.0%	7.1%	39.9%	100%

How often do you use a seat belt... - when you are driving many miles from your home?

	Never			About half the time			Always	
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
581	15.0%	7.4%	4.5%	9.5%	7.4%	9.8%	46.5%	100%

How often do you use a seat belt... - in general, driving during the day?

	Never			About half the time			Always	
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
581	21.2%	6.9%	5.0%	12.0%	6.9%	8.3%	39.8%	100%

How often do you use a seat belt... - in general, driving at night?

	Never			About half the time			Always	
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
581	18.9%	6.4%	3.8%	9.8%	9.0%	8.4%	43.7%	100%

Thinking of the next 30 days, how often do you intend to use your seat belt?

	Never			About half the time			Always	
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
581	16.2%	7.2%	3.6%	11.5%	6.0%	9.3%	46.1%	100%

How likely is it that you will drive WITHOUT using your seat belt in the next 30 days?

	Extremely likely			Moderately likely			Not at all likely	
N	(7)	(6)	(5)	(4)	(3)	(2)	(1)	
581	26.3%	10.5%	5.5%	9.8%	2.6%	6.0%	39.2%	100%

How determined are you to use your seat belt every time you are in a vehicle in the next 30 days?

	Extremely likely			Moderately likely			Not at all likely	
N	(7)	(6)	(5)	(4)	(3)	(2)	(1)	
581	19.3%	4.5%	5.0%	12.7%	5.2%	7.7%	45.6%	100%

Imagine you are in the following situations. How willing would you be to use your seat belt? - If children are in the vehicle

	Extremely likely			Moderately likely			Not at all likely	
N	(7)	(6)	(5)	(4)	(3)	(2)	(1)	
581	8.8%	2.8%	2.2%	12.7%	5.5%	8.1%	59.9%	100%

Imagine you are in the following situations. How willing would you be to use your seat belt? - You are by yourself in the vehicle

	Extremely likely	(6)	(5)	Moderately likely	(3)	(2)	Not at all likely	(1)	
N	(7)			(4)					
581	18.9%	7.2%	6.0%	11.9%	5.3%	6.4%	44.2%		100%

Imagine you are in the following situations. How willing would you be to use your seat belt? - You are driving on rural roads

	Extremely likely	(6)	(5)	Moderately likely	(3)	(2)	Not at all likely	(1)	
N	(7)			(4)					
581	17.7%	7.6%	5.7%	10.8%	5.2%	6.9%	46.1%		100%

Imagine you are in the following situations. How willing would you be to use your seat belt? - You are driving during the day

	Extremely likely	(6)	(5)	Moderately likely	(3)	(2)	Not at all likely	(1)	
N	(7)			(4)					
580	16.0%	7.4%	5.2%	13.1%	6.9%	7.8%	43.6%		100%

To me, always using a seat belt feels: good: bad

N	1	2	3	4	5	6	7	
577	52.3%	8.1%	5.9%	14.4%	6.6%	4.5%	8.1%	100%

To me, always using a seat belt feels: foolish: wise

N	1	2	3	4	5	6	7	
571	5.4%	3.2%	5.3%	13.7%	7.4%	11.2%	53.9%	100%

To me, always using a seat belt feels: safe: dangerous

N	1	2	3	4	5	6	7	
573	58.5%	9.9%	8.6%	12.9%	3.8%	2.3%	4.0%	100%

To me, always using a seat belt feels: unnecessary: necessary

N	1	2	3	4	5	6	7	
572	11.2%	5.4%	5.6%	14.2%	6.1%	8.2%	49.3%	100%

To me, always using a seat belt feels: uncomfortable: comfortable

N	1	2	3	4	5	6	7	
578	21.6%	4.8%	7.8%	14.2%	8.7%	10.0%	32.9%	100%

How much do you agree or disagree with the following statements? - I believe it is important to protect myself by always using a seat belt.

N	Strongly disagree	Moderately Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	13.4%	8.3%	5.2%	10.2%	14.3%	10.7%	38.0%	100%

How much do you agree or disagree with the following statements? - I use a seat belt because I don't want to get a ticket.

N	Strongly disagree	Moderately Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	15.9%	4.5%	4.3%	12.4%	19.0%	15.7%	28.3%	100%

How much do you agree or disagree with the following statements? - I use a seat belt because I want to set a good example for my children.

N	Strongly disagree	Moderately Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	12.9%	5.7%	3.6%	16.2%	10.7%	15.5%	35.5%	100%

How much do you agree or disagree with the following statements? - People are less likely to be seriously injured or killed if they always use their seat belt.

N	Strongly disagree	Moderately Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	9.3%	5.5%	5.9%	11.6%	13.6%	15.7%	38.4%	100%

How much do you agree or disagree with the following statements? - I believe local law enforcement should enforce seat belt laws.

N	Strongly disagree	Moderately Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	15.3%	7.4%	7.1%	13.3%	11.6%	14.1%	31.2%	100%

How much do you agree or disagree with the following statements? - It is a driver's responsibility to comply with traffic laws.

N	Strongly disagree	Moderately Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	4.5%	4.8%	2.2%	9.3%	15.0%	16.2%	47.9%	100%

How much do you agree or disagree: "People who care about me want me to always use a seat belt"?

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	6.9%	2.4%	3.1%	10.7%	12.9%	11.5%	52.5%	100%

Would most people important to you feel it was acceptable or unacceptable if you did NOT use your seat belt?

N	Extremely acceptable	Moderately acceptable	Somewhat acceptable	Neutral	Somewhat unacceptable	Moderately unacceptable	Extremely unacceptable	
581	7.2%	6.0%	6.2%	18.4%	12.2%	13.4%	36.5%	100%

Would most people who are important to you approve or disapprove if you did NOT use a seat belt?

N	Strongly approve	Moderately approve	Somewhat approve	Neither approve nor disapprove	Somewhat disapprove	Moderately disapprove	Strongly disapprove	
577	5.2%	2.6%	6.6%	19.4%	11.4%	13.3%	41.4%	100%

In your opinion, would the following people feel it was acceptable or unacceptable if you did NOT use your seat belt?

- Your spouse or partner

N	Extremely acceptable	Moderately acceptable	Somewhat acceptable	Neutral	Somewhat unacceptable	Moderately unacceptable	Extremely unacceptable	Does not apply to me	
580	5.7%	3.6%	6.9%	19.0%	7.1%	9.5%	41.0%	7.2%	100%

In your opinion, would the following people feel it was acceptable or unacceptable if you did NOT use your seat belt?

- Your children

N	Extremely acceptable	Moderately acceptable	Somewhat acceptable	Neutral	Somewhat unacceptable	Moderately unacceptable	Extremely unacceptable	Does not apply to me	
580	4.7%	4.5%	4.0%	16.0%	6.6%	10.2%	46.6%	7.6%	100%

In your opinion, would the following people feel it was acceptable or unacceptable if you did NOT use your seat belt?

- Your friends

N	Extremely acceptable	Moderately acceptable	Somewhat acceptable	Neutral	Somewhat unacceptable	Moderately unacceptable	Extremely unacceptable	Does not apply to me	
581	5.5%	6.2%	7.6%	23.6%	11.7%	11.7%	32.5%	1.2%	100%

In your opinion, would the following people feel it was acceptable or unacceptable if you did NOT use your seat belt?  
 - Your coworkers

N	Extremely acceptable	Moderately acceptable	Somewhat acceptable	Neutral	Somewhat unacceptable	Moderately unacceptable	Extremely unacceptable	Does not apply to me	
580	4.1%	5.0%	6.7%	31.2%	8.1%	9.8%	27.8%	7.2%	100%

In your opinion, would the following people feel it was acceptable or unacceptable if you did NOT use your seat belt?  
 - Most adults in your community

N	Extremely acceptable	Moderately acceptable	Somewhat acceptable	Neutral	Somewhat unacceptable	Moderately unacceptable	Extremely unacceptable	Does not apply to me	
581	4.3%	6.2%	5.9%	26.7%	12.6%	12.6%	29.8%	2.1%	100%

In general, how often do most people like you use their seat belts?

N	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)	
580	5.0%	4.3%	3.3%	24.0%	14.3%	20.9%	28.3%	100%

How many people similar to you do you think always use their seat belt?

N	None (1)	(2)	(3)	About half (4)	(5)	(6)	All (7)	
581	5.7%	4.8%	5.2%	24.4%	12.9%	23.1%	23.9%	100%

How common do you think it is for people like yourself to always use their seat belt?

N	Not at all common (1)	(2)	(3)	Moderately common (4)	(5)	(6)	Extremely common (7)	
581	6.0%	5.3%	6.0%	22.5%	12.2%	16.9%	31.0%	100%

In your opinion, how often do the following people use their seat belts? - Your spouse or partner

N	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)	Does not apply to me	
580	8.3%	2.9%	2.2%	8.8%	4.5%	9.0%	43.6%	20.7%	100%

In your opinion, how often do the following people use their seat belts? - Your children

N	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)	Does not apply to me	
581	2.1%	0.9%	1.5%	7.2%	4.5%	6.7%	54.7%	22.4%	100%

In your opinion, how often do the following people use their seat belts? - Your friends

N	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)	Does not apply to me	
581	3.3%	1.4%	2.4%	23.1%	13.3%	16.4%	34.8%	5.5%	100%

In your opinion, how often do the following people use their seat belts? - Your coworkers

N	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)	Does not apply to me	
581	2.6%	1.9%	3.1%	18.4%	11.2%	14.6%	31.0%	17.2%	100%

In your opinion, how often do the following people use their seat belts? - Most adults in your community

N	Never (1)	(2)	(3)	About half the time (4)	(5)	(6)	Always (7)	Does not apply to me	
581	2.1%	1.4%	2.6%	21.2%	12.6%	23.4%	29.6%	7.2%	100%

How much do you agree or disagree: "I find it difficult to remember to always use a seat belt"?

N	Strongly agree	Moderately agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Moderately disagree	Strongly disagree	
581	12.7%	7.6%	12.2%	12.7%	6.5%	6.9%	41.3%	100%

If you wanted to, how easy or difficult would it be for you to always use a seat belt?

N	Extremely difficult	Moderately difficult	Somewhat difficult	Neither difficult nor easy	Somewhat easy	Moderately easy	Extremely easy	
581	6.2%	4.5%	6.5%	11.4%	11.0%	12.0%	48.4%	100%

How confident are you that you could always use a seat belt if you wanted to?

	Not at all confident			Moderately confident			Extremely confident	
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
581	5.9%	2.8%	3.6%	11.5%	6.9%	11.5%	57.8%	100%

"I am comfortable using my seat belt even if others in the vehicle are not."

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	9.6%	3.8%	5.0%	13.6%	9.3%	10.0%	48.7%	100%

"Even if I wanted to, I can't always use a seat belt because... - my vehicle does not have a seat belt that works."

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
579	66.5%	5.4%	4.1%	9.5%	5.4%	4.1%	5.0%	100%

"Even if I wanted to, I can't always use a seat belt because... - the seat belt does not fit me properly."

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
579	53.2%	5.5%	5.4%	12.3%	7.8%	7.3%	8.6%	100%

"Even if I wanted to, I can't always use a seat belt because... - I have to get in and out of the vehicle too much to wear a seat belt."

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	50.1%	5.7%	6.2%	11.7%	11.4%	7.6%	7.4%	100%

Do you have a family rule about always using a seat belt?

	no	yes	I don't know	I don't have a family	
N					
581	36.0%	51.8%	2.8%	9.5%	100%

Do you have a workplace rule about always using a seat belt?

	no	yes	I don't know	I don't have a workplace	
N					
581	48.5%	27.5%	5.7%	18.2%	100%

How much do you agree or disagree with the following statements? - "Using a seat belt isn't necessary if you are a good driver."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	50.9%	10.2%	8.6%	13.1%	5.5%	6.0%	5.7%	100%

How much do you agree or disagree with the following statements? - "It's ok to not use a seat belt if you are in a hurry to get somewhere and forget to buckle up."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	49.1%	10.0%	7.6%	14.0%	8.1%	5.2%	6.0%	100%

How much do you agree or disagree with the following statements? - "My heroes don't use seat belts."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	51.6%	7.9%	6.0%	22.2%	3.3%	4.8%	4.1%	100%

How much do you agree or disagree with the following statements? - "Not using a seat belt is just a way of letting the government know they aren't in control."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	50.9%	9.3%	6.9%	16.2%	7.1%	5.7%	4.0%	100%

How much do you agree or disagree with the following statements? - "I might not use a seat belt, but at least I don't text and drive."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	38.0%	7.1%	5.2%	14.5%	9.0%	8.8%	17.6%	100%

How much do you agree or disagree with the following statements? - "Not using a seat belt is no big deal when you consider that others are choosing more dangerous behaviors like drinking and driving."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	44.6%	9.6%	6.7%	12.0%	9.6%	7.4%	10.0%	100%

How much do you agree or disagree with the following statements? - "You can't blame me for not using a seat belt; I have more important things to worry about."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	48.4%	9.8%	7.2%	16.4%	6.9%	5.5%	5.9%	100%

How much do you agree or disagree with the following statements? - "My friends/family don't use seat belts; why should I?"

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	50.7%	10.0%	9.1%	15.7%	5.2%	4.3%	5.0%	100%

How much do you agree or disagree with the following statements? - "I am not going to use a seat belt because others in the vehicle aren't either."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	51.6%	10.0%	9.1%	15.7%	5.9%	3.8%	4.0%	100%

How much do you agree or disagree with the following statements? - "I don't need to use a seat belt because vehicles are so much safer today."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	49.7%	10.8%	7.2%	16.4%	6.5%	4.5%	4.8%	100%

How much do you agree or disagree with the following statements? - "Not use my seat belt is okay because it doesn't impact anyone else."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	44.4%	8.6%	8.1%	13.8%	6.7%	7.2%	11.2%	100%

How much do you agree or disagree with the following statements? - "We didn't have to use seat belts when I was young, and we turned out just fine."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	36.8%	7.2%	6.5%	16.5%	12.2%	9.5%	11.2%	100%

How much do you agree or disagree with the following statements? - "If kids don't use a seat belt, it is their parents' fault."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	15.0%	3.1%	3.8%	9.1%	13.4%	14.0%	41.6%	100%

How much do you agree or disagree with the following statements? - "If other people knew how to drive, people would not need to use a seat belt to protect themselves."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	43.5%	8.3%	9.3%	14.3%	9.8%	9.0%	5.9%	100%

How much do you agree or disagree with the following statements? - "Telling people they have to use a seat belt is acting like people are stupid."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	40.4%	8.6%	9.1%	18.4%	8.8%	6.9%	7.7%	100%

How much do you agree or disagree with the following statements? - "Making someone use a seat belt is treating them like less than a person."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	50.3%	8.6%	8.3%	14.3%	6.9%	4.6%	7.1%	100%

How much do you agree or disagree? - The message threatened my freedom to choose

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	42.7%	9.1%	8.4%	13.6%	10.3%	4.0%	11.9%	100%

How much do you agree or disagree? - The message tried to make a decision for me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	36.5%	11.7%	10.0%	15.0%	13.4%	5.3%	8.1%	100%

How much do you agree or disagree? - The message tried to manipulate me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
580	38.3%	11.9%	9.0%	17.2%	11.6%	6.0%	6.0%	100%

How much do you agree or disagree? - The message tried to pressure me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
581	39.4%	10.5%	10.0%	15.3%	12.7%	4.3%	7.7%	100%

To what extent did the message that you just read make you feel...? - Angry

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
579	62.3%	5.0%	6.9%	13.0%	2.9%	4.0%	5.9%	100%

To what extent did the message that you just read make you feel...? - Irritated

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
579	60.6%	7.3%	6.6%	11.2%	6.0%	3.5%	4.8%	100%

To what extent did the message that you just read make you feel...? - Annoyed

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
579	58.2%	8.1%	5.9%	11.6%	6.4%	5.4%	4.5%	100%

To what extent did the message that you just read make you feel...? - Aggravated

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
578	61.4%	8.5%	6.1%	9.7%	6.4%	4.0%	4.0%	100%

How much do you agree or disagree? - The message is a reason for using a seat belt that is believable.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	3.6%	2.4%	19.8%	32.0%	42.2%	100%

How much do you agree or disagree? - The message is a reason for using a seat belt that is convincing.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	3.6%	5.3%	20.8%	32.4%	37.9%	100%

How much do you agree or disagree? - The message gives a reason for using a seat belt that is important to me.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	4.0%	5.0%	23.1%	26.5%	41.5%	100%

How much do you agree or disagree? - The message helped me feel confident about how best to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	5.3%	8.4%	26.0%	26.5%	33.7%	100%

How much do you agree or disagree? - The message would help my friends to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	4.5%	7.9%	28.9%	26.2%	32.5%	100%

How much do you agree or disagree? - The message put thoughts in my mind about wanting to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	6.2%	7.1%	22.5%	29.3%	34.9%	100%

How much do you agree or disagree? - The message put thoughts in my mind about not wanting to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	29.4%	13.6%	21.0%	17.7%	18.2%	100%

How much do you agree or disagree? - Overall, how much do you agree or disagree with the message?

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	2.6%	5.0%	21.9%	28.2%	42.3%	100%

How much do you agree or disagree? - The message threatened my freedom to choose

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	39.4%	8.1%	9.0%	15.1%	12.0%	6.2%	10.2%	100%

How much do you agree or disagree? - The message tried to make a decision for me

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
581	35.1%	8.4%	8.8%	16.5%	14.1%	8.6%	8.4%	100%

How much do you agree or disagree? - The message tried to manipulate me

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
580	36.4%	7.9%	8.1%	15.9%	16.9%	6.6%	8.3%	100%

How much do you agree or disagree? - The message tried to pressure me

	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
N								
580	36.4%	7.1%	6.6%	14.7%	17.9%	7.6%	9.8%	100%

To what extent did the message that you just read make you feel...? - Angry

	None of this feeling			Moderately			A great deal of this feeling		
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
580	55.5%	7.8%	5.9%	15.0%	4.5%	4.7%	6.7%		100%

To what extent did the message that you just read make you feel...? - Irritated

	None of this feeling			Moderately			A great deal of this feeling		
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
581	52.3%	6.9%	6.5%	14.5%	8.4%	5.7%	5.7%		100%

To what extent did the message that you just read make you feel...? - Annoyed

	None of this feeling			Moderately			A great deal of this feeling		
N	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
581	49.6%	7.6%	6.4%	16.4%	7.2%	7.4%	5.5%		100%

To what extent did the message that you just read make you feel...? - Aggravated

N	None of this feeling			Moderately			A great deal of this feeling		100%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
580	53.8%	6.7%	6.4%	13.4%	7.2%	6.0%	6.4%		

How much do you agree or disagree? - The message is a reason for using a seat belt that is believable.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	100%
581	6.7%	6.0%	21.7%	28.6%	37.0%	

How much do you agree or disagree? - The message is a reason for using a seat belt that is convincing.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	100%
581	6.5%	9.1%	21.5%	28.1%	34.8%	

How much do you agree or disagree? - The message gives a reason for using a seat belt that is important to me.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	100%
579	7.8%	9.5%	23.8%	25.4%	33.5%	

How much do you agree or disagree? - The message helped me feel confident about how best to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	100%
581	8.1%	9.3%	27.9%	25.6%	29.1%	

How much do you agree or disagree? - The message would help my friends to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	100%
581	6.9%	9.1%	30.8%	24.1%	29.1%	

How much do you agree or disagree? - The message put thoughts in my mind about wanting to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	100%
580	9.3%	9.0%	26.0%	27.2%	28.4%	

How much do you agree or disagree? - The message put thoughts in my mind about not wanting to use a seat belt.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
581	22.5%	12.0%	25.6%	20.0%	19.8%	100%

How much do you agree or disagree? - Overall, how much do you agree or disagree with the message?

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
580	6.9%	9.5%	21.6%	26.9%	35.2%	100%

What is the highest level of school you have completed or the highest degree you have received?

	Less than high school degree	High school graduate (high school diploma or equivalent including GED)	Some college but no degree	Associate degree in college (2-year)	Bachelor's degree in college (4-year)	Master's degree	Doctoral degree	Professional degree (JD, MD)	I prefer not to answer	
N	3.3%	24.3%	24.3%	12.7%	25.6%	6.5%	1.0%	1.9%	0.3%	100%
581										

What best describes where you live?

N	Urban (population of 50,000 or more)	Suburban (population between 2,500 and 50,000)	Rural	
576	30.2%	47.7%	22.0%	100%

Are you Spanish, Hispanic, or Latino or none of these?

N	None of these	Yes	I prefer not to answer	
581	89.5%	9.8%	0.7%	100%

What is your annual household income from all sources?

N	Less than \$25,000	\$25,000 to less than \$35,000	\$35,000 to less than \$50,000	\$50,000 to less than \$75,000	\$75,000 or more	I prefer not to answer	
581	18.6%	15.0%	16.7%	21.7%	25.5%	2.6%	100%

## 7.4 Relative Frequency Report of Aggressive Driving Survey Results

In a typical month, how often do you operate a vehicle?

N	Most days	Daily	100.0%
750	32.9%	67.1%	

How often do you drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	100.0%
750	15.6%	24.8%	7.9%	8.1%	4.3%	18.3%	21.1%	

What is your sex?

N	male	female	other	I prefer not to answer	100.0%
750	49.2%	49.3%	0.8%	0.7%	

In the past year, how many vehicle crashes (even minor ones) have you been involved in that were NOT your fault?

N	None	1	2	3	4	5	6 or more	100.0%
749	81.4%	12.8%	2.9%	1.7%	0.3%	0.4%	0.4%	

In the past year, how many vehicle crashes (even minor ones) have you been involved in that you had some fault?

N	None	1	2	3	4	5	6 or more	100.0%
749	86.6%	9.5%	1.9%	0.8%	0.5%	0.3%	0.4%	

In the past year, how many citations, tickets, or summons have you received for speeding?

N	None	1	2	3	4	5	6 or more	100.0%
750	84.1%	9.3%	4.0%	1.2%	0.7%	0.3%	0.4%	

How much do you agree or disagree with each statement? - I become frustrated when I am unable to make free and independent decisions.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	100.0%
750	8.3%	4.8%	6.4%	13.7%	32.8%	18.3%	15.7%	

How much do you agree or disagree with each statement? - I become angry when my freedom of choice is restricted.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	100.0%
750	7.1%	4.8%	7.1%	12.4%	28.7%	19.5%	20.5%	

How much do you agree or disagree with each statement? - It irritates me when someone points out things that are obvious to me.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
749	7.3%	6.0%	9.5%	22.4%	26.6%	16.3%	11.9%	100.0%

How much do you agree or disagree with each statement? - The thought of being dependent on others aggravates me.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	6.5%	4.3%	9.2%	15.5%	27.6%	20.4%	16.5%	100.0%

How much do you agree or disagree with each statement? - Regulations trigger a sense of resistance in me.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	13.2%	10.4%	15.9%	28.5%	16.7%	8.6%	6.7%	100.0%

How much do you agree or disagree with each statement? - I find contradicting others stimulating.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	23.2%	14.7%	14.9%	23.7%	10.8%	8.4%	4.3%	100.0%

How much do you agree or disagree with each statement? - When something is prohibited, I usually think "that's exactly what I am going to do."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	31.1%	14.4%	14.2%	17.1%	11.0%	6.7%	5.5%	100.0%

How much do you agree or disagree with each statement? - I resist the attempts of others to influence me.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	8.0%	5.9%	9.6%	24.5%	23.4%	15.0%	13.6%	100.0%

How much do you agree or disagree with each statement? - It makes me angry when another person is held up as a model for me to follow.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	12.3%	8.7%	13.2%	27.3%	19.3%	10.8%	8.4%	100.0%

How much do you agree or disagree with each statement? - When someone forces me to do something, I feel like doing the opposite.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	13.8%	7.8%	13.4%	21.3%	21.4%	11.6%	10.8%	100.0%

How much do you agree or disagree with each statement? - It disappoints me to see others submitting to society's standards and rules.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	18.6%	11.1%	12.0%	23.9%	17.5%	9.0%	7.9%	100.0%

How much do you agree or disagree with each statement? - I am content only when I am acting of my own free will.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	7.0%	5.5%	9.4%	22.9%	26.7%	15.2%	13.4%	100.0%

How much do you agree or disagree with each statement? - I consider advice from others to be an intrusion.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
746	19.8%	16.8%	20.1%	20.1%	11.5%	6.4%	5.2%	100.0%

How much do you agree or disagree with each statement? - Advice and recommendations induce me to do just the opposite.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	25.0%	16.3%	16.7%	21.3%	9.8%	6.3%	4.7%	100.0%

How much do you agree or disagree with the following statements? - I am very concerned about safety on our roads and highways.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	2.8%	1.5%	4.4%	6.5%	20.0%	19.5%	45.3%	100.0%

How much do you agree or disagree with the following statements? - I believe the only acceptable number of deaths and serious injuries on our roadways is zero.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	5.5%	3.3%	5.5%	13.2%	12.9%	15.5%	44.1%	100.0%

How much do you agree or disagree with the following statements? - I believe the only acceptable number of deaths and serious injuries among my family and friends on our roadways is zero.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	3.3%	2.4%	3.7%	10.7%	8.9%	9.5%	61.5%	100.0%

When driving, how often do you ... - pass a vehicle that is going about the posted speed limit?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always	
750	19.7%	28.4%	14.9%	14.0%	9.6%	6.0%	7.3%	100.0%

When driving, how often do you ... - drive so close to the vehicle in front that it would be difficult to stop in an emergency?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always	
749	55.4%	21.9%	6.5%	5.5%	2.7%	2.9%	5.1%	100.0%

When driving, how often do you ... - drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always	
750	29.1%	26.7%	13.2%	9.3%	7.6%	6.5%	7.6%	100.0%

When driving, how often do you ... - drive more than 10 mph over the speed limit on roads with speed limits between 55 mph and 65 mph?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always	
750	26.4%	22.8%	13.6%	10.5%	10.7%	7.7%	8.3%	100.0%

Thinking of the next week, how often will you... - pass a vehicle that is going about the posted speed limit?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always	
749	32.6%	25.9%	12.6%	9.3%	6.5%	5.7%	7.3%	100.0%

Thinking of the next week, how often will you... - drive so close to the vehicle in front that it would be difficult to stop in an emergency?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always		
749	62.8%	16.0%	4.8%	5.5%	2.9%	3.2%	4.8%	100.0%	

Thinking of the next week, how often will you... - drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always		
749	36.2%	26.3%	9.5%	8.1%	7.9%	5.2%	6.8%	100.0%	

Thinking of the next week, how often will you... - drive more than 10 mph over the speed limit on roads with speed limits between 55 mph and 65 mph?

N	Never	Rarely (about 15% of the time)	Occasionally (about 30% of the time)	Sometimes (about half the time)	Frequently (about 70% of the time)	Usually (about 85% of the time)	Always		
749	33.4%	23.9%	11.2%	7.6%	8.9%	7.1%	7.9%	100.0%	

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to pass a vehicle that is going about the posted speed limit? - There is very little traffic (few vehicles on the road)

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)		
750	26.0%	13.2%	8.0%	21.6%	8.1%	7.7%	15.3%	100.0%	

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to pass a vehicle that is going about the posted speed limit? - There is a lot of traffic (many vehicles on the road)

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)		
750	47.6%	14.1%	9.5%	12.5%	5.9%	4.3%	6.1%	100.0%	

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to pass a vehicle that is going about the posted speed limit? - You are late, and others are expecting you at home

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)		
749	28.7%	15.2%	12.3%	17.2%	9.3%	7.7%	9.5%	100.0%	

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to pass a vehicle that is going about the posted speed limit? - It is raining pretty hard

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)	
749	57.0%	13.6%	6.9%	8.1%	4.5%	3.9%	5.9%	100.0%

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to pass a vehicle that is going about the posted speed limit? - There are others in the vehicle with you

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)	
749	45.4%	13.4%	11.7%	12.1%	6.7%	3.5%	7.2%	100.0%

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to drive more than 10 mph over the posted speed limit? - There is very little traffic (few vehicles on the road)

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)	
749	28.4%	13.1%	9.9%	17.5%	8.3%	9.3%	13.5%	100.0%

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to drive more than 10 mph over the posted speed limit? - There is a lot of traffic (many vehicles on the road)

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)	
749	46.9%	14.4%	10.9%	11.9%	5.7%	4.5%	5.6%	100.0%

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to drive more than 10 mph over the posted speed limit? - You are late, and others are expecting you at home

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)	
749	34.8%	15.5%	10.3%	16.8%	8.4%	5.5%	8.7%	100.0%

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to drive more than 10 mph over the posted speed limit? - It is raining pretty hard

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)	
747	57.2%	13.7%	7.8%	7.6%	4.0%	3.5%	6.3%	100.0%

Suppose you are about 10 miles from your home, and you are driving home. In each of the following situations, how willing would you be to drive more than 10 mph over the posted speed limit? - There are others in the vehicle with you

N	Not at all willing (1)	(2)	(3)	Moderately willing (4)	(5)	(6)	Very willing (7)	
749	47.5%	15.6%	9.5%	10.7%	5.9%	4.1%	6.7%	100.0%

For me, passing a vehicle which is driving about the posted speed limit feels: useful: useless

N	1	2	3	4	5	6	7	
734	16.1%	8.3%	13.4%	18.0%	7.8%	9.0%	27.5%	100.0%

For me, passing a vehicle which is driving about the posted speed limit feels: dangerous: safe

N	1	2	3	4	5	6	7	
731	26.4%	11.9%	13.0%	20.4%	9.7%	7.9%	10.7%	100.0%

For me, passing a vehicle which is driving about the posted speed limit feels: foolish: smart

N	1	2	3	4	5	6	7	
733	28.5%	10.6%	13.2%	21.8%	9.4%	5.7%	10.6%	100.0%

For me, passing a vehicle which is driving about the posted speed limit feels: efficient: wasteful

N	1	2	3	4	5	6	7	
736	11.4%	9.6%	14.1%	19.2%	9.6%	10.6%	25.4%	100.0%

For me, passing a vehicle which is driving about the posted speed limit feels: exciting: not at all exciting

N	1	2	3	4	5	6	7	
731	10.1%	4.9%	7.5%	22.2%	9.6%	10.7%	35.0%	100.0%

For me, passing a vehicle which is driving about the posted speed limit feels: harmful: beneficial

N	1	2	3	4	5	6	7	
730	26.0%	10.0%	11.2%	22.3%	12.6%	7.8%	10.0%	100.0%

For me, driving so close to the vehicle in front that it might be difficult to stop in an emergency feels: useful: useless

N	1	2	3	4	5	6	7	
730	9.3%	1.9%	2.5%	7.5%	6.6%	10.7%	61.5%	100.0%

For me, driving so close to the vehicle in front that it might be difficult to stop in an emergency feels: dangerous: safe

N	1	2	3	4	5	6	7	
739	65.5%	10.7%	4.9%	6.9%	2.6%	2.4%	7.0%	100.0%

For me, driving so close to the vehicle in front that it might be difficult to stop in an emergency feels:  
foolish: smart

N	1	2	3	4	5	6	7	
735	63.5%	11.8%	6.5%	6.9%	2.9%	1.6%	6.7%	100.0%

For me, driving so close to the vehicle in front that it might be difficult to stop in an emergency feels:  
efficient: wasteful

N	1	2	3	4	5	6	7	
726	5.8%	2.6%	3.3%	11.6%	7.7%	13.2%	55.8%	100.0%

For me, driving so close to the vehicle in front that it might be difficult to stop in an emergency feels:  
exciting: not at all exciting

N	1	2	3	4	5	6	7	
729	6.0%	2.3%	4.4%	10.0%	7.1%	10.3%	59.8%	100.0%

For me, driving so close to the vehicle in front that it might be difficult to stop in an emergency feels:  
harmful: beneficial

N	1	2	3	4	5	6	7	
734	62.4%	12.4%	6.0%	7.4%	3.1%	2.5%	6.3%	100.0%

For me, driving more than 10 mph over the posted speed limit feels: useful: useless

N	1	2	3	4	5	6	7	
731	13.3%	7.7%	16.7%	19.0%	7.4%	7.8%	28.2%	100.0%

For me, driving more than 10 mph over the posted speed limit feels: dangerous: safe

N	1	2	3	4	5	6	7	
735	28.8%	8.7%	12.8%	21.8%	13.5%	6.0%	8.4%	100.0%

For me, driving more than 10 mph over the posted speed limit feels: foolish: smart

N	1	2	3	4	5	6	7	
733	30.7%	7.1%	11.7%	27.1%	10.0%	4.9%	8.5%	100.0%

For me, driving more than 10 mph over the posted speed limit feels: efficient: wasteful

N	1	2	3	4	5	6	7	
734	10.9%	8.7%	15.7%	19.2%	9.4%	9.3%	26.8%	100.0%

For me, driving more than 10 mph over the posted speed limit feels: exciting: not at all exciting

N	1	2	3	4	5	6	7	
730	8.8%	5.5%	10.0%	23.2%	9.0%	9.7%	33.8%	100.0%

For me, driving more than 10 mph over the posted speed limit feels: harmful: beneficial

N	1	2	3	4	5	6	7	
731	29.1%	7.5%	9.2%	24.2%	13.3%	7.7%	9.0%	100.0%

How much do you agree or disagree with the following statements? - Driving the posted speed limit makes our roads safer.

N	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
749	2.1%	2.5%	5.6%	11.2%	18.8%	25.4%	34.3%	100.0%

How much do you agree or disagree with the following statements? - Passing a vehicle that is driving about the posted speed limit saves time.

N	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
750	14.9%	10.8%	10.0%	22.0%	20.5%	12.8%	8.9%	100.0%

How much do you agree or disagree with the following statements? - If I drive more than 10 mph over the posted speed limit, I am likely to get a speeding ticket.

N	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
749	3.3%	2.4%	8.5%	15.1%	20.2%	21.8%	28.7%	100.0%

How much do you agree or disagree with the following statements? - Driving closely to the vehicle in front of me is likely to make that driver speed up.

N	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
749	28.7%	19.6%	10.3%	14.3%	10.8%	8.9%	7.3%	100.0%

How much do you agree or disagree with the following statements? - Driving closely to the vehicle in front of me will upset the driver of that vehicle.

N	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
748	1.9%	1.1%	2.1%	10.2%	24.1%	27.8%	32.9%	100.0%

How much do you agree or disagree with the following statements? - I believe local law enforcement should enforce speed limit laws.

N	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
750	2.9%	1.9%	5.5%	15.3%	19.9%	25.6%	28.9%	100.0%

How much do you agree or disagree with the following statements? - It is a driver's responsibility to comply with traffic laws.

N	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	
750	1.3%	0.1%	0.8%	5.3%	13.7%	25.7%	52.9%	100.0%

In your opinion, how acceptable would most people who are important to you feel it is to... - pass a vehicle that is going about the posted speed limit?

N	Not at all acceptable (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely acceptable (7)	
749	21.0%	8.9%	7.3%	26.2%	14.6%	8.9%	13.1%	100.0%

In your opinion, how acceptable would most people who are important to you feel it is to... - drive so close to the vehicle in front that it would be difficult to stop in an emergency?

N	Not at all acceptable (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely acceptable (7)	
750	50.5%	13.3%	8.8%	10.8%	5.5%	4.3%	6.8%	100.0%

In your opinion, how acceptable would most people who are important to you feel it is to... - drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?

N	Not at all acceptable (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely acceptable (7)	
750	28.7%	12.7%	8.8%	20.3%	12.4%	7.9%	9.3%	100.0%

In your opinion, how acceptable or unacceptable would the following people feel it was for you to do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your spouse or partner

N	Extremely unacceptable	Moderately unacceptable	Somewhat unacceptable	Neutral	Somewhat acceptable	Moderately acceptable	Extremely acceptable	Does not apply to me	
750	28.8%	11.7%	9.1%	15.3%	8.0%	6.4%	10.1%	10.5%	100.0%

In your opinion, how acceptable or unacceptable would the following people feel it was for you to do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your children

N	Extremely unacceptable	Moderately unacceptable	Somewhat unacceptable	Neutral	Somewhat acceptable	Moderately acceptable	Extremely acceptable	Does not apply to me	
750	33.7%	10.9%	10.0%	16.8%	5.6%	6.0%	6.7%	10.3%	100.0%

In your opinion, how acceptable or unacceptable would the following people feel it was for you to do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your friends

N	Extremely unacceptable	Moderately unacceptable	Somewhat unacceptable	Neutral	Somewhat acceptable	Moderately acceptable	Extremely acceptable	Does not apply to me	
750	24.8%	11.7%	9.6%	21.6%	13.5%	7.9%	9.3%	1.6%	100.0%

In your opinion, how acceptable or unacceptable would the following people feel it was for you to do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your coworkers

N	Extremely unacceptable	Moderately unacceptable	Somewhat unacceptable	Neutral	Somewhat acceptable	Moderately acceptable	Extremely acceptable	Does not apply to me	
750	23.5%	10.1%	8.1%	24.7%	10.3%	8.3%	6.9%	8.1%	100.0%

In your opinion, how acceptable or unacceptable would the following people feel it was for you to do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Most adults in your community

N	Extremely unacceptable	Moderately unacceptable	Somewhat unacceptable	Neutral	Somewhat acceptable	Moderately acceptable	Extremely acceptable	Does not apply to me	
749	26.7%	12.6%	12.0%	19.8%	12.8%	7.5%	7.6%	1.1%	100.0%

In your opinion, how often do most people like you... - pass a vehicle that is driving about the posted speed limit?

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
750	11.5%	18.5%	18.4%	18.5%	16.9%	8.8%	7.3%	100.0%

In your opinion, how often do most people like you... - drive so close to the vehicle in front that it would be difficult to stop in an emergency?

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
750	25.7%	21.6%	16.4%	15.1%	11.2%	4.3%	5.7%	100.0%

In your opinion, how often do most people like you... - speed on roads with speed limits between 35 mph and 50 mph?

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
750	14.1%	19.3%	15.6%	16.4%	18.3%	9.2%	7.1%	100.0%

In your opinion, how often do the following people do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your spouse or partner

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
749	38.3%	18.0%	11.5%	12.3%	7.7%	5.6%	6.5%	100.0%

In your opinion, how often do the following people do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your children

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
749	47.3%	17.2%	10.0%	10.4%	6.0%	4.1%	4.9%	100.0%

In your opinion, how often do the following people do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your friends

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
749	20.4%	20.4%	18.8%	17.0%	11.7%	5.5%	6.1%	100.0%

In your opinion, how often do the following people do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Your coworkers

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
749	23.9%	19.2%	15.4%	19.9%	11.2%	6.1%	4.3%	100.0%

In your opinion, how often do the following people do things like pass vehicles going about the posted speed limit, follow vehicles very closely, and drive more than 10 mph over the posted speed limit? - Most adults in your community

N	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always	
748	16.7%	18.2%	17.9%	20.1%	14.6%	7.1%	5.5%	100.0%

How EASY or DIFFICULT is it for you to... - NOT pass a vehicle that is driving about the posted speed limit?

N	Very easy	Easy	Somewhat easy	Neither	Somewhat difficult	Difficult	Very difficult	
750	34.7%	17.2%	15.2%	13.2%	11.3%	4.4%	4.0%	100.0%

How EASY or DIFFICULT is it for you to... - NOT drive so close to the vehicle in front that it would be difficult to stop in an emergency?

N	Very easy	Easy	Somewhat easy	Neither	Somewhat difficult	Difficult	Very difficult	
750	55.1%	14.9%	8.3%	10.1%	4.7%	3.6%	3.3%	100.0%

How EASY or DIFFICULT is it for you to... - NOT drive more than 10 mph over the speed limit on roads with speed limits between 35 mph and 50 mph?

N	Very easy	Easy	Somewhat easy	Neither	Somewhat difficult	Difficult	Very difficult	
750	36.5%	17.6%	14.1%	11.1%	13.1%	3.5%	4.1%	100.0%

In general, how likely are you to find yourself driving in the following situations? - Being late to pick up someone (like children or other family members)

N	Extremely unlikely	Unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Likely	Extremely likely	
749	22.3%	16.7%	13.1%	13.6%	18.0%	8.1%	8.1%	100.0%

In general, how likely are you to find yourself driving in the following situations? - Being late to an appointment, school, or work

N	Extremely unlikely	Unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Likely	Extremely likely	
750	22.0%	16.9%	13.1%	14.1%	17.1%	9.6%	7.2%	100.0%

In general, how likely are you to find yourself driving in the following situations? - Feeling frustrated by traffic

N	Extremely unlikely	Unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Likely	Extremely likely	
747	10.7%	9.8%	9.0%	12.9%	27.2%	16.2%	14.3%	100.0%

In general, how likely are you to find yourself driving in the following situations? - Feeling frustrated by other drivers

N	Extremely unlikely	Unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Likely	Extremely likely	
747	8.8%	7.6%	8.4%	13.1%	27.3%	16.3%	18.3%	100.0%

In general, how likely are you to find yourself driving in the following situations? - Just feeling angry

N	Extremely unlikely	Unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Likely	Extremely likely	
744	19.9%	18.3%	14.2%	20.6%	12.4%	7.7%	7.0%	100.0%

Do you have a family rule about not speeding?

N	No	Yes	I don't know	I don't have a family	
750	49.2%	38.3%	5.1%	7.5%	100.0%

Do you have a workplace rule about not speeding?

N	No	Yes	I don't know	I don't have a workplace	
749	51.4%	21.8%	5.6%	21.2%	100.0%

How much do you agree or disagree with each statement? - It's ok to tailgate if it gets people to realize they are doing the wrong thing.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
747	51.1%	13.8%	10.6%	10.7%	6.2%	3.6%	4.0%	100.0%

How much do you agree or disagree with each statement? - It's ok to yell at other drivers who put the lives of your passengers at risk.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	26.4%	9.3%	10.5%	18.7%	16.3%	9.9%	8.9%	100.0%

How much do you agree or disagree with each statement? - Honking the horn loudly is just a way of letting off frustration.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	28.5%	10.5%	11.2%	16.1%	20.1%	6.5%	6.9%	100.0%

How much do you agree or disagree with each statement? - Following too closely or cutting someone off is just a way of teaching someone a lesson they need.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	57.1%	9.6%	8.9%	10.5%	6.0%	3.5%	4.4%	100.0%

How much do you agree or disagree with each statement? - Tailgating is no big deal when you consider other people are deliberately running red lights.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	53.7%	11.6%	9.6%	12.3%	4.9%	3.9%	4.0%	100.0%

How much do you agree or disagree with each statement? - Yelling at other drivers is pretty tame when compared to people that attack other drivers.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	27.2%	10.0%	9.9%	20.1%	17.9%	8.0%	6.9%	100.0%

How much do you agree or disagree with each statement? - Speeding a little over the limit is not too serious compared to those that speed a lot over the speed limit.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
749	16.0%	7.3%	8.9%	17.9%	27.8%	14.4%	7.6%	100.0%

How much do you agree or disagree with each statement? - If a driver is pushed into being rude to other drivers, they shouldn't be blamed for it.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	34.7%	13.3%	14.7%	20.1%	7.1%	5.6%	4.5%	100.0%

How much do you agree or disagree with each statement? - People can't be blamed for intimidating another driver if their friend pressured them into it.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	50.3%	11.5%	11.7%	12.8%	6.1%	4.1%	3.5%	100.0%

How much do you agree or disagree with each statement? - You can't blame a single driver for going through a yellow light if a whole group does it.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	29.6%	12.7%	13.9%	18.8%	13.9%	6.0%	5.2%	100.0%

How much do you agree or disagree with each statement? - It's ok to go over the speed limit if it means you are keeping up with the rest of the traffic.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
749	16.4%	8.3%	8.8%	18.3%	26.8%	13.5%	7.9%	100.0%

How much do you agree or disagree with each statement? - Drivers don't mind being honked at because they know it just means "hurry up."

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
749	38.1%	14.7%	15.2%	17.4%	7.7%	3.2%	3.7%	100.0%

How much do you agree or disagree with each statement? - Flashing headlights to get someone to move over doesn't really hurt anyone.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	27.3%	12.7%	15.4%	17.9%	14.0%	6.0%	6.7%	100.0%

How much do you agree or disagree with each statement? - Tailgating other vehicles when the traffic is heavy isn't really dangerous.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	51.6%	11.7%	9.5%	9.3%	6.9%	4.1%	6.8%	100.0%

How much do you agree or disagree with each statement? - If you are getting honked at while driving you probably deserve it.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
749	24.8%	11.1%	14.4%	23.0%	15.0%	6.5%	5.2%	100.0%

How much do you agree or disagree with each statement? - Overly cautious drivers who are tailgated deserve it because they are a risk to everyone on the road.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	36.9%	10.8%	11.5%	18.9%	9.7%	6.3%	5.9%	100.0%

How much do you agree or disagree with each statement? - People who don't know how to drive provoke bad driving in others.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	13.3%	7.1%	8.8%	19.6%	25.5%	12.3%	13.5%	100.0%

How much do you agree or disagree with each statement? - It's alright to abuse drivers who are behaving like jerks.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	44.3%	12.0%	9.8%	18.2%	7.2%	4.4%	4.1%	100.0%

How much do you agree or disagree with each statement? - A driver who is inconsiderate doesn't deserve to be treated like a normal person.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	28.3%	11.1%	12.6%	24.1%	13.6%	5.2%	5.1%	100.0%

How much do you agree or disagree with each statement? - Some drivers deserve to be treated like the idiots they are.

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	27.1%	8.5%	9.1%	21.3%	17.1%	8.3%	8.7%	100.0%

How much do you agree or disagree? - The message threatened my freedom to choose

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	41.8%	9.4%	8.0%	11.6%	8.7%	8.0%	12.4%	100.0%

How much do you agree or disagree? - The message tried to make a decision for me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	37.3%	8.8%	11.6%	19.0%	10.2%	7.2%	5.9%	100.0%

How much do you agree or disagree? - The message tried to manipulate me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
749	42.1%	10.9%	10.0%	17.5%	10.1%	5.9%	3.5%	100.0%

How much do you agree or disagree? - The message tried to pressure me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
750	43.6%	11.5%	11.5%	15.5%	8.8%	5.9%	3.3%	100.0%

To what extent did the message that you just read make you feel...? - Angry

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
749	68.1%	8.7%	4.9%	9.3%	2.4%	2.0%	4.5%	100.0%

To what extent did the message that you just read make you feel...? - Irritated

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
748	65.9%	9.5%	4.4%	9.5%	4.5%	3.1%	3.1%	100.0%

To what extent did the message that you just read make you feel...? - Annoyed

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
749	65.2%	8.5%	4.4%	10.0%	5.5%	4.0%	2.4%	100.0%

To what extent did the message that you just read make you feel...? - Aggravated

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
750	67.5%	7.7%	4.5%	9.6%	3.7%	3.6%	3.3%	100.0%

How much do you agree or disagree? - The message is a reason for not driving aggressively that is believable.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
749	4.4%	3.7%	22.7%	33.8%	35.4%	100.0%

How much do you agree or disagree? - The message is a reason for not driving aggressively that is convincing.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
749	3.5%	6.4%	23.0%	37.0%	30.2%	100.0%

How much do you agree or disagree? - The message gives a reason for not driving aggressively that is important to me.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
749	4.9%	5.6%	21.1%	33.5%	34.8%	100.0%

How much do you agree or disagree? - The message helped me feel confident about how best to not drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
749	4.0%	5.2%	26.8%	34.2%	29.8%	100.0%

How much do you agree or disagree? - The message would help my friends to not drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
748	4.9%	10.3%	31.7%	27.7%	25.4%	100.0%

How much do you agree or disagree? - The message put thoughts in my mind about wanting to not drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
749	4.4%	9.7%	23.9%	33.2%	28.7%	100.0%

How much do you agree or disagree? - The message put thoughts in my mind about wanting to drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
748	36.5%	16.6%	20.6%	13.9%	12.4%	100.0%

How much do you agree or disagree? - Overall, how much do you agree or disagree with the message?

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
749	2.8%	4.9%	19.5%	31.8%	41.0%	100.0%

How much do you agree or disagree? - The message threatened my freedom to choose

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
747	39.2%	8.7%	8.2%	13.4%	11.8%	6.8%	11.9%	100.0%

How much do you agree or disagree? - The message tried to make a decision for me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	37.4%	7.4%	8.0%	16.6%	15.4%	7.5%	7.8%	100.0%

How much do you agree or disagree? - The message tried to manipulate me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
747	39.2%	7.5%	9.8%	16.2%	13.8%	7.4%	6.2%	100.0%

How much do you agree or disagree? - The message tried to pressure me

N	Strongly disagree	Moderately disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Moderately agree	Strongly agree	
748	38.0%	7.5%	8.8%	15.5%	14.7%	8.3%	7.2%	100.0%

To what extent did the message that you just read make you feel...? - Angry

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
749	60.6%	7.6%	7.3%	11.6%	3.7%	3.9%	5.2%	100.0%

To what extent did the message that you just read make you feel...? - Irritated

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
749	57.3%	7.3%	6.9%	12.8%	5.5%	4.7%	5.5%	100.0%

To what extent did the message that you just read make you feel...? - Annoyed

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
749	56.1%	6.5%	7.6%	13.4%	6.3%	4.3%	5.9%	100.0%

To what extent did the message that you just read make you feel...? - Aggravated

N	None of this feeling (1)	(2)	(3)	Moderately (4)	(5)	(6)	A great deal of this feeling (7)	
748	60.6%	5.3%	8.6%	10.8%	5.5%	4.1%	5.1%	100.0%

How much do you agree or disagree? - The message is a reason for not driving aggressively that is believable.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
747	7.1%	6.0%	20.6%	31.9%	34.4%	100.0%

How much do you agree or disagree? - The message is a reason for not driving aggressively that is convincing.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
750	6.8%	9.7%	22.1%	29.2%	32.1%	100.0%

How much do you agree or disagree? - The message gives a reason for not driving aggressively that is important to me.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
750	6.4%	9.2%	23.7%	28.7%	32.0%	100.0%

How much do you agree or disagree? - The message helped me feel confident about how best to not drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
750	6.9%	10.0%	26.0%	29.1%	28.0%	100.0%

How much do you agree or disagree? - The message would help my friends to not drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
750	8.3%	11.2%	32.9%	22.7%	24.9%	100.0%

How much do you agree or disagree? - The message put thoughts in my mind about wanting to not drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
749	8.5%	9.2%	26.4%	28.8%	27.0%	100.0%

How much do you agree or disagree? - The message put thoughts in my mind about wanting to drive aggressively.

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
750	32.1%	15.1%	22.4%	15.5%	14.9%	100.0%

How much do you agree or disagree? - Overall, how much do you agree or disagree with the message?

N	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
750	6.0%	6.0%	22.5%	29.1%	36.4%	100.0%

What is the highest level of school you have completed or the highest degree you have received?

N	Less than high school degree	High school graduate (high school diploma or equivalent including GED)	Some college but no degree	Associate degree in college (2-year)	Bachelor's degree in college (4-year)	Master's degree	Doctoral degree	Professional degree (JD, MD)	I prefer not to answer	
750	2.3%	22.1%	22.8%	13.1%	22.9%	11.6%	1.7%	2.9%	0.5%	100.0%

What best describes where you live?

N	Urban (population of 50,000 or more)	Suburban (population between 2,500 and 50,000)	Rural (less than 2,500)	I prefer not to answer	
743	30.6%	45.9%	22.7%	0.8%	100.0%

Are you Spanish, Hispanic, or Latino or none of these?

N	None of these	Yes	I prefer not to answer	
749	89.5%	8.8%	1.7%	100.0%

What is your annual household income from all sources?

N	Less than \$25,000	\$25,000 to less than \$35,000	\$35,000 to less than \$50,000	\$50,000 to less than \$75,000	\$75,000 or more	I prefer not to answer	
750	15.5%	15.9%	15.6%	24.3%	25.7%	3.1%	100.0%