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PROCESSING OF TEXTING-WHILE-DRIVING NARRATIVES AND ATTRIBUTION OF RESPONSIBILITY TO THE PERPETRATOR: THE MODERATING EFFECT OF NEED TO BELIEVE IN A JUST WORLD, SITUATIONAL SIMILARITY AND THE MEDIATING EFFECT OF INTERNAL, EXTERNAL LOCUS OF CONTROL AND SYMPATHY

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PROCESSING OF TEXTING-WHILE-DRIVING NARRATIVES AND ATTRIBUTION OF RESPONSIBILITY TO THE PERPETRATOR: THE MODERATING EFFECT OF NEED TO BELIEVE IN A JUST WORLD, SITUATIONAL SIMILARITY AND THE MEDIATING EFFECT OF INTERNAL, EXTERNAL LOCUS OF CONTROL AND SYMPATHY

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Abstract

Texting while driving is a dangerous form of distracted driving that causes injuries and fatalities every year. Combined efforts, such as legislation, enforcement, social norms, and education, were recommended to aware people about the consequences of texting while driving. However, there was insufficient research on how participants perceived the awareness campaign narratives describing the adverse effects of the drivers involved in texting-while-driving crashes. Thus, this study aimed to examine the texting-while-driving narrative campaigns on participants' assignment of responsibility, punishment, attitudes, and driver traits to the responsible driver and behavioral intention not to text while driving. In addition, the study examined situational similarities between the participants and the perpetrator (and the victim) and the need to believe in a just world construct. A 2 (severity of outcome: severe vs. mild) x 2 (narrative types: endangering-self vs. endangering-others) x 2 (need to believe in a just world: high vs. low) x 2 (situational similarities with the perpetrator: high vs. low) x 2 (situational similarities with the victim: high vs. low) between-subject experimental design was conducted. The severity of the outcome directly affected assigning punishment to the perpetrator, having negative attitudes toward the perpetrator and positive attitudes toward the victim. Endangering-others narratives directly affected assigning responsibility, punishment, less positive driver traits to the perpetrator, and having positive attitudes toward the victim. In the severe accident outcome, low situational similarities with the perpetrator decreased audiences' behavioral intention to text while driving. The findings of this study will help design effective texting-while-driving campaigns. Theoretically, the findings of this study advance the application of defensive attribution theory (DAT), modified defensive attribution theory, the need to believe in a just world, and the rational decision stage model in a texting-while-driving scenario.

Chapter 1

Introduction and Overview

Background

Texting-while-driving is one of the dangerous distracted driving behaviors. By definition, distracted driving includes activities that take drivers' attention away from the road (NHTSA, 2018). For example, talking and texting on the phone, eating and drinking, talking to people sitting in the vehicle, doing unimportant things like fiddling on the entertainment and navigation systems are examples of distracted driving (NHTSA, 2018). During the daylight hours across America, approximately 481,000 drivers use cell phones while driving (FCC, n.d.). One-fifth to one-third of young adult drivers reported texting and driving (Lenhart, Ling, Campbell, & Purcell, 2010; Marist Poll, 2010). In addition, more than half of high school students stated that they text while driving (Olsen, Shults, & Eaton, 2013). Often, distraction-affected crashes centered on cell phone use and texting because significant numbers (1 out of every four car accidents) of accidents happen in the United States because of cell phones use (NHTSA, 2016).

Texting and other forms of distracted driving claimed 3,450 lives in the United States in 2016 (NHTSA, 2018). In the same year, distraction-affected crashes killed 562 non-occupants, such as pedestrians and bicyclists (NHTSA, 2018). Almost all people who use cell phones know it is dangerous to text while driving, but this awareness of danger is not associated with a decrease in the behavior (Atcheley et al., 2011; Dillow, Walsh, Spellman, & Quirk, 2015; Lennon et al., 2020; Westlake & Boyle, 2012). More than a quarter of texting drivers think they can do several things while driving (CBSNews, 2014). Forty-eight (48) states in the United States ban text messaging for drivers (Governors Highway Safety Association, GHSA, 2019), but the situation is not improving significantly. Hence, texting-while-driving becomes a vital

issue among policymakers, business people, industrialists, researchers, and the general public. Thus, it is still important to continue communication campaigns to help address this issue and promote awareness of distracted driving. The challenge of communication campaigns is to show drivers solutions to avert the threat and to adopt the recommended behaviors. The higher the threat and the more relevant the threat is, the more individuals believe that they are vulnerable to a severe threat, and they will then be motivated to think carefully about the recommended responses advocated by the message (Cismaru, 2014).

Processing of Texting-While-Driving Narratives

Texting-while-driving awareness campaigns highlight texting-while-driving accident severity by using statistics, presenting realistic death scenarios, or providing the survivors' testimonials (Cismaru, 2014). Many narratives focused on texting-while-driving drivers who met with a severe accident (endangering-self narrative). Other narratives focused on texting-while-driving drivers who severely injured other people (endangering-others narrative). For example, AT&T's "don't text while driving" campaign narrated the endangering-self story of 18-year-old Mariah West, who was texting while driving and had a severe accident. She sustained major head injuries and died eight days later in the hospital. The same campaign narrated the endangering-others story of 22-year-old Chandler Gerber, who was texting-while-driving and hit an Amish buggy. Three child passengers (5-year-old, 7-year-old, and 17 year old) were killed due to impact.

Upon observing an actual crash story depicted in a media message, people may experience different physical and psychological reactions (e.g., shock or fear), active thinking on what caused the crash, who or what was responsible for it, and whether the driver could have avoided the accident (DeJoy, 1990; Feigenson, 2000; Hirschberger, 2000; Stewart, 2005). Upon

observing a severe accident, observers' defensive mechanisms may activate, and observers try to separate themselves from the perpetrators by (a) blaming the responsible person and (b) by assuring themselves that if they were in the perpetrator's place, they would never make such careless mistakes (Walster, 1966). That means observers blame the driver (victim) if they perceive that the driver drives carelessly. The opposite of not attributing a severe accident to someone would explain that such events are entirely random or happen by chance and impossible to avoid (Stewart, 2005; Walster, 1966).

The just-world hypothesis (JWH) states that observers witnessing a severe accident attribute responsibility to the perpetrator/responsible driver to preserve the belief that the world is a just place and people tend to get what they deserve (Lerner & Miller, 1978). People believe that those who are unfortunate somehow deserve their fate, and for this reason, people are more inclined to derogate the sufferer (LaDoux, 1989). However, observers may not assign responsibility based on the severity of the accident outcome or through motivational biases as just world hypothesis suggested. Instead, observers' may assign responsibility by thinking about the factors that were in driver's control (internal locus of control) and the contribution of the factors that were outside the driver's control such as bad weather (external locus of control). This rational attribution process influences people's emotions (e.g., sympathy towards the victim) and subsequent behavioral responses (assigning punishment to the perpetrator). For example, observers may think a perpetrator is responsible if they perceive the accident is due to drivers' lack of effort (controllable accident). As a result, the observer will feel less/no sympathy for the perpetrator. Negative feelings will generate various adverse reactions (e.g., rejection or punishment) to the perpetrator (Herbert & Dunkel-Schetter, 1992; Graham et al., 1997; Hirschberger, 2002).

However, situational relevance (e.g., perceived similarity in the physical circumstances of the stimulus person and the observer) between the responsible driver (or victim) and the observer may change the assignment of responsibility (Shaver, 1970). For example, if observers found that texting-while-driving accident was situationally (observer also texted while driving) similar to them, they may feel motivated to attribute less responsibility to the perpetrator and more to chance (Berger, 1981; Shaver, 1970). In contrast, if the observer does not think of themselves situationally similar to the perpetrator, they attribute the accident responsibilities to the perpetrator and less to chance.

Gaps in Texting-While-Driving Research

Transportation safety research was often considered threat appeal/fear appeal in a campaign message to discourage drivers from texting while driving, drunk driving, and speeding and to adopt the recommended behaviors. (Hayashi, Foreman, Friedel, & Wirth, 2019) Threat appeals were found effective in eliciting fear. However, the relationship between threat appeal and the behavioral outcome was inconsistent (Hayashi et al., 2019). Moreover, message-invoked fear can result in both message acceptance and rejection (Kareklas & Muehling, 2014). Participants were more likely to accept the message when they thought they could reduce the threat presented in the advocated message campaign (Kareklas & Muehling, 2014). It is not enough to add threat appeal to the message. It is also essential to consider the audience's active thinking process on recognizing threats in the advocated message. Attribution theory is a good fit for this particular study as this theory explains the audience's causal reasoning upon witnessing an accident.

There was not much discussion on observers' emotional experience and its impacts on responsibility assignment and feelings toward the accident victim and the perpetrator. The

relationship between the accident's severity and sympathy toward the perpetrator/victim is still unknown. These two factors may influence observers' decisions on responsibility assignment. Focusing on the relationship between variables on the attribution process is necessary to conclude how observers attribute responsibility following watching a real accident story depicted in a mediated message.

The current study considered the seriousness of the texting-while-driving problem and the limited scholarly attention (especially in communication and journalism) on this topic. The literature on texting while driving mainly focused on the determinants that drove people to continue texting-while-driving. However, these studies were not enough to understand if the current texting-while-driving campaigns can educate people about the dangers of texting-while-driving and change people's texting-while-driving behavior. One way to do this is to learn how observers perceive an actual texting-while-driving accident narrative presented in a campaign.

The primary research questions addressed in this research were: does the severity of the accident outcome generate greater attribution of responsibility, more punishment, negative attitudes to the perpetrator/responsible driver, positive attitudes toward the victim, and lower behavioral intention to text while driving? What types of narratives (endangering-self or endangering-others) generate more attribution of responsibility, punishment, negative attitudes to the perpetrator/responsible driver, positive attitudes toward the victim, and lower behavioral intention to text-while-driving?

Thus, the current study had three aims: First, examining whether the severity of the accident outcome in a narrative texting-while-driving campaign leads an observer to assign greater responsibility, more punishment, less positive driver traits, and negative attitudes toward the perpetrator, positive attitudes toward the victim, and subsequently influence behavioral

intention not to text while driving. Second, examining whether the need to believe in a just world, situational similarity with the perpetrator and the victim had an impact on assigning responsibility, punishment, less positive driver traits, and negative attitudes to the perpetrator, showing positive attitudes toward the victim, and subsequently influence audiences behavioral intention not to text while driving. Finally, examining whether the severity of the accident outcome-based narratives generated internal locus of control, external locus of control, and sympathy towards the victim and to what extent those indirectly affect assigning responsibility, punishment, less positive driver traits, and negative attitudes to the perpetrator, positive attitudes toward the victim, and subsequently influence audiences' behavioral intention not to text while driving.

The dissertations will proceed as follows: Chapter 2 will review the relevant literature, theories, and hypotheses generated from the literature and theories. Chapter 3 will present the experimental design used to test the hypotheses and the methodology. Chapter 4 will present the results of the study. Chapter 5 will offer a discussion and implications of this research theory and practice.

Chapter 2

Literature Review

Texting-While-Driving Among Young Adults

Most young adults who own a cell phone use text messaging while driving (Harrison, 2011). Many incidents of recklessness happen due to texting-while-driving. Young adults who reported texting-while-driving also reported texting with passengers, including children riding with them in the vehicle (Harrison, 2011). Many reported driving dangerously above the speed limit and drifting into other traffic lanes while texting (Harrison, 2011). Many drivers argue via text messages while driving (Harrison, 2011). Current research on texting-while-driving focuses on the motivators that influence young adults' texting-while-driving behavior (Feldman, Greeson, Renna, & Robbins-Monteith, 2011; Nelson, Atchley & Little, 2009; Nemme & White, 2010; Walsh, White, & Young, 2009; White, Hyde, Walsh & Watson, 2010).

According to these studies, young adults perceive texting as instantaneous communication, and texting helps them connect with their peer group (Alton, 2017; Walsh et al., 2009). They also feel that responding quickly to a friend's message is the norm. If they do not respond fast, they will receive disapproval from peers/friends (Walsh et al., 2009; White et al., 2010). Subjective norms (Ajzen, 1991) and perceived behavioral control (Ajzen, 1991) determined young adults' texting-while-driving behavior. Perceived behavior control refers to how easy or difficult a person sees performing the recommended action (Ajzen, 1991; Nemme & White, 2010). These are some of the motivators that influence young adults to continue texting-while-driving.

Many young adults believe that texting-while-driving is dangerous, distracting, and should be illegal (Harrison, 2011). However, the same people are neutral in their opinions on

whether they would engage in the behavior despite knowing the dangerous consequences (Harrison, 2011). Similarly, young drivers acknowledge the hazards associated with this behavior, but most admit that they text while driving on at least a few occasions (Harrison, 2011).

Some studies focused on the measures that can effectively prevent texting-while-driving. Punishment of safety violations, such as legal bans, taking legal actions (arrests, ticketing, or fining), is often suggested as an effective prevention measure (Harrison, 2011; Lennon, Rentfro, & O'Leary, 2010; Lobb et al., 2003). Punishment can be helpful to warn young adults about the consequences of distracted driving and may discourage them from texting-while-driving (Lennon et al., 2010). Another suggestion is to use persuasive techniques of a promotional campaign highlighting the consequences of texting-while-driving. Campaigns should highlight the severity of the texting-while-driving accident, such as depicting the graphic texting-while-driving accident scenario and actual accident video footage from the cameras inside the car. Also, presenting factual data and statistics with a graphic accident photo is another suggestion. Besides, presenting accident survivors and people who have lost friends and family members in texting-while-driving accidents are influencers for young adults to not engage in texting-while-driving. In short, the use of strong fear appeals in written and visual persuasion messages is the best way to discourage young adults from distracted driving (Lennon et al., 2010). On the other hand, low and moderate strength fear messages do not affect young people much (Lennon et al., 2010). However, it is unknown how audiences will react on graphic accident scenario in a texting-while-driving campaign.

Presently, literature on texting-while-driving focuses on young adults' motivation behind texting-while-driving. These studies are not adequate to understand how audiences (including

young adults) perceive campaigns highlighting the dangers of texting-while-driving and change their behavior to continue texting-while-driving. The current study will take the theoretical explanation of attribution of responsibility to address this gap in the existing texting-while-driving literature.

Attribution of Responsibility Following Texting-While-Driving Accident

Attribution of responsibility refers to the degree to which a person considers another person responsible for the favorable and unfavorable incident (Sulzer & Burglass, 1968). Responsibility is not a person's disposition, nor is it a property of an object (Fishbein & Ajzen, 1973). Attribution of responsibility is a moral judgment made by an observer (Fishbein & Ajzen, 1973). Attribution theories explain why and how an observer attribute responsibility for an accident. The root of attribution theory is Kelly's (1955) person-as-scientist metaphor that states that people have an innate desire to know why things happen, especially bad or unexpected things (Gendolla & Koller, 2001; Hirschberger, 2005). Upon observing an accident, an observer tends to look for causal relationships in the social world to answer why the event happened (Fiske & Taylor, 1991; Hirschberger, 2005; Kelly & Michela, 1980).

Heider (1958) differentiated the five levels of responsibility people assign while interpreting an event. Heider's (1958) five levels of responsibility are associated partly with Piaget's (1932) developmental stages in moral judgment (Fishbein & Ajzen, 1973). The first and most primitive level is the global association. In this level, the actors appear to be responsible for connecting with the negative outcome (even if they could not have foreseen them) (Fishbein & Ajzen, 1973; Shaw & Sulzer, 1964). According to Piaget (1955), observers judge a person responsible based on pseudo causal reasoning rather than objective causal connections. Thus, for

example, actors can be held responsible for the adverse acts committed by their friends, although they are not actively participating in the actions (Shaw & Sulzer, 1964).

The second level is the extended commission. In this level, actors appear to be responsible for producing the observed adverse effects (even if they could not have foreseen them) (Fishbein & Ajzen, 1973; Shaw & Sulzer, 1964). According to Piaget (1932), responsible people are judged based on what they do but not their motives (Shaw & Sulzer, 1964).

The third level is the careless commission. In this level, actors appear to be responsible only if they produced the negative outcome by their actions and could have foreseen the effects even though they might not have intended to create them (Fishbein & Ajzen, 1973; Shaw & Sulzer, 1964).

The fourth level is the purposive commission. At this level, actors appear to be responsible for the effects produced by their actions, whether they foresaw the outcome and intended to create a negative impact.

The fifth and final level is justified commission. At this level, actors appear to be responsible for the effect partly produced by their actions and partially produced by the coercive environment (Shaw & Sulzer, 1964).

These five different forms of attribution explain the impact of several variables in an accident situation (Shaw & Sulzer, 1964). Studies testing Heider's level for an adverse event found that adult participants tend to attribute higher responsibility at the careless, purposive, and justified commission levels (Shaw & Sulzer, 1964).

Besides Heider's (1958) attribution theory, several other attribution theories focused on understanding the causal structure of the social world (Weiner, 1992). Most attribution theories concede that human behavior is not always rational. Sometimes personal biases influence

people's assignment of responsibility. However, biases affecting the attribution process are exceptions and not core variables in the attributional process (Alicke, 2000). Attribution of responsibility generally depends on the interaction between the personality characteristics of the attributor and the perceived characteristics of the stimulus situation (Sulzer & Burglass, 1966).

Attribution theories that discussed attribution of responsibility following an accident include defensive attribution theory (DAT) (Walster, 1966), modified defensive attribution theory (Shaver, 1970), need to believe in a just world (Lerner & Miller, 1978), and rational decision stage model (Weiner, 1995). Of these models, defensive attribution theory (Walster, 1966), the modified defensive attribution theory (Shaver, 1970), and the just-world hypothesis (Lerner & Miller, 1978) consider motivational accounts of attribution (Hirschberger, 2006). The rational decision stage model (Shaver, 1970; Weiner, 1995) is the normative stage model.

Motivational accounts of attribution are different from normative stage models of attribution of blame (e.g., Weiner, 1995) (Hirschberger, 2006). Normative attribution theories have described the process rational observers undergo when making judgments of blame (e.g., Weiner, 1995) (Hirschberger, 2000). However, normative attribution theories did not talk about the motivational biases that may lead to rational evaluations (Alicke, 2000). Motivational attributional theories (e.g., Lerner & Miller, 1978; Shaver, 1970; Walster, 1966) addressed motivational biases that may influence observers' judgment (Hirschberger, 2000).

This study will compare both the motivational attribution theories (defensive attributional theory, need to believe in a just world) (Walster, 1966; Lerner & Miller, 1978) and normative attribution theory (Weiner, 2000). Comparisons between the motivational and normative attribution theories will be helpful to understand audiences processing of a texting-while-driving

campaign. Understanding audiences processing will be helpful to design effective campaign messages.

Motivational Attribution Theories

Defensive Attribution Theory

Walster (1966) addressed observers' motivational biases that may influence observers' judgments in the defensive attribution theory (DAT). According to DAT, audiences blamed the perpetrator based on the severity of the outcome. People tend to assign more responsibility to the perpetrator when the result of the accident becomes more serious, such as damage to the car and physical injury to bystanders (LaDoux, Fish, & Mosatche, 1989; Walster, 1966). When the outcome of an accident becomes severe, it becomes more unpleasant and less tolerable for the observer (Fiske & Taylor, 1991). Observers fear that the same thing may happen to them in the future. To avoid this unpleasant feeling and make the accident more predictable, observers blamed the person responsible for the accident (Fiske & Taylor, 1991). If the responsible person is also a severely injured victim, people will still blame the victim (Feigenseon, Park, & Salovey, 1997). This blame-the-victim effect is an example of defensive attribution (Shaver, 1970).

People tend to blame the seriously injured accident victim for preserving their belief that if they (observers) are in the victim's position, they can avoid this misfortune (Fiske & Taylor, 1991; Freigenseon et al., 1997; Lerner, 1980). According to attribution theory, observers are more motivated to blame the perpetrator if the accident has severe adverse effects than if the effects are less severe (Chaikin & Darley, 1973; Mitchell & Kalb, 1981; Robbernnolt, 2000; Walster, 1966). Existing research also suggests that observers tend to recommend more strict punishments for the perpetrator as the severity of the outcome increases (DeJoy & Klippel, 1984; Gleason & Harris, 1976; Mitchell & Wood, 1980; Ugwuegbu & Hendrick, 1974).

Why do observers attribute more blame and assign severer punishment to the perpetrator of the severe accident? According to Walster (1966), when people suffered a minor loss, it is easy to feel sympathy for the sufferers, attributing their misfortune and accepting that unfortunate things can happen to any person without any fault of their own (Walster, 1966). If the accident is severe and observers find that the accident victim is to blame, defensive attribution mechanisms will be triggered. They will assure themselves by attributing responsibility to the perpetrator (Walster, 1966). That means the severity of misfortunes increases the self-protective motives of the observer and intensifies personal responsibility ascriptions to victims. Observers also find a severe accident more comfortable and tolerable if they assign more responsibility to the perpetrator (Walster, 1966). By blaming perpetrators/victims responsible for their misfortunes, they can avoid the implied threat by reasoning that they (observers) are very different from these careless people (accident perpetrators/victims). If they (observers) are in the responsible person's place, they will not act in such a manner (Walster, 1966). Since a mild outcome accident is not as threatening as a severe outcome accident, observers do not employ such an assignment of responsibility to the victim. Several studies tested this theory and found the effect of severity on assigning responsibility (Chaikin & Darley, 1973; DeJoy & Klippel, 1984; Gleason & Harris, 1976).

DeJoy and Klippel (1984) tested the severity of the outcome (2: high/low) and unsafe driving behavior (3: none, drinking, drinking and speeding) in a drunk driving accident scenario. The findings of the study suggest that outcome severity did influence responsibility attributions. The more severe the outcome of the accident was, the more responsibility and punishment observers assigned to the perpetrator. However, no significant interaction between outcome severity and unsafe behavior on the assignment of blame suggests that severity-dependent

attribution was not affected differently by the presence of unsafe behavior. When the outcome was mild (near-miss accident), participants rated the perpetrator less responsible for the result, even in the drinking and drinking and speeding act. Drinking by itself was not sufficient to significantly influence responsibility attribution. The findings suggest that drinking needs to occur with some other unsafe behavior to change responsibility attribution. The result indicates that participants did not perceive drinking and driving as a severe offense. When both drinking and speeding were involved, observers wanted to assign severe penalties for both mild and severe outcomes. Finally, the study supported the DAT hypothesis that observers will separate themselves from the perpetrator as the severity increases by assigning more blame to the perpetrator. When the perpetrator committed any unsafe acts (e.g., drinking or drinking and speeding), participants/observers could not see themselves in the same situation. The finding suggests that the presence of unsafe acts did motivate participants/observers to blame the perpetrator. The presence of unsafe acts also stimulates participants/observers to deny the likelihood of having similarity with the perpetrator.

High outcome severity also convinced observers that the perpetrators themselves are responsible for their misfortune, and hence, observers evaluate the perpetrators unfavorably (Stokols & Schopler, 1973). In this situation, observers tend to assign responsibility for serious misfortune to the responsible person than attribute the circumstance to chance (Shaver, 1970; Stokols & Schopler, 1973; Walster, 1966). Observers do this to avoid the threatening implication that they, too, could experience a similar misfortune due to chance alone (Stokols & Schopler, 1973). However, in the low outcome severity, the victim has rated more attractively than the high outcome severity.

Based on the notion of Defensive Attribution Theory (DAT) and the findings of the available research testing DAT, the following hypothesis and research question were proposed:

H1: when the outcome of texting-while-driving is severe, participants are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely to display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim and (e) rate the perpetrator negatively on driver's trait in comparison with texting-while-driving mild outcome.

However, observers' own behavioral intention to text while driving is always uncertain. Observers believe that texting-while-driving is dangerous, but observers preferred to stay neutral about texting-while-driving in real life (Harrison, 2011). In addition, prior studies did not suggest that severe outcomes determine observers' behavioral intention not to text while driving. That is why instead of proposing a hypothesis, the current study will propose behavioral intention as a research question.

RQ1 - Does outcome severity result in lower behavioral intention to text while driving?

Influence of Texting-While-Driving Narrative Message Types

Change of one's behavior according to the advocated health message depends on many factors. One of the factors is the format of the message. For many years, impacts of non-narrative message format were examined (Kreuter et al., 2007). A growing body of health literature now considers the positive impact of non-narratives, such as entertainment education, case stories, testimonials, and storytelling, on changing audiences' behavior (Kreuter et al., 2007). The current study would like to test the impact of narrative texting-while-driving message framing (endangering-self vs. endangering-others) on audiences' responsibility attribution toward the perpetrator/victim.

Narratives and Narratives Message Framing on Persuasion

Health messages delivered in a narrative format have received significant attention in health communication research partly because messages that have storytelling elements were less threatening to the audience, generated fewer arguments, more positive cognitive appraisals, and elicited fewer angry feelings (Gardner & Leshner, 2016; Kreuter et al., 2007). By definition, narratives are "connected events and characters that have an identifiable structure, are bounded in space and time, and contains implicit and explicit messages about the topic being addressed" (Kreuter et al., 2007, p. 1). Narratives can be of different types, such as entertainment narratives (e.g., soap operas, cartoons, and dramas to educate the public about a health issue), literature, case stories, testimonials, and storytelling (Kreuter et al., 2007).

There are some differences between a non-narrative message (e.g., argument-based health message) and a narrative message (e.g., case stories). A non-narrative message format uses an expository and didactic communication style, emphasizing reasons and evidence supporting a health claim (Kreuter et al., 2007). On the other hand, narratives do not present straightforward arguments (e.g., arguments present in non-narrative health messages) about how and why to avoid a health-threatening behavior. Instead, narratives present views in the form of connected events, characters, and consequences of maintaining a health-threatening behavior (Kreuter et al., 2007).

Narratives have two crucial structural features – chronology and causality (Chang, 2008; Escalas, 1998; Polkinghorne, 1991). Narratives may have several chronologically disclosed events, and the narrative structure describes the causal relationship among the events (Chang, 2008). For example, texting-while-driving narratives to raise awareness of the negative

consequences of texting-while-driving may present a real-life story of injured individuals, such as how they start their day and how they met the accident.

Narratives consider a critical tool to control audiences' resistance toward the health message (Kreuter et al., 2007). Narratives or storytelling is a representation of social information and social experience. Using stories can be helpful for audiences' attention, comprehension, and recall of health-related information (Kreuter et al., 2007). Health messages present in the narrative format help the audience process information better and help the audience engage with the storyline (Chang, 2009; Escalas, 1998; Green & Brock, 2005; Kreuter et al., 2007; Limon & Kazoleas, 2004), and represent emotional and existential issues (Kreuter et al., 2007). Overall, observers respond positively toward the health message if the health message presents in a story format rather than an informational argument (Gardner & Leshner, 2016).

Endangering-Self Narrative vs. Endangering-Others Narrative

Texting-while-driving case stories usually present two themes. The first one is the endangering-self theme. For example, a driver was texting-while-driving and met a severe/non-severe accident. The second theme is the endangering-others theme. For example, a perpetrator/driver was texting-while-driving and severely/non-severely injured another driver or passerby.

Endangering-self messages highlight the physical death of an individual as a result of practicing unhealthy behaviors. By doing this, endangering-self messages can activate the audience's defensive mechanism and cause reactance toward the message (Greenberg & Arndt, 2011; Martin & Kamins, 2010; Shehryar & Hunt, 2005). Thus, endangering-self messages (e.g., physical mortality of the perpetrator due to practicing unhealthy behavior) can create a barrier to acknowledge health risk (Goldenberg & Arndt, 2008; Sherman, Nelson, & Steele, 2000).

Endangering-others messages focus on the harmful effect of an individual's health behavior on other people, rather than personal outcomes of one's own choice (Gardner & Leshner, 2016; Martin & Kamins, 2009; Pechmann, Zhao, Goldberg, & Reibling, 2003). For example, endangering-others anti-smoking messages focus on how secondhand smoke, and smoking in general, can seriously harm smokers' family members, coworkers, and peers (Pechmann et al., 2003). Some messages stressed how a smoker's death could cause family members to suffer emotionally and financially (Pechmann et al., 2003). This message theme depicts severe health consequences, such as the deaths of the perpetrator. At the same time, endangering-others messages explain that the perpetrator can encounter strong social disapproval from other people who are unlike the perpetrator (e.g., many victims may express disappointment or anger to the perpetrator) (Pechmann et al., 2003). When death is made salient, individuals tend to blame (assignment of responsibility) the person(s) responsible for the outcome. For example, when death is salient in anti-smoking advertisements, observers blame advertisers, smokers, and the tobacco companies more for smoking problems and showed negative attitudes toward the tobacco companies, smokers, as well as smoking behaviors (Moore, Thorson, & Leshner, 2011; Burke, Martens, & Faucher, 2010; Greenberg, Solomon, & Pyszczynski, 1997). Conversely, for messages which mention disease or harm instead of death, individuals tend to show lower levels of blame/negative attitudes toward the responsible persons (Moore et al., 2011).

Endangering-others messages may positively influence some target groups (e.g., young aged audiences) to understand the dangers of the advocated health message. Endangering-others health behavior and smokers' adverse life circumstances influence adolescents' intentions not to smoke (Pechmann et al., 2003). Health messages focusing on the severe impact, such as the

death of loved ones, are more practical to communicate the risk of texting-while-driving (Martin & Kamins, 2009). The argument is that physical mortality messages focusing on texting driver's death due to inattention to the road can generate defensive intentions to alter risky behavior. In contrast, health messages describing social loss (death of another family member or friends) help an individual step outside of oneself and take the perspective of the friends and family left behind (Fitzsimons & Bargh, 2003). However, young adults' behavioral intention toward texting-while-driving when observing endangering-self or endangering-others messages and the perpetrator's adverse life circumstances need further research.

Based on the discussion on the effect of narratives, the following hypothesis and research question were proposed:

H2: In the narrative type condition, participants exposed to endangering-others messages are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with endangering-self message condition.

RQ2: Does endangering-others result in lower behavioral intention to text while driving?

In addition, the current study will examine if there is an interaction effect between narrative types (endangering-self vs. endangering others) and the severity of outcome. Thus, the following research question was proposed:

RQ3- Does severity of outcome and narratives interact on (a) assigning responsibility to the perpetrator/responsible person, (b) assign legal action (e.g., higher fine), (c) negative attitudes toward the perpetrator, (d) positive (favorable) attitudes toward the victim, (e) rate the

perpetrator negatively on driver's trait, and (f) lower behavioral intention to text while driving in comparison with endangering-self and high severity of outcome condition?

However, many studies, including Walster (1966) herself, failed to replicate the findings of the defensive attribution theory, which predicts severity causes more assignment of responsibility to the perpetrator (Burger, 1981; Shaver, 1970). Researchers acknowledged that the responsibility assignment process is multidimensional, and several other variables (in addition to the severity of the outcome and narrative types) may influence the responsibility assignment process (Vidmar & Crinklaw, 1974). Besides the severity of the accident outcome, it is necessary to consider the observers' active thinking process. While observing a severe outcome, observers tend to go through a complex thinking process that moves from relatively objective judgments about perpetrators' association to the event and proceeds toward subjective judgments on the perpetrator's intentions (Mantler, Schellenberg, & Page, 2003).

The following variables can interfere with how observers will process texting-while-driving narratives. They are – perceived internal locus of control and external locus of control (Weiner 2000; Weiner 1986; Weiner 1985; Weiner 1980), and sympathy towards the victim (Graham, Weiner, & Zucker, 1997). The current study will test the perceived locus of control and sympathy as both are relevant variables with punishment decisions (Graham et al., 1997). If observers think the accident is controllable by the driver, then they will show less sympathy to them (and more sympathy to the victim) and assign greater responsibility to the driver for the accident outcome.

Mediators

Perceived Locus of Control

According to normative attribution theory (Graham et al., 1997; Weiner 1986, 1985, 1980), perceived locus of control describes perpetrators' association with the adverse event. For example, after observing an accident, observers think about the reason behind the accident.

The perceived locus dimension differentiates situational causes (e.g., the accident happened due to external situational causes) and dispositional causes (e.g., the accident happened due to the perpetrator) (Gupta, 2009). That means if observers think the accident happened because of the perpetrator, they (observers) will assign responsibility to the perpetrator.

If the driver/perpetrator had little or no control of the adverse event (e.g., an accident happened due to the driver's carelessness), observers will attribute the accident responsibility to the driver (Graham et al., 1997). As a result, observers will feel angry with the perpetrator (Graham et al., 1997). High anger can give rise to adverse reactions, such as rejection of the responsible person and desire to punish the responsible one (Graham et al., 1997). On the other hand, uncontrollable events do not generate the perception of responsibility (Graham et al., 1997). Those perceived as non-responsible or innocent victims generate little anger, and minimal punishment will be assigned (Graham et al., 1997; Hirschberger, 2000).

Sympathy towards the Victim

If observers perceive perpetrators/drivers as careless, they (observers) will assign responsibility to the perpetrator and derogate them. On the other hand, if the victims are innocent (e.g., who were not texting-while-driving but injured during the accident), then observers will react to them more sympathetically (Stokols & Schopler, 1973). Participants reacted more sympathetically to an innocent victim than the careless one since the suffering of innocent people

would be attributed to situations beyond their control (e.g., bad luck) (Stokols & Schopler, 1973). In addition, participants may perceive the perpetrator/responsible person's sufferings unfortunate due to inappropriate/careless behavior. Thus, observers may judge innocent victims as less deserving of their misfortune and less derogatory than the careless victim.

Self-identification with the people presented in the accident scenario and feeling empathy are two relevant variables in the defensive attribution process (Gleason & Harris, 1976). The basic premise of DAT deals with people's desire to separate themselves from an accident and to convince themselves that the same accident could not happen to them (Gleason & Harris, 1976). Participants' self-identification with the perpetrator or empathize with the various participants in the accident scene is a necessary variable to separate themselves and convince themselves that they are different from those presented in the accident scenario (Gleason & Harris, 1976). Observers/attributors' ability to empathize with the sufferers also determines whether they will show less sympathy, attribute responsibility or punishment, and derogate the perpetrators and victims of the accident (Sulzer & Burglass, 1968).

In summary, the sequence of judgments leading to a response is:

Negative outcome →perceived internal locus→ responsibility → little or no sympathy →punishment. Or,

Negative outcome →perceived external locus→ person is not responsible → sympathy→punishment withheld.

Based on the above discussion on perceived internal locus of control, perceived external locus of control (Graham et al., 1997; Weiner, 2000; Weiner, 1980), and sympathy, the following hypotheses and research questions were proposed:

H3: There will be an indirect effect between severity and DVs' through the perceived locus of control (internal locus of control), such that high severity will lead to high perceived internal locus of control (accident happened due to the perpetrator) and low perceived external locus of control (accident happened due to chance or bad luck), which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with texting-while-driving mild-severity condition.

H4: There will be an indirect effect between severity and DV's through sympathy, such that high severity will lead to high sympathy to the victim, which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim and (e) rate the perpetrator negatively on driver's trait in comparison with texting-while-driving mild-severity condition.

RQ4: Does high severity leads to a high perceived internal locus of control (and low perceived external locus of control) that leads to lower behavioral intention to text while driving?

RQ5: Does high severity leads to high sympathy to the victim that leads to lower behavioral intention to text while driving?

However, prior literature did not suggest the indirect effect between narratives (endangering-self and endangering others) through the locus of control and sympathy. Also, both narratives focus on the driver's texting-while-driving behavior suggesting an internal locus of control (accident happened due to the driver). That is why the relationship between narrative

message framing and DVs through the perceived locus of control and sympathy was proposed as a research question.

RQ6: Is there an indirect effect between narrative types (endangering-self vs. endangering-others) and DVs' through the perceived locus of control, such that endangering-others narrative will lead to high perceived internal locus of control (accident happened due to the perpetrator) and low external locus of control (accident happened due to chance or bad luck), which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait, (f) lower behavioral intention to text while driving in comparison with the endangering-self condition?

RQ7: Is there an indirect effect between narrative types (endangering-self vs. endangering-others) and DVs' through sympathy towards the victim, such that endangering-others narrative will lead to high sympathy to the victim, which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, (e) rate the perpetrator negatively on driver's trait, and (f) lower behavioral intention to text while drive in comparison with the endangering-self narrative condition?

From the observer’s part, it is necessary to have situational similarity to initiate active thinking on assigning responsibility (LaDoux, 1989). Prior studies testing DAT defined a severe consequence of anything from financial loss to death (LaDoux, 1989). Some studies have used descriptions of events that participants cannot relate to or cannot understand the implications of

the events for the victim (LaDoux, 1989). Examples of such events include explosions (Shaw & Skolnick, 1971), industrial accidents, students in North Carolina read a description of accidents in Minnesota (Shaver, 1970), and landslides (Walster, 1967) (LaDoux, 1989). The use of these different severe but situationally dissimilar events generated inconsistent participant's responses. Situational similarity with the victim is another necessary variable for attributing responsibility. Prior studies testing DAT often produced inconsistent results because studies chose different characters, such as innocent victims, perpetrators (who brought the accident but not the accident victim), or victims responsible for their accident. These studies produced inconsistent results due to the variance in the actors' characteristics presented in the stimuli. Apart from situational similarity, participants' beliefs about the world may play an essential role in attributing responsibility to the perpetrator.

In summary, the following variables — situational relevance (Shaver, 1970) and the just–world–hypothesis (Lerner & Miller, 1977) may strengthen the relationship between severity of the accident and attribution of responsibility.

Moderator Variable - Just World Hypothesis

The just-world hypothesis (Lerner, 1965, 1970, 1977; Lerner, Miller, & Homes, 1976; Miller, 1977) was formulated based on the DAT and other early findings. JWH stated that people tend to believe their physical and social environment is a right and orderly place. Without this belief, individuals cannot dedicate themselves to achieve long-term goals or maintain day-to-day life. In a word, the "world is just" serves an important adaptive function for an individual (Lerner & Miller, 1978). People also believe that in the right and orderly place, people tend to get what they deserve (Lerner & Miller, 1978). Individuals persuade themselves that a victim deserves fate due to having a "bad" character or was involved in "bad" acts. Thus, "good" people can

deserve a "bad" fate if they make careless mistakes (Lerner & Miller, 1978). The justness of others' fates implies the future of the observers' fate (Lerner & Miller, 1978, p. 2). For example, if an individual suffers unjustly, then the observers must admit that they (observers themselves) too could suffer unjustly (Lerner & Miller, 1978). Thus, individuals facing injustice generally motivate to restore justice. One way to restore justice is by acting to support the victim. Another way is convincing oneself that the victim deserves to suffer (Lerner, 1970).

When observers witness an accident scene, they try to find a causal connection of why the accident happened. If they cannot find a causal or behavioral relationship between the victim and his suffering, they are motivated to make moral or characterological justification. Observers make moral or characterological justification for maintaining the just world notion that people get what they deserve (Stokols & Schopler, 1973). In short, two types of attribution of responsibility may occur: first, observers may blame and derogate the victim/perpetrator presents in the scene due to observers' belief in a just world that the victim gets what they deserve (Lerner & Simmons, 1966). Second, under certain conditions (e.g., observers' similarity with the victim), observers may empathize with the victim/perpetrator, and observers' will not derogate the victim.

Lerner and Simmons (1966) tested JWH in an experiment where subjects watched a fellow student received an electric shock as punishment for her errors. In one condition, subjects could compensate the victim by voting to reassign the victim to a reward condition. In this condition, subjects were able to restore justice. In another condition, subjects were not allowed to reward the victim, and researchers informed them that the victim's suffering would continue. At the end of the experiment, subjects evaluated the victims. Subjects in the victim-compensated condition evaluated the victim more favorably than subjects in the victim-uncompensated

condition (where the injustice was higher than the victim compensated condition). The sight of an innocent person suffering without receiving reward or compensation motivated people to devalue the victim's attractiveness (Lerner & Miller, 1978). The researchers conclude that individuals tend to derogate a victim whom they witness suffering. However, some factors, such as identification with the victim or remoteness from the victim, can moderate the derogation effect (Lerner & Miller, 1978). The less responsible victims were for their fate, the lower was the rated attractiveness (MacDonald, 1972). The more responsible the victim, the less the perceived injustice and need to devalue the victim (MacDonald, 1972). Based on the above discussion, the current study proposed that just-world perception can be a vital moderator: Just-world perception and the severity of the accident outcome together may influence responsibility attribution. Thus, the following hypothesis and research question were proposed:

H5: There will be an interaction between severity and need to believe in a just world such that, in the high severity and high belief in a just world condition, participants are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with the participants in mild severity and high belief in a just world condition.

RQ8- Is there an interaction between severity and the need to believe in a just world such that high severity and high belief in a just world results in lower behavioral intention to text while driving?

Moderating Variable - Situational Similarity

Situational similarity is considered a personal characteristic of observers that may interfere with how observers assign responsibility to the perpetrator of a severe accident. Situational similarity refers to "the perceived similarity in the physical circumstances of the stimulus person and the observer" (Shaver, 1970, p. 106). For example, observers who also text while driving may find texting-while-driving accident narratives situationally similar to them. Observers who see themselves situationally similar to the perpetrator may expect the possibility that the same situation could happen to them in the future (Shaver, 1970). In this situation, observers attribute the cause of the accident to someone or something other than the perpetrator to avoid future blame for themselves (Berger, 1981). Some observers/subjects may be motivated to attribute less responsibility to the perpetrator and more to chance if they found similarities between them and the perpetrator (Berger, 1981). Observers will emphasize that the accident happens despite taking all the reasonable precautions, and the perpetrator is innocent. A study found that participants who were regular marijuana users and who viewed themselves similar to the driver (also a marijuana user) attributed less responsibility and lowered fines to the driver than the nonusers (McKillip & Posavac, 1972) and concluded that the accident happened due to external causes, such as poor road conditions (McKillip & Posavac, 1972).

On the other hand, at severe consequences, situationally dissimilar observers may feel motivated to attribute more responsibility to the perpetrator and less to chance (Chaikin & Darley, 1973; McKillip & Prosavac, 1972; Shaver, 1970; Shaw & McMartin, 1977). Situationally dissimilar observers will also display compassion towards the innocent sufferer in the stories (Aderman, Archer, & Harris, 1978; Aderman, Brehm, & Katz, 1974; Lerner & Miller, 1978; Stokols & Schopler, 1973). A detached observer tends to view an accident situation

objectively and respond sympathetically and favorably toward the suffering person. Also, detached observers will be more critical toward the persons responsible for their sufferings. Thus, between the innocent victim and responsible victim condition, innocent victims should be rated more favorably than responsible ones (Schopler & Stokols, 1973). Under conditions of situational detachment, the reaction of a detached observer to a victim is based more upon an objective consideration of the circumstances surrounding the target person's misfortune than an attempt to maintain the notion of a just world (Stokols & Schopler, 1973).

Participants, when asked to identify themselves with the "innocent victim" of a severe outcome story, were showed high empathy to the innocent victim and blamed the perpetrator more than the "nonvictim counterpart" (Aderman, Archer, & Harris, 1975; Gleason & Harris, 1976).

However, when participants were in the responsible victim condition (perpetrator broke the traffic rule, loose car control, and smashed the car into a telephone pole), they were assigned significantly lower ratings of personal responsibility (Aderman et al., 1975). The findings suggest that personal identification with the perpetrator may motivate observers to lower the ratings of attribution of responsibility (Aderman et al., 1975; Shaver, 1970).

Besides, when participants were in the responsible victim plus harm doer condition (perpetrator broke the traffic rule, loose car control, killed a pediatrician, smashed the car into a telephone pole), participants were assigned high responsibility compared to responsible victim conditions. The findings suggest that the severity of the accident produced vicarious guilt feelings, which, in turn, intensified the subjects' attributions of responsibility (Aderman et al., 1975). The findings support the DAT hypothesis that the severity of a negative outcome increases responsibility attribution. Self-identification motivates the observer to lower the

responsibility attribution, but as the severity increases, self-identification with the perpetrator do not motivate the observer to lessen the responsibility attribution. Instead, the accident's severity prompts the observer to empathize with the innocent victim and blame the perpetrator. The findings suggest that if observers receive empathy-inducing instruction (for example, imagining themselves as an innocent victim), they display compassion toward the undeserved sufferer. Observers did not derogate the innocent sufferer and attribute a relatively high percentage of responsibility to the perpetrator/responsible person (Aderman et al., 1975).

Also, observers who were victims of a severe accident in the past will not derogate the innocent victims in the story (Chaikin & Darley, 1973; Shaver, 1970). Potential victims had refused to devalue the observed victim to avoid blaming themselves if a similar fate happens to them (Chaikin & Darley, 1973). The perception of common fate also intensified the empathic responsiveness.

Based on the above discussion, the following hypothesis and research questions were proposed:

H6: There will be an interaction between severity and situational similarity, such that, in the high severity and high situational similarity with the victim (and low situational similarity with the perpetrator), participants are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with the participants in mild severity and high situational similarity with the victim condition.

RQ9- Is there an interaction between severity and situational similarity such that high severity and high situational similarity with the victim results in lower behavioral intention to text while driving?

RQ10- Is there an interaction between severity and situational similarity such that high severity and low situational similarity with the perpetrator results in lower behavioral intention to text while driving?

However, the relationship between narrative types and the need to believe in a just world and situational similarity is unexplored. For this reason, the following research questions were proposed:

RQ11- Is there an interaction between narrative types and need to believe in a just world such that, high/low need to belief in a just world and endangering-others narratives generates (a) greater responsibility to the perpetrator/responsible person, (b) higher fine, (c) positive attitudes toward the victim, (e) less positive driver's traits, and (f) lower behavioral intention to text while drive?

RQ12- Is there an interaction between narrative types high situational similarity with the victim (and low situational similarity with the perpetrator), such that high/low situational similarity with the victim (and the perpetrator) and endangering-others narratives generates (a) greater responsibility to the perpetrator/responsible person, (b) higher fine, (c) positive attitudes toward the victim, (e) less positive driver's traits, and (f) lower behavioral intention to text while drive?

There are some differences in the predictions made by the motivational and normative attribution theories. According to the defensive attribution hypothesis (motivational theory), the severity of the accident outcome will determine the attribution of blame. However, observers who believe in a just world (motivational theory) may blame innocent victims more than the perpetrator. Observers may look for information retrospectively or exaggerate available evidence to support their attribution about the accident. DAT did not specify emotional reactions observers may display while attributing responsibility to the victim or the perpetrator. The rational decision

stage model (normative theory) separates the attribution of responsibility and blame by highlighting that perceived internal and external locus of control are the prerequisites of attribution of blame. The rational decision stage model also focused on emotions (e.g., sympathy) observers may experience upon witnessing a severe accident. According to this model, observers actively evaluate the perpetrator's controllability and responsibility before blaming the perpetrator. Here, innocent victims elicit less blame because the innocent victim is innocent of any wrongdoing.

However, motivational and normative attribution theories are not the only determinants of attribution of responsibility. Higher attribution of responsibility for the severe accident can occur due to observers' self-protective tendency, belief in a just world, pre-existing attitudes, prejudices, and their moral necessity to fix the blame (Shaver, 1970). Experimental manipulation may not be the only way to explain how the assignment of responsibility occurs (Gleason & Harris, 1976; Shaver, 1970). Additional research is needed to specify the condition (e.g., participants' perception of various parameters) under which an attribution occurs. (Gleason & Harris, 1976; Shaver, 1970). Currently, there is a gap in understanding additional determinants of responsibility attribution that's not part of a message content but more with observers' biases and attitudes.

Second, observers' attribution can proceed through both rational and motivational manner. Observers make a rational and unbiased judgment only when they are in a neutral emotional and motivational state (Alicke, 2000). At this stage, observers may make judgments based on objective evidence. However, personal motivators may overrule the rational processes in the motivationally active stage, and prior beliefs, values, and attitudes influence subjective judgment (Mantler et al., 2003). Existing research does not yet inform which factor may overrule the others

while attributing responsibility. Do rational processes overrule motivational biases? Or do motivational preferences override rational processes?

Third, previous studies have tested DAT in different accident scenarios to see how observers attribute the responsibility for various accidents they witnessed. The current research tries to apply attribution theories in the texting-while-driving scenario to understand how observers attribute the responsibility for the perpetrator. Currently, texting-while-driving is a public health issue in the United States that is dangerous for the driver, passengers, and pedestrians. Death resulting from texting-while-driving is increasing every year. Cell phone companies and different campaigners are trying to create awareness about the dangers associated with texting-while-driving. However, current research on texting-while-driving is not adequate to inform observers' processing of texting-while-driving accident scenarios depicted in a mediated campaign and subsequent behavioral intention of not texting during the drive.

The present study addressed these limitations by manipulating the level of severity of outcome (severe vs. mild) and narrative types (endangering-self vs. endangering-others narrative) outlined in texting-while-driving narratives and observing the resulting processing of the message. In addition, the study also considered the situational similarity between the observer and the perpetrator, perceived locus of control, and sympathy after viewing the manipulation.

The hypothesis and research questions are restating below:

Hypothesis

H1: when the outcome of texting-while-driving is severe, participants are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely to display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim and (e) rate the perpetrator negatively on driver's trait in comparison with texting-while-driving mild outcome.

H2: In the narrative type condition, participants exposed to endangering-others messages are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display positive (favorable) attitudes toward the victim, and (d) rate the perpetrator negatively on driver's trait in comparison with endangering-self message condition.

H3: There will be an indirect effect between severity and DVs' through the perceived locus of control (internal locus of control), such that high severity will lead to high perceived internal locus of control (accident happened due to the perpetrator) and low perceived external locus of control (accident happened due to chance or bad luck), which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with texting-while-driving mild-severity condition.

H4: There will be an indirect effect between severity and DV's through sympathy, such that high severity will lead to high sympathy to the victim, which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive

(favorable) attitudes toward the victim and (e) rate the perpetrator negatively on driver's trait in comparison with texting-while-driving mild-severity condition.

H5: There will be an interaction between severity and need to believe in a just world such that, in the high severity and high belief in a just world condition, participants are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with the participants in mild severity and high belief in a just world condition.

H6: There will be an interaction between severity and situational similarity, such that, in the high severity and high situational similarity with the victim (and low situational similarity with the perpetrator), participants are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with the participants in mild severity and high situational similarity with the victim condition.

Research questions

RQ1: Does outcome severity result in lower behavioral intention to text while driving?

RQ2: Does endangering-others result in lower behavioral intention to text while driving?

RQ3: Does severity of outcome and narratives interact on (a) assigning responsibility to the perpetrator/responsible person, (b) assign legal action (e.g., higher fine), (c) negative attitudes toward the perpetrator, (d) positive (favorable) attitudes toward the victim, (e) rate the

perpetrator negatively on driver's trait, and (f) lower behavioral intention to text while driving in comparison with endangering-self and high severity of outcome condition?

RQ4: Does high severity leads to a high perceived internal locus of control (and low perceived external locus of control) that leads to lower behavioral intention to text while driving?

RQ5: Does high severity leads to high sympathy to the victim that leads to lower behavioral intention to text while driving?

RQ6: Is there an indirect effect between narrative types (endangering-self vs. endangering-others) and DVs' through the perceived locus of control, such that endangering-others narrative will lead to high perceived internal locus of control (accident happened due to the perpetrator) and low external locus of control (accident happened due to chance or bad luck), which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait, (f) lower behavioral intention to text while driving in comparison with the endangering-self condition?

RQ7: Is there an indirect effect between narrative types (endangering-self vs. endangering-others) and DVs' through sympathy towards the victim, such that endangering-others narrative will lead to high sympathy to the victim, which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, (e) rate the perpetrator negatively on driver's trait, and (f) lower behavioral intention to text while drive in comparison with the endangering-self narrative condition?

RQ8: Is there an interaction between severity and the need to believe in a just world such that high severity and high belief in a just world results in lower behavioral intention to text while driving?

RQ9: Is there an interaction between severity and situational similarity such that high severity and high situational similarity with the victim results in lower behavioral intention to text while driving?

RQ10: Is there an interaction between severity and situational similarity such that high severity and low situational similarity with the perpetrator results in lower behavioral intention to text while driving?

RQ11: Is there an interaction between narrative types and need to believe in a just world such that, high/low need to belief in a just world and endangering-others narratives generates (a) greater responsibility to the perpetrator/responsible person, (b) higher fine, (c) positive attitudes toward the victim, (e) less positive driver's traits, and (f) lower behavioral intention to text while drive?

RQ12: Is there an interaction between narrative types high situational similarity with the victim (and low situational similarity with the perpetrator), such that high/low situational similarity with the victim (and the perpetrator) and endangering-others narratives generates (a) greater responsibility to the perpetrator/responsible person, (b) higher fine, (c) positive attitudes toward the victim, (e) less positive driver's traits, and (f) lower behavioral intention to text while drive?

Chapter 3

Method

Design

This study employed a 2 (severity of outcome: severe vs. mild) x 2 (narrative types: endangering- self vs. endangering- others) x 2 (message replication) mixed factorial design. Severity of outcome and narrative types were manipulated between-subjects and messages were altered within-subjects.

Belief in a just world, situational similarities with the perpetrator, and situational similarities with the victim were moderating variables that would affect participants' involvement with each type of message and the dependent variables. Internal locus of control, external locus of control, and sympathy towards the victim were measured mediator variables.

The dependent variables were - attribution of responsibility to the perpetrator/responsible driver, assignment of fine to the perpetrator, attitudes toward the perpetrator and the victim, and behavioral intention not to text-while-driving.

Multiple messages were used in each level of the independent variables to represent multiple texting-while-driving narratives and minimize the effects of individual texting-while-driving stories (Moore, Thorson & Leshner, 2011).

Independent variables

Severity of outcome

The severity of outcome was conceptualized as message content that described real texting-while-driving cases where an individual experienced a severe outcome due to texting-while-driving (Cismaru, 2014). The current study divided the severity of the outcome into two levels – severe outcome and mild outcome. The severe outcome was manipulated by describing a

real accident story where an individual (victim) experienced severe injury (and death) due to texting-while-driving. The mild outcome was manipulated by changing the outcome of the accident. Here the individual (victim) was unharmed during the texting-while-driving accident.

Narrative types (endangering-self vs. endangering-others)

Two narrative types were commonly found in texting-while-driving accident stories. One was endangering-self narratives, and the other was endangering-others narratives. Endangering-self (may also be defined as "self-referencing," see Gardner & Leshner, 2015) was defined as messages that narrated consequences to the individual her/himself (Gardner & Leshner, 2015). Endangering-others narratives were defined as messages that narrated consequences that did not affect the individual who was texting but the consequences of texting-while-driving on other people (e.g., other drivers, pedestrians) (Gardner & Leshner, 2015).

Stimuli

There were two steps in choosing stimuli for this study. First, texting-while-driving accident stories were derived from the EndDD.org (End distracted driving) website. EndDD.org is an end distracted driving organization founded in 2009. Their website narrates distracted driving stories.

From the EndDD.org, two different kinds of texting-while-driving accident case stories were selected: endangering-self narrative and endangering-others narrative. In the first kind, a perpetrator/driver was texting-while-driving and caused an accident (endangering-self narratives). In the second kind of story, a perpetrator/driver was texting-while-driving and hit another car or pedestrians (endangering-others narratives).

Second, twenty (20) stories were selected in the endangering-self narratives condition. Of them, ten (10) were severe outcome endangering-self stories, and ten (10) were mild outcome

endangering-self stories. Likewise, there were twenty (20) stories on endangering-others narratives condition – ten (10) were severe outcome endangering-others stories, and ten (10) were mild outcome endangering-others stories. Regardless of the condition, all stories narrated the perpetrators/driver's name and age (all ages ranged from 18 to 24 years), the victim's name and age (all ages ranged from 18 to 24 years), accident reasons, and the accident outcomes. The length of the endangering-self and endangering-others stories were roughly the same. The total word count of endangering-self stories (20 stories) was 1650 words, and the total word count of endangering others stories (20 stories) was 1651 words.

A pilot test was conducted to accurately separate messages into endangering-self, endangering-others, severe outcome, and mild outcome conditions and to select some stories for the final study.

The pilot test for manipulation check was necessary to ensure that the participants perceived and understood the manipulated messages. It also confirmed that participants' responses are not due to chance, rather reflect the variance in the manipulated independent variable constructs. In short, if the manipulation resulted in statistically significant differences on the dependent variables that means the manipulation had a causal effect.

Pilot 1 – message categorization and stimuli selection

The aim of pilot 1 was threefold: (1) to do a manipulation check to accurately separate messages into endangering-self and endangering-others conditions, (2) separate messages into severe outcome and mild outcome condition, and (3) select the best endangering-self (severe and mild outcome) and endangering-others (severe and mild outcome) stories for the final study.

Participants

Participants for pilot 1 (message categorization) were collected from Amazon (Mturk). The participants' ages were was 18 years and above, and only U.S. citizens took part in the pilot study. The mean age of the participants was 40 (*SD*=12.66). All participants were randomly assigned to one of the four experimental conditions: endangering-self severe outcome, endangering-self mild outcome, endangering-others severe outcome, and endangering-others mild outcome conditions. A total of 175 participants took part in the pilot study. Of them, 41 participants were in endangering-self severe outcome condition, 47 participants were in endangering-self mild outcome condition, 45 participants were in endangering-others severe outcome condition, and 42 participants were in endangering-others mild outcome condition. A priori power estimates (g power) indicated that to conduct a t-test between two groups, a total of 70 participants (35 participants in each group) were necessary with a large effect size (.80), a significance criterion of .05, and a power of .95. Therefore, the pilot study was sufficiently powered as the sample size was larger than the a priori estimates.

Measures

Endangering-self

Endangering-self narratives were measured with one item "to what extent do you think the message includes the consequences of the driver who was texting-while-driving?" (1=not at all, 7=a lot). The question was adapted and modified from Gardner & Leshner, 2015.

Endangering-others

Endangering-others narratives were measured with one item "to what extent do you think the message includes the consequences that affect other people (e.g., other drivers, pedestrians)?" (1=not at all, 7=a lot). The question was adapted and modified from Gardner & Leshner, 2015.

Severity of outcome

The severity of the outcome was measured with three items – severe, serious, and dangerous. The following question was asked to measure the severity of the outcome – "to what extent do you think this texting-while-driving incident was severe?", "to what extent do you think this texting-while-driving incident was serious?", and "to what extent do you think this texting-while-driving incident was dangerous?" (1=not at all, 7=very much).

Procedure

The study got IRB approval (OU-NC IRB Number: 13258, Approval date: April 9, 2021) On Amazon (Mturk), participants were informed that the study needs their opinion about texting-while-driving. For this, each participants will need to read ten (10) texting-while-driving stories and answer five questions after each story. Participants were randomly assigned to different experimental conditions. In each condition, participants read a total of ten (10) stories. Participants answered five questions (one endangering-self question, one endangering-others question, and three severe outcome questions) after reading each story. In total, participants answered fifty (50) questions in each condition.

The pilot responses of the endangering-self and endangering-others questions showed that these two questions' operationalization was correct. Participants rated endangering-self stories per the definition of endangering-self, which is the driver(s) texted while driving and severely/mildly injured themselves. Similarly, participants rated endangering-others stories per the definition of endangering-others, which is the driver(s) texted while driving and severely/mildly injured other people on the street. However, the severity items (severe, serious, and dangerous) did not show variance in responses in high and low conditions, thus indicates no relationship between the variables. Also, the item "dangerous" in severity measurement

generated the same responses in all conditions indicating that participants perceived all texting-while-driving incidents dangerous regardless of the outcome of the accident. The study addressed this problem by changing the word "mildly injured" to "unhurt/unharmed" to reduce the severity level in mild outcome conditions. Second, the item "dangerous" was omitted from the scale, and the questions to measure severity was changed to –"to what extent do you think the [victim's name] condition is serious/severe?" (1=not at all, 7=very much). The adjustment was tested with another group of forty (40) participants (10 participants in each condition). This time the result on the severity questions displayed more variance in the participants' response, thus indicates correct operationalization.

Analytical strategy for message categorization

Four steps analysis was employed to check if endangering-self and endangering-others messages are different from each other. First, regardless of the severity of outcome levels, means of all endangering-self questions (q.1) in endangering-self condition were compared with the means of all endangering-self questions (q.1) in endangering-others condition. A total of twenty (20) questions measuring endangering-self questions in endangering-self condition were compared with twenty (20) questions measuring endangering-self questions in endangering-others condition. Second, regardless of the severity levels, means of all endangering-others questions (q.2) in endangering-others condition were compared with the means of all endangering-others questions (q.2) in endangering-self condition. Third, the severity of the outcome of all endangering-self stories was rank-ordered, and two stories with the highest mean were selected. Fourth, the means of the severity of the outcome of all endangering-others stories were rank-ordered, and two stories with the highest mean were selected.

Results of pilot 1

Message categorization

First, to check if the endangering-self messages were accurately explained the definition of endangering-self, the following question was asked – "Is there a difference between narratives types, such that, means of all endangering-self questions(q.1) in endangering-self condition are higher than the means of all endangering-self questions(q.1) in endangering-others condition?"

An independent sample t-test between the means of endangering-self questions in endangering-self conditions and endangering-self questions in endangering others conditions was conducted to answer this question. The result suggests that there was a statistically significant difference between the messages of endangering-self questions (Q.1) in endangering-self condition (M=5.78, SD=1.53, n=86) and the messages of endangering-self questions (Q.1) in endangering-others condition (M=4.38, SD=2.04, n=87); $t(171)=5.1$, $p<.001$ (Table 1). The mean of endangering-self conditions was significantly higher than the mean of endangering-others conditions. The finding suggested that the messages in the endangering-self condition narrated the consequences of the driver who was texting-while-driving (endangering-self) more than the messages in the endangering-others condition.

Similarly, to check if the endangering-others messages accurately explains the definition of endangering others, the following question was asked – "Is there a difference between narratives types, such that in the endangering-others stories, means of all endangering-others questions (q.2) are higher than the means of all endangering-others questions (q.2) in endangering-self stories?

An independent sample t-test was conducted to answer this question. The result suggested that there were statistically significant differences between the messages of

endangering-others questions (Q.2) of endangering-others condition (*M*=5.40, *SD*=1.58, *n*=87) and the messages of endangering-others questions (Q.2) of endangering-self condition (*M*=2.71, *SD*=1.80, *n*=88); *t*(173)=-10.51, *p*<.001 (Table 2). The mean of endangering-others questions (q.2) in endangering-others conditions was significantly higher than the mean of endangering-others questions (q.2) in endangering-self conditions. The findings suggested that the messages in the endangering-others condition narrated the consequences of the other people (e.g., other drivers, pedestrians) more than the messages in the endangering-self condition.

Stimuli Selection based on Severity of Accident Outcome

As noted on page 5, the severity of the outcome was a three-item index (severe, serious, and dangerous). The severity of outcome items was modified to a two-item index (severe and serious) due to problems with one of the scale items ('dangerous') and the operationalization of the severity of the outcome. In addition, the severity of the outcome question was changed to – "to what extent do you think the driver's (name) condition was severe/serious?" This change was tested with 40 new participants (10 participants on each condition). The mean age of the participants was 34.

To check if the messages of endangering-self condition were accurately separated between severe and mild outcome, the following question was asked - "Are there differences between severity of outcome in the endangering-self condition, such that, means of all endangering-self severe outcome stories were higher than the means of all endangering-self mild outcome stories?"

An independent sample t-test was conducted to check differences in outcome severities. The result suggests that there were statistically significant differences in severity of outcome between endangering-self severe outcome condition (*M*=6.64, *SD*=.51, *n*=11) and the

endangering-self mild outcome condition (M=3.55, SD=1.63, n=9); t(18)=-5.948, p<.001 (Table 5). The mean of endangering-self severe outcome was significantly higher than the mean of endangering-self mild outcome conditions. The finding suggests that the messages in the endangering-self severe outcome condition narrated the physical mortality or severe consequences of the drivers who were texting-while-driving more than the endangering-self mild outcome condition.

Similarly, there were statistically significant differences in severity of outcome between endangering-others severe outcome (M=6.29, SD=.85, n=9) and the endangering-others mild outcome condition (M=2.86, SD=1.95, n=11); t(18)=-4.884, p<.001 (Table 6**)**. Thus, the mean of endangering-others severe outcome was significantly higher than the mean of endangering-others mild outcome condition. The finding suggests that the stories in the endangering-others severe outcome condition narrated the severe consequences of the other people (e.g., other drivers, pedestrians) more than the endangering-others mild outcome condition.

One of the aims of this pilot study was to find some stories for the final study that best represent endangering-self severe outcome and endangering-others severe outcome conditions. The stories selected for endangering-self severe outcome condition used in endangering-self mild outcome condition to eliminate the chances of confound that may happen if different stories are selected. For the same reason, stories selected for endangering-others severe outcome condition used in endangering- others mild outcome condition. The difference between these stories in the severe outcome and the stories in the mild outcome condition is that a person experienced severe outcome in severe outcome condition and mild outcome condition, the same person experienced mild outcome. However, it is still essential to ensure that the stories chosen for the severe outcome and the mild outcome have a valid representation of their condition. One way to do that

is to check if the selected stories have significant differences in severity of outcome means, such that severe outcome stories have a higher mean than the mild outcome stories.

To do this, first, descriptive statistics (mean) of 'severe' and 'serious' items of each story in all conditions were obtained. Two stories with the highest severity of outcome mean in endangering-self condition and endangering-others condition were selected from these descriptive statistics. Stories with the highest mean scores in severity scales are stories with severe outcomes, such as death. The mean scores of the two stories in endangering-self condition are – 6.91 (story 2), and 6.86 (story 9). The outcome of these two stories was manipulated in the mild outcome condition (e.g., the person(s) involved in the accident was unhurt/unharmed). The mean scores of these two stories in endangering-self mild outcome condition are– 3.78 (story 2), and 3.50 (story 9). Also, the mean scores of the two stories in endangering-others condition are – 6.55 (story 2), and 6.50 (story 4). The mean scores of these two stories in endangering-others mild outcome condition are – 3.18 (story 2), and 2.45 (story 4). Initially, three stories were selected. Participants will have to answer approximately 100 questions if they ask to read three stories. This was not feasible considering the time a participant need to spend and attention a participants can hold to answer the whole survey. A decision was made to use two stories instead. Now a participant will answer total 64 questions along with reading two manipulation stories.

Second, 'severe' and 'serious' (two-scale items to measure the severity of outcome) items of each of these two stories were averaged to create a composite index of severity of outcome variable. The scale items - 'severe' and 'serious' were positively correlated, $r(11)=.93$, $p<.001$.

Next, an independent sample t-test was conducted to see if severe outcome stories have a difference in mean than mild outcome stories. For example, the mean of severe outcome story 2

in endangering-self condition was compared with mild outcome story 2 to see if the severity of the outcome of these two stories was significantly different.

Results of Endangering-self Severe Outcome Stories and Mild Outcome Stories

Two independent sample t-tests were conducted in endangering-self condition to compare differences between story two (2) severe outcome and story two (2) mild outcome, and story nine (9) severe outcome and story nine (9) mild outcome.

The independent sample t-test between story two (2) severe outcome (M=6.91, SD=.30) and story two (2) mild outcome (M=3.78, SD=1.97) in endangering-self condition suggests a statistically significant difference between these two stories, t(8.31)=4.72, p=.001 (Table 7). Thus, the severity of outcome in story two (2) was rated higher than story two (2) in the mild outcome.

The independent sample t-test between story nine (9) severe outcome (M=6.86, SD=.32) and story nine (9) mild outcome (M=3.50, SD=1.77) in endangering-self condition suggests a statistically significant difference between these two stories, t(8.44)=5.63, p<.001 (Table 8). Thus, the severity of outcome in story nine (9) was rated higher than the story 9 in the mild outcome.

Results of endangering-others severe outcome stories and mild outcome stories

Two independent sample t-test were conducted in endangering-others condition to compare differences between story two (2) severe outcome and story two (2) mild outcome, story four (4) severe outcome and story four (4) mild outcome.

The independent sample t-test between story two (2) severe outcome (M=6.55, SD=.91) and story two (2) mild outcome (M=3.18, SD=2.31) in endangering-others condition suggested a statistically significant differences between these two stories, t(13.60)=4.44, p=.001 (Table 9).

Thus, the severity of outcome in story two (2) was rated higher than the story two (2) in the mild outcome.

The independent sample t-test between story four (4) severe outcome (M=6.50, SD=.90) and story four (4) mild outcome (M=2.45, SD=2.17) in endangering-self condition suggests a statistically significant difference between these two stories, $t(13.88)=5.61$, $p<.001$ (Table 10). Thus, the severity of outcome in story four (4) was rated higher than story four (4) in the mild outcome.

Hence, the three stories chosen in the endangering-self severe outcome condition and endangering-self mild outcome condition were accurately separated based on severity of outcome.

Pilot 2 – Feasibility Test

A second pilot study (pilot 2) was conducted after selecting stories for the final study. The purpose of the second pilot study was to check the feasibility of the study which includes checking the approximate time each participant needs to read two stories and answer all questions in the condition they are assigned to. It is important to know how long the survey turns to be because long survey may result participants inattention, losing focus, incomplete answers, and leave study before finishing. These problems due to a long survey may not generate accurate responses and participants' data will be less useful.

Main study

Participants

Participants for the main study were recruited from Prolific – an online survey site. An *a priori* power analysis (g power) indicated that to conduct an F test (ANCOVA) between four (4) groups, a total of 469 participants (167 participants in each group) are necessary with a small

effect size (.15), a significance criterion of .05, and a power of .90. Four hundred seventy one (471) participants were participated in the study. Of them, 234 participants were male (49.7%), 233 participants were female (49.5%) and 4 participants were self-identified as "other" (.8%). Therefore, the study was sufficiently powered.

Prolific wanted researchers to use prescreeners so that only eligible participants could access the study. The following screeners were used to select the participants – (a) all participants had to be U.S. citizens and living in the United States, (b) all participants had to be at least 18 years old, (c) all participants should have a valid driving license, and (d) all participants should own a car and drive regularly. All participants answering the survey met these eligibility criteria.

The study was approved by the university IRB (approval number: 13258, date: September 20, 2021). All participants received a Qualtrics survey link along with an invitation to participate in a texting-while-driving study. After the participants agreed to participate in the study by clicking "I agree to participate" button as part of the informed consent process, they completed a questionnaire that contained the covariates and moderating variables. After that, participants were randomly assigned to one of the four experimental conditions. All participants read two stories in their assigned condition. After reading each story they answered questions that measured the mediators and dependent variables. At the end of the survey, participants answered demographic questions. The study took approximately 12 minutes to complete and all participants were compensated $2 for their participation.

Measurement for the Main Study

Moderating Variables

Belief in a Just World. Belief in a just world was defined as an individual's belief that the world is a just and orderly place, and in a just place, people get what they deserve (Lerner & Miller, 1978). Belief in a just world scale was adapted from Lipkus, Dalbert, and Siegler (1996). The current study used four items to measure belief in a just world: "I feel that people get what they deserve," "I feel that people earn the rewards and punishments they get," "I feel that people get what they are entitled to have," and "I feel that when people meet with misfortune, they have brought it upon themselves" (1=strongly disagree, 7=strongly agree). The scale was internally consistent (α=.874).

Situational Similarity with the Perpetrator and the Victim. Situational similarity was conceptualized as perceived similarities of the texting-while-driving circumstances between the stimulus person and the participants. The perceived situational similarity questions were adapted from Harrison (2011). Situational similarity with the perpetrator and situational similarity with the victim had a total of six items. To measure situational similarity with the perpetrator participants were asked three questions: "In the past, how often have your vehicle drifted into adjacent lane because you were texting-while-driving?", "In the past, how often have you run the stop sign because you were texting-while-driving?", "In the past, how often have you exceeded speed limit because you were texting-while-driving?" (1=none, 7=often). The scale was internally consistent (α=.689). To measure situational similarity with the victim participants were asked three questions: "In the past, how often has someone drifted to your lane because that driver was texting-while-driving?", "In the past, how often has someone run a stop sign and near hit your vehicle because that driver was texting-while-driving?", "In the past, how often has

someone exceeded speed limit and near hit your vehicle because that driver was texting-while-driving?" (1=none, 7=often). The scale was internally consistent (α=.777).

Mediator Variables

Internal locus of control. Internal locus of control was defined as whether the texting-while-driving accident was associated with the perpetrator (internal locus of control) or other external causes (external locus of control) (Gupta, 2009; Weiner, 2000). The questions to measure internal locus of control was derived from Hunter & Stewart (2012). The current study selected three questions from the internal locus of control category and three questions from the external locus of control category. The questions were modified to resemble the situation narrated in the manipulation story. Three questions measured internal locus of control: "if the driver [name] took the right action (e.g., not texting) he/she could have avoided the accident", "if the driver [name] followed the road safety rules and regulation, he/she could have avoided the accident", "the accident happened because the driver [name] was not careful enough" (1=strongly disagree, 7=strongly agree). The scale was internally consistent (α=.839).

External locus of control: The questions to measure external locus of control was derived from Hunter & Stewart (2012). The questions were modified to resemble the situation narrated in the manipulation story. Three questions measured external locus of control: "I think the driver's [name] accident was mostly a matter of fate, chance, or bad luck", "I think the driver's [name] accident was caused by accidental happening outside her control", "I think the driver's [name] accident happened due to the technology" (1=strongly disagree, 7=strongly agree). The scale was not internally consistent (α=.487).

Sympathy towards the victim. Sympathy towards the victim scale was derived from Graham et al., 1997. Sympathy toward the victim was measured by asking the following two items: "how

much sympathy do you feel toward the victim [name]?", "how much compassion do you feel toward the victim [name]?" (1=none and 7= a great deal). The relationship between “sympathy” and “compassion” were positive and statistically significant, r=.92, p<.01.

Dependent Variables

Attribution of Responsibility to the Perpetrator/Responsible Driver. Attribution of responsibility to the perpetrator/responsible driver was an observer's moral judgment on considering the extent to which the perpetrator was responsible for the incident (Fishbein & Ajzen, 1973; Sulzer & Burglass, 1966). To attribute responsibility, observers consider a perpetrator's intentions and circumstances and decide to what extent a perpetrator is accountable for the outcome of their action (Ferguson & Rule, 1983; Fincham & Jaspars, 1980; Heider, 1958; Mantler, Schellenberg, & Page, 2003). The scale of attribution of responsibility was adapted and modified from Mantler et al., 2003.

Three items measured attributions of responsibility for endangering-self narrative condition: "to what extent do you believe that the driver/perpetrator (name) is responsible for his/her own outcome?", "to what extent do you believe that the driver/perpetrator (name) is accountable for his/her own outcome?" "to what extent do you believe that the driver/perpetrator (name) is to blame for his/her own outcome?" (1=not at all, 7= very much). Cronbach’s alpha for the 3 attribution of responsibility items were .894.

Three items measured attributions of responsibility for endangering-others narrative condition: "to what extent do you believe that the driver/perpetrator (name) is responsible for [victim’s name] outcome?", "to what extent do you believe that the driver/perpetrator (name) is accountable for [victim’s name] outcome?" "to what extent do you believe that the

driver/perpetrator (name) is to blame for [victim's name] outcome?" (1=not at all, 7= very much). The scale was internally consistent (α=.859).

Assigning Higher Fine to the Perpetrator/Responsible Driver. Assigned fine to the perpetrator was measured by asking participants the following question: "Please choose the fine the perpetrator/driver's insurance company should pay to the [victim] to recovery the damages?" The scale ranged from $0 (lowest amount) to $100,000 (highest amount) [numbers were presented as a sliding scale].

Victim Derogation. Victim derogation was measured two ways: (a) measuring participants' attitudes toward the perpetrator/responsible driver and the victim, and (b) and measuring participants' evaluation about the driver's traits. Attitudes toward the victim and perpetrator/driver traits questions were asked only for the endangering-self condition. In this condition, the perpetrator was also the victim of the accident. In endangering-others condition, the victim or injured person(s) were other drivers/pedestrians who were not texting but got hit by the car of the driver who was texting-while-driving. Hence, the endangering-others' condition had three variables to measure victim derogation: attitudes toward the perpetrator, attitudes toward the victim, and perpetrator/driver traits.

Attitudes toward the perpetrator (and victim) scales were adapted from Gardner & Leshner (2016). The original scale had three-items. The current study modified it to two-item scale. Attitudes toward the perpetrator was measured by asking the following questions: "how would you rate your overall impression of the driver [name]?" The response scales were anchored by bad (1)- good (7), and negative (1) - positive (7). There was a positive correlation between these two variables, r=.95, p<.01.

The same question will ask to measure attitudes toward the victim.

The scale of perpetrator traits was adapted from Lambert & Raichle (2000). The question to measure perpetrator traits was: "how would you rate the driver [name] based on the following traits?" – Self-discipline, patience, alertness (1=not all, 7- a lot). The three-item scale was internally consistent (α=.823).

Behavioral Intention not to Text while Driving. Behavioral intention to reduce or stop texting-while-driving was measured by asking the following question: After seeing the message, how likely are you to text while drive? (1=not at all likely and 7= extremely likely).

Covariates

Three additional contextual variables likely associated with increased texting-while-driving were included in the model as covariates – driving frequency, prior attitudes toward texting-while-driving, and whether or not the participant had a cell phone plan (Feldman et al., 2011; Harrison, 2011). The age and gender of the participants were also covariates. Age and gender can influence attributing responsibility to the perpetrator.

Driving Frequency. Participants were asked, "How many days per week do you drive (e.g., car, truck, other passenger vehicles)?"

Cell Phone Plan. Participants were asked: "Does your cell phone plan included unlimited text messaging?" (1=yes, and 0= no) (Feldman et al., 2011).

Age of the Participants. Age can be a possible confounding variable in the study. For example, older participants may attribute more responsibility if the perpetrator is younger and younger participants may attribute more responsibility if the perpetrator is older (Walster, 1966; Shaver, 1970). Age was measured by askin: "what is your age?" (Participants' provided the response in a text box).

Gender. Gender was measured by asking: "what is your gender?" The answer were given as - male, female, other (please specify).

Attitudes toward Texting while Driving. The attitude toward texting while driving scale was derived from Harrison (2011). Three items measured attitudes toward texting while driving: "It is unsafe to text while driving, "it should be illegal to text while driving", and "texting while driving is distracting" (1=strongly disagree, 7-strongly agree). Cronbach's alpha of the 3 items of attitudes toward texting while driving were .669.

Demographic Questions

The following demographic data were collected to describe the sample characteristics.

Education

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

No schooling completed

Some high school, no diploma

High school graduate, diploma, or the equivalent

Some college credit, no degree

Associate degree

Bachelor's degree

Master's degree

Professional degree

Doctorate

Ethnicity

Please specify your ethnicity -

White

Hispanic or Latino

Native American

Asian/ Pacific Islander

Other

Employment Status

Are you currently...?

Employed for wages

Self-employed

A student

Military

Retired

Unable to work

Income

What is your income last year?

Less than $10,000

$10,000 to $19,999

$20,000 to $29,999

$30,000 to $39,999

$40,000 to $49,999

$50,000 to $59,999

$60,000 to $69,999

$70,000 and above

Prefer not to answer

Chapter 4

Results

Preparing Data for Analysis

Participants' raw data were cleaned and checked for missing values before running the analysis. Several variables have two, three, and four items scales, such as belief in a just world (4 items), situational similarity with the perpetrator (3 items), situational similarity with the victim (3 items), internal locus of control (3 items), external locus of control (3 items), attribution of responsibility (3 items), and sympathy towards the victim (2 items). After that, the reliability of each variable was conducted.

This study was guided by the general research question proposed at the beginning of the study: How do people process mediated severity-based texting-while-driving narratives compared to mild texting-while-driving narratives? A total of six hypotheses and twelve research questions were examined based on defensive attribution theory (DAT), modified defensive attribution theory, need to believe in a just world, rational decision stage model, and previous research findings based on these theories. The study used repeated-measures ANCOVA and PROCESS to analyze the data to address the hypotheses and research questions. A significance criterion of .05 was used for all tests to prevent Type I error.

The result section will proceed as follows: (a) manipulation check of the message theme (endangering-self and endangering-others), (b) manipulation check of the severity of the outcome (severe outcome and mild outcome), (c) demographic characteristics of the participants, (d) main effect results, (e) interaction effect results, (f) indirect effect results, and (g) moderating variables results. The manipulation check was conducted once in the pilot study. However, the final study chose participants from the survey site Prolific. Due to selecting a new group of

participants from a different survey site, the study conducted the manipulation check again to see if the new group of participants' responses on accident outcome and narrative types were significantly different.

Manipulation Check of the Message Theme (Endangering-self and Endangering-others)

Each participant answered this message theme question after reading each message of their assigned condition: "To what extent do you think the story includes the consequences of the driver who was texting while driving?" (1=not at all, 7= a lot).

An independent samples t-test was conducted to see if the messages in the endangering-self condition described the consequences of the driver who was texting while driving (endangering-self question) more than the messages in the endangering-others condition. Levene's test was significant. The result indicated a significant difference in the scores of endangering-self questions in the endangering-self condition (M=5.82, SD=1.38, N=233) and endangering others (M=3.49, SD=2.15, N=234) condition (t (397.22) = 13.99, p<.001 (Table 12). Thus, the messages in the endangering-self condition were perceived to include the consequences of the driver texting while driving more than the messages in the endangering-others condition.

Similarly, after reading each message, participants asked endangering-others question: "To what extent do you think the story includes the consequences that affected other people (e.g., other drivers, pedestrians etc.)"? (1=not at all, 7=at all). An independent sample t-test was conducted to see if the messages in the endangering-others condition included the consequences that affected other drivers (e.g., other drivers, pedestrians) (endangering-others question) more than the messages in the endangering-self condition. Levene's test was significant. The result suggested that there was a significant difference in the scores for endangering-others (M=5.77, SD=1.36, N=234) and endangering self (M=2.86, SD=1.76, N=232) conditions; t (434.10) =

19.10, $p<.001$ (Table 13). The messages in the endangering-others condition narrated the consequences that affected other people (e.g., other drivers, pedestrians) more than the messages in the endangering-self condition.

Manipulation Check for Severity of Outcome

The aim of the severity of the outcome manipulation check was to see whether the new group of participants perceived the selected severe endangering-self (and endangering-others) messages are different from mild endangering-self (and endangering-others) messages. The severity of accident outcome was compared between conditions to check if severe outcome messages were significantly different from mild outcomes. For example, endangering-self severe outcome messages were compared with endangering-self mild outcome messages. Similarly, endangering-others severe outcome messages were compared with endangering-others mild outcome messages.

After reading each message, participants were asked two questions to measure the severity of the accident outcome- "to what extent do you think the driver's [name] condition is severe?" and "to what extent do you think the driver's [name] condition is serious?" (1=not at all, 7= a lot). In the endangering-self condition, a total of 233 participants were responded. Of them, 118 participants were in the severe outcome condition, and 115 were in the mild outcome condition. In the endangering-others condition, a total of 234 participants were responded. Of them, 118 participants were in the severe outcome condition, and 116 were in the mild outcome condition. The responses of these two items were averaged to create a composite score for the severity of accident outcomes. An independent sample t-test was conducted to see if the messages in the endangering-self severe outcome condition were significantly different from those in the mild outcome. Levene's test was significant. The result suggested that there was a significant

difference in the scores for the endangering-self severe outcome (*M*=6.83, *SD*=.49, *N*=118) and endangering-self mild outcome (*M*=3.22, *SD*=1.87, *N*=115) conditions; *t* (129.18) = 19.96, *p*<.001 (Table 14). Thus, the messages in the endangering-self severe outcome condition narrated the severe consequences of the driver texting while driving more than the messages in the endangering-self mild outcome condition.

In addition, an independent sample t-test was conducted to see if the messages in the endangering-others severe outcome condition were significantly different from the messages in the endangering-others mild outcome condition. Levene's test was significant. The result suggested that there was a significant difference in the scores for the endangering-others severe outcome (*M*=6.69, *SD*=.73, *N*=118) and endangering-others mild outcome (*M*=3.59, *SD*=1.92, *N*=116) conditions; *t* (147.07) = 16.22, *p*<.001 (Table 15). Thus, the messages in the endangering-others severe outcome condition narrated the severe consequences of texting-while-driving that affected other drivers and pedestrians more than those in the endangering-others mild outcome condition.

Demographic Characteristics of the Participants

Four hundred seventy-one (471) participants took part in the final survey. The participants were randomly assigned to four conditions. A total of two hundred thirty-three participants (N=233) took part in the endangering-self condition. Of them, one hundred eighteen participants (N=118) were male and one hundred fifteen (N=115) were female. A total of two hundred thirty-four participants (N=234) took park in the endangering-others condition. Of them, one hundred sixteen participants (N=116) were male and one hundred eighteen (N=118) participants were female. Participants who identified themselves as other (4 participants) were too low in number and deleted from the data. Hence, the data of 467 participants were analyzed.

The majority of the participants were White (N=377), followed by other (N=37), Hispanic or Latino (N=27), Asian (N=22), and American Indian or Alaskan Native (N=2). The majority of the participants were holding at least Bachelor's degree. The majority of the participants' annual income range was $70,000 and up.

All participants were 18 years old and above. The average age of the participants was 30.18. Most participants owned cars and drive more than five days per week. Most participants owned a cell phone plan with unlimited text messaging. Socio-demographic characteristics of the participants are presented in Table 16.

Severity of Outcome Main Effect Result

Hypothesis 1, 2 and research questions 1, 2 were proposed to test the main effect of severity of the accident outcome and narratives on the dependent variables.

Hypothesis 1 stated that when the outcome of a texting-while-driving accident is severe, participants are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with the texting-while-driving mild outcome.

A 2 (severity of outcome: severe vs. mild) x 2 (narratives: endangering-self vs. endangering-others) x 2 (messages) repeated-measures ANCOVA was conducted to compare the effectiveness of two levels of outcome severity (severe and mild) and messages on the attribution of responsibility to the perpetrator, higher fine, attitudes toward the perpetrator, attitudes toward the victim, driver's traits, and behavioral intention of not to text and drive while controlling for covariates (age, gender, driving frequency, and cell phone plan). The correlation of each

dependent variable with the covariates were conducted. Covariates that were significantly correlated with the dependent variables were included in the ANCOVA analyses. The findings of the main effects of the severity of outcome are describing below. The ANCOVA result for main effect of severity of outcome and narratives is presented on Table 17.

(1)*Attribution of Responsibility to the Perpetrator/Responsible Driver*

The first dependent variable was the attribution of responsibility. Age and attitude toward texting and driving were added as covariates because these two variables were significantly correlated with the attribution of responsibility variable. There was a significant difference in the attribution of responsibility ($F(1, 461) = 7.51$, $p = .006$, $\eta_p^2 = .016$) between severe and mild accident outcomes. Comparing the estimated marginal means showed that the mild accident outcome generated greater attribution of responsibility ($M = 6.60$, $SD = .61$) than severe accident outcome ($M = 6.45$, $SD = .69$). Hypothesis 1 for attribution of responsibility to the perpetrator/responsible driver was not supported.

(2)Higher Fine

The second dependent variable was the higher fine. No covariates were added because none of the covariates variables were significantly correlated with the fine variable. There was a significant difference in higher fine between severe and mild accident outcomes ($F(1, 463) = 137.93$, $p < .001$, $\eta_p^2 = .23$). The estimated marginal mean suggested that the severe accident outcome generated assigning higher fine ($M = 59656.26$, SD=37457.42) than the mild outcome condition ($M = 36239.59$, SD=21980.76). The result goes in the direction of the hypothesis. Hypothesis 1 for higher fine was supported.

(3)Attitudes toward the Perpetrator

The third dependent variable was the attitudes toward the perpetrator. No covariates were added because none of the covariates variables were significantly correlated with the fine variable. There was no significant difference in attitudes toward the perpetrator between severe and mild accident outcomes, (F (1, 231) = 1.53, p=.22, η_p^2=.007). Hypothesis 1 for attitudes toward the perpetrator was not supported.

(4)Attitudes toward the Victim

The fourth dependent variable was the attitudes toward the victim. No covariates were added because none of the covariates variables were significantly correlated with the attitudes toward the victim variable. There was a significant difference in attitudes toward the victim between severe and mild accident outcomes (F (1, 461) = 13.60, p<.001, η_p^2=.029). The estimated marginal mean suggested that the severe accident outcome generated positive attitudes toward the victim (M=4.10, SD=1.50) than the mild outcome condition (M=3.73, SD=1.68). Hypothesis 1 for attitudes toward the victim was supported.

(5)Driver's Traits

The fifth dependent variable was the driver's trait. Driver's traits was measured by asking following question – "how would you rate the driver [name] based on the following traits?" – Self-discipline, patience, alertness (1=not all, 7- a lot). Age, gender, and attitudes toward texting and driving were significantly correlated with the driver's traits variable. Thus, age, gender, and attitudes toward texting and driving were added as covariates. There was a significant difference in driver's trait between severe and mild accident outcomes (F(1, 459) = 3.85, p=.050, η_p^2=.008). The estimated marginal mean suggested that participants rated the perpetrator with less positive

driver traits (M=1.85, SD=.77) in the mild outcome condition than the severe accident outcome (M=1.99, SD=.82). Hypothesis 1 for driver's traits was not supported.

The findings suggested that when the accident outcome was mild (victims were unharmed), participants assigned more responsibility and less positive driver's trait (e.g., low self-discipline, patience, and alertness) to the perpetrator in comparison with the severe outcome (victim were dead). In addition, attitudes toward the perpetrator was not significant. Thus, hypothesis 1 was not supported.

Table 18 (descriptive statistics of the main effects of severity of outcome and narratives on the dependent variables) summarizes the findings.

Narratives Main Effect Result

Hypothesis 2 stated that participants exposed to endangering-others message conditions are more likely to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display positive (favorable) attitudes toward the victim, and (d) rate the perpetrator negatively on driver's trait in comparison with endangering-self message condition. The findings are presented below.

(1) Attribution of Responsibility to the Perpetrator/Responsible Driver

The first dependent variable was the attribution of responsibility to the perpetrator/responsible driver. Age and attitudes toward texting and driving were significantly correlated with the attribution of responsibility variable, hence added as covariates. There was a significant difference in the attribution of responsibility ($F(1, 461) = 31.34$, $p<.001$, $\eta_p^2=.064$) between endangering-others and endangering-self message theme. Comparing the estimated marginal means showed that the endangering-others message theme generated greater attribution

of responsibility (*M*=6.69, *SD*=.59) than the endangering-self message theme (*M*=6.37, *SD*=.68). Hypothesis 2 for attribution of responsibility to the perpetrator/responsible driver was supported.

(2) Higher Fine

The second dependent variable was higher fine. No covariates were added because none of the covariates variables were significantly correlated with the fine variable. There was a significant difference in fine ($F(1, 463) = 363.81$, $p < .001$, $\eta_p^2 = .44$) between endangering-others and endangering-self message theme. The estimated marginal means showed that the endangering-others narratives generated assigning higher fine to the perpetrator/responsible person (*M*=66963.29, *SD*=30937.91) than the endangering-self message theme (*M*=28932.55, *SD*=21889.93). Hypothesis 2 for higher fine was supported.

(3) Attitudes toward the Victim

The third variable was attitudes toward the victim. No covariates were added because none of the covariates variables were significantly correlated with the attitudes toward the victim variable. There was a significant difference in attitudes toward the victim ($F(1, 461) = 532.49$, $p < .001$, $\eta_p^2 = .54$) between endangering-others and endangering-self narratives. The estimated marginal means showed that the endangering-others message theme generated greater favorable attitudes toward the victim (*M*=5.07, *SD*=1.06) than the endangering-self message theme (*M*=2.76, *SD*=1.15). Hypothesis 2 for attitudes toward the victim was supported.

(4) Driver's Traits

The fourth variable was driver's traits. Age, gender, and attitudes toward texting and driving were significantly correlated with the driver's traits variable, hence added as covariates. There was a significant difference in driver's traits ($F(1, 459) = 11.31$, $p = .001$, $\eta_p^2 = .024$) between endangering-others and endangering-self narratives. The estimated marginal means showed that

the endangering-others narratives generated less positive driver's traits (*M*=1.80, *SD*=.79) than the endangering-self narratives (*M*=2.03, *SD*=.79). That means participants in the endangering-others narrative condition perceived the responsible driver had less positive driver's traits, such as lower self-discipline, lower patience, and lower alertness than the driver in the endangering-self condition. Hypothesis 2 for driver's traits was supported.

The relationship between endangering-others messages to the dependent variables was significant. Hypothesis 2 was supported. Table 17 (Repeated Measures ANCOVA Direct Effect Table) summarizes the findings.

Severity of Outcome and Behavioral Intention not to Text and Drive Research Questions

Two research questions were proposed to show the relationship between outcome severity and behavioral intention not to text while driving. RQ1 stated – does outcome severity result in lower behavioral intention not to text while driving? RQ2 stated – does endangering-others result in lower behavioral intention not to text while driving?

Car ownership, driving frequency, age, and attitudes toward texting and driving were significantly correlated with the behavioral intention not to text while driving variable, hence added as covariates. The relationship between outcome severity (RQ1) and behavioral intention not to text while driving was not significant (F (1, 459) = .86, p=.35).

Similarly, narrative types (endangering-self and endangering-others), and behavioral intention not to text while driving was not significant (F(1, 459) =.16, p=.69). Table 17 on page 76 summarizes the findings of the severity of outcome and narrative types on behavioral intention not to text while driving.

Interaction of Severity of Outcome and Narratives

Research question 3 asked if severity of outcome and narratives interact on attribution of responsibility, fine, driver's traits, attitudes toward the victim, and behavioral intention to text while driving.

A 2 (severity of outcome: severe vs. mild) x 2 (narratives: endangering-self vs. endangering-others) x 2 (messages) mixed repeated-measures analysis of variance was conducted to analyze the RQ3.

(1)*Attribution of Responsibility to the Perpetrator/Responsible Driver*

The first dependent variable was attribution of responsibility to the perpetrator/responsible driver. Age and attitude toward texting and driving were significantly correlated with the attribution of responsibility variable. Thus, age and attitude toward texting-while-driving were added as covariates. There was a significant interaction between severity of outcome and narratives on attribution of responsibility to the perpetrator/responsible driver, (F(1, 461) =6.34, p=.012, η_p^2=.014), such that when the accident outcome was severe, endangering-others narratives generated greater attribution of responsibility in comparison with endangering-self narratives.

A one-way ANOVA revealed that there was a significant difference in attribution of responsibility to the perpetrator/responsible driver between endangering-self and endangering-others severe outcome narratives (F (1, 235) = 28.53, p<.001). Endangering-others severe accident outcome generated greater attribution of responsibility (M=6.68, SD=.56) than endangering-self severe accident outcome (M=6.21, SD=.74) (Figure 1).

In addition, a one-way ANOVA revealed that there was a significant difference in attribution of responsibility to the perpetrator/responsible driver between endangering-self and

endangering-others mild outcome narratives ($F(1, 230)=5.19$, $p=.024$). Endangering-others mild accident outcome generated greater attribution of responsibility ($M=6.69$, $SD=.63$) than endangering-self mild accident outcome ($M=6.52$, $SD=.59$) (Figure 1).

(2)*Higher Fine*

The second dependent variable was higher fine. No covariates were added because no covariates were significantly correlated with the fine variable. There was a significant interaction between severity of outcome and narratives on attribution of responsibility, ($F(1, 463) =118.60$, $p=<.001$, $\eta_p^2=.20$), such that when the accident outcome is severe, participants in the endangering-others narratives condition assigned higher fine to the perpetrator in comparison with endangering-self narrative condition.

A one-way ANOVA revealed that there was a significant difference in assigning fine between endangering-self and endangering-others severe outcome narratives ($F(1, 235) = 413.70$, $p<.001$). Endangering-others severe accident outcome narratives generated assigning higher fine to the perpetrator/responsible driver ($M=89528.77$, $SD=30336.51$) than endangering-self severe accident outcome narratives ($M=29783.75$, $SD=30271.62$) (Figure 2).

In addition, a one-way ANOVA revealed that there was a significant difference in assigning fine between endangering-self and endangering-others mild outcome narratives ($F(1, 230) = 36.77$, $p<.001$). Endangering-others mild accident outcome generated assigning higher fine to the responsible driver ($M=44397.82$, $SD=30596.87$) than endangering-self mild accident outcome ($M=28081.36$, $SD=30663.92$) (Figure 2).

(3) *Attitude toward the Victim*

The third dependent variable was attitudes toward the victim. No covariates were added because no covariates were significantly correlated with the attitudes toward the victim variable.

There was a significant interaction between severity of outcome and narratives on attitude toward the victim, ($F(1, 461) = 12.46$, $p = <.001$, $\eta_p^2 = .026$), such that when the accident outcome was severe, endangering-others narratives generated favorable attitudes toward the victim in comparison with the endangering-self narrative condition.

A one-way ANOVA revealed that there was a significant difference in attitudes toward the victim between endangering-self and endangering-others severe outcome narratives (F (1, 233) = 172.26, $p<.001$). Endangering-others severe accident outcome generated favorable attitudes toward the victim (M=5.08, SD=1.51) than endangering-self severe accident outcome (M=3.12, SD=1.53) (Figure 3).

In addition, a one-way ANOVA revealed that there was a significant difference in attitudes toward the victim between endangering-self and endangering-others mild outcome narratives (F (1, 230) = 398.53, $p<.001$). Endangering-others mild accident outcome generated favorable attitudes toward the victim (M=5.07, SD=1.53) than endangering-self mild accident outcome (M=2.40, SD=1.54) (Figure 3).

(4)Driver's Traits

The fourth dependent variable was driver's traits. Age, gender, and attitudes toward texting and driving were significantly correlated with the driver's traits. Thus, age, gender, and attitudes toward texting and driving were added as covariates. Participants were asked to rate the responsible driver based on three driver's traits – self-discipline (1= not at all, 7= a lot), patience (1= not at all, 7= a lot), and alertness (1=not at all, 7= a lot).

There was a significant interaction between severity of outcome and narratives on driver's traits, ($F(1, 459) = 6.90$, $p = .009$, $\eta_p^2 = .015$), such that when the accident outcome was severe, participants in the endangering-others narratives assigned less positive driver traits (lower

self-discipline, less patience, and less alertness) to the perpetrator/responsible driver in comparison with endangering-self narrative condition.

A one-way ANOVA revealed that there was a significant difference in driver traits between endangering-self and endangering-others severe outcome narratives (F (1, 234) = 15.47, p<.001). Endangering-others severe accident outcome generated less positive driver traits (M=1.78, SD=1.07) than endangering-self severe accident outcome (M=2.20, SD=1.07) (Figure 15).

However, a one-way ANOVA revealed that there is no significant difference in driver's trait between endangering-self and endangering-others mild outcome narrative (F (1, 230) = .360, p=.55) (Figure 15).

The findings suggest a statistically significant relationship between severity of outcome and endangering-others narratives on the dependent variables. Endangering-others severe accident outcome generated greater responsibility to the perpetrator/responsible driver, assigned higher fine, generated more positive attitudes toward the victim, and less positive driver's traits compared to endangering-self narratives.

(5)Behavioral Intention not to Text while Driving

The interaction of severity of outcome and narratives on behavioral intention to text while driving was not significant (F (1, 459) =.94, p=.33).

Table 19 (descriptive statistics of the interaction effect of severity of outcome and narratives on the dependent variables) summarizes the findings of the interaction effect.

Severity of Outcome Indirect Effect Results

The indirect effect analysis was conducted to examine the mediating effect of internal locus of control, external locus of control, and sympathy towards the victim on the DV's. Hypothesis 3 and 4 predicted that there will be an indirect effect between severity and DVs' through the perceived locus of control (internal locus of control and external locus of control), and sympathy towards the victim such that high severity will lead to high perceived internal locus of control (accident happened due to the perpetrator), low external locus of control (accident happened due to chance or bad luck), and high sympathy to the victim which leads to (a) assign greater responsibility to the perpetrator/responsible person, (b) assign higher legal action (e.g., higher fine), (c) more likely display negative attitudes toward the perpetrator, (d) more likely display positive (favorable) attitudes toward the victim, and (e) rate the perpetrator negatively on driver's trait in comparison with texting-while-driving mild-severity condition. Thus, as hypothesized, severity of the accident outcome should have a direct effect on attribution of responsibility to the perpetrator/responsible driver, fine, attitudes toward the perpetrator, attitudes toward the victim, driver's traits, and behavioral intention not to text while driving. However, from a theoretical standpoint, it is unknown whether there are significant indirect effects. In other words, the hypotheses predict relationships between severity of outcome and the dependent variables that are mediated by internal locus of control, external locus of control, and sympathy towards the victim.

To test this hypothesis, the study used a conditional indirect effects modeling program, PROCESS, that uses an ordinary least squares regression-based path analytical framework for direct and indirect effects (Hayes, 2012). PROCESS is appropriate to test the hypothesis because it allows researchers to explore the parallel mediation model to test for indirect effects. The

current study used PROCESS model 4. All indirect effects were subjected to follow-up bootstrap analysis with 5000 bootstrap samples and 95% bias-corrected confidence intervals.

To analyze the score of attitude toward the perpetrator, data were selected for severe and mild endangering-others condition only. Comparison between endangering-self and endangering-others narratives for attitudes toward the perpetrator was not possible because endangering-self narratives did not have a perpetrator.

Hayes Process Model (model 4) tests to see if any or all three mediators (internal locus of control, external locus of control, and sympathy towards the victim) mediate the relationship between severity of accident outcome and the dependent variables in a simultaneous model. For example, in the model, attribution of responsibility to the perpetrator/responsible driver was entered as the outcome variable, severity of outcome as the predictor variable, age and attitudes toward texting and driving as covariates, and all three variables (internal locus of control, external locus of control, and sympathy towards the victim) as mediators. No covariates were added for fine, attitudes toward the perpetrator, and attitudes toward the victim as no covariates were significantly correlated with these three dependent variables. Age, gender, and attitude toward texting while driving were significantly correlated with the driver's traits and added as covariates. Finally, car ownership, driving frequency, age, and attitudes toward texting while driving were significantly correlated with the behavioral intention not to text while driving and added as covariates.

The findings are presented below.

Attribution of Responsibility to the Perpetrator/Responsible Driver

Severity of accident outcome was still related to attribution of responsibility after indirect effects of the mediating variables were taken into account (Figure 5). The c′ path (direct effect)

from severity of outcome to attribution of responsibility to the perpetrator/responsible driver was significant (*b*=-.132, *SE*=.052, *p*=.011, 95% CI: -.234, -.030), indicating that when the severity of outcome was mild, participants assigned greater attribution of responsibility to the perpetrator/responsible driver and when the severity of outcome was high, participants assigned lower attribution of responsibility to the perpetrator/responsible driver.

(1) *Path coefficient of Internal Locus of Control*

The a-path of severity of the accident outcome to internal locus of control was not significant, *b*=-.099, *SE*=.052, *p*=.057, 95% CI: -.202, .003, R^2=.080.

However, the b-path of internal locus of control to responsibility was significant (*b*=.552, SE=.047, *p*<.001, 95% CI: .461, .644), indicating that higher internal locus of control (means the accident happened due to the perpetrator) determines higher attribution of responsibility to the perpetrator/responsible driver. Internal locus of control did not mediate the relationship between severity of outcome and attribution of responsibility to the perpetrator/responsible driver.

(2) *Path Coefficient of External Locus of Control*

The a-path of severity of outcome to external locus of control was not significant, *b*=-.123, *SE*=.090, *p*=.172, 95% CI: -.054, .300, R^2=.051. However, the b-path of external locus of control to responsibility was significant (*b*=-.093, *SE*=.027, *p*=.001, 95% CI: -.146, -.041), indicating that lower external locus of control (means the accident did not happen due to chance or bad luck) determines higher attribution of responsibility to the perpetrator and higher external locus of control (means the accident happened due to chance or bad luck) determines lower attribution of responsibility to the perpetrator. External locus of control did not mediate the relationship between severity of outcome and attribution of responsibility to the perpetrator/responsible driver.

(3) *Path Coefficient of Sympathy towards the Victim*

The a-path of severity of outcome to sympathy towards the victim was significant, (*b*=1.139, *SE*=.182, *p*<.001, 95% CI: .781, 1.497, R^2=.081), indicating that severe accident outcome generated greater sympathy to the victim in comparison with mild accident outcome.

In addition, the b-path of sympathy towards the victim to attribution of responsibility to the perpetrator/responsible driver was significant, (*b*=.038, *SE*=.013, *p*=.003, 95% CI: .013, .063), indicating that greater sympathy to the victim generated greater attribution of responsibility to the perpetrator/responsible driver. That means sympathy towards the victim mediated the relationship between severity of outcome and attribution of responsibility to the perpetrator/responsible driver.

Total and Indirect Effect

The total effect was not significant, *b*=-.024, *SE*=.039, 95% CI: -.103, .049. The indirect effect of severity on attribution of responsibility to the perpetrator/responsible driver through internal locus of control was not significant, *b*=-.055, *SE*=.031, 95% CI: -.121, .001. In addition, the indirect effect of severity of outcome on attribution of responsibility to the perpetrator/responsible driver through external locus of control was not significant, *b*=-.012, *SE*=.009, 95% CI: -.031, .005.

However, severity of outcome indirectly influenced attribution of responsibility to the perpetrator/responsible driver through sympathy towards the victim, *b*=.043, *SE*=.016, 95% CI: .015, .079. According to a-path and b-path, severity of outcome positively predicted sympathy towards the victim and sympathy towards the victim positively predicted attribution of responsibility to the perpetrator/responsible driver.

The direct effect of severity of outcome to attribution of responsibility to the perpetrator/responsible driver was significant. In short, the relationship between severity of outcome and attribution of responsibility to the perpetrator/responsible driver was partially mediated by sympathy towards the victim.

Higher Fine

Severity of accident outcome was still related to higher fine even after indirect effects of the mediating variables were taken into account (Figure 6). The c′ path (direct effect) from severity of outcome to higher fine was significant (*b*=17109.762, *SE*=2646.112, *p*<.001, 95% CI: 11909.796, 22309.729), indicating that when the accident outcome was severe, participants assigned higher fine to the perpetrator/responsible driver.

(1) *Path Coefficient of Internal Locus of Control*

The a-path of severity of outcome to internal locus of control was not significant, (*b*=-.091, *SE*=.054, *p*=.093, 95% CI: -.197, .015, R^2=.006).

However, the b-path of internal locus of control to fine was significant, (*b*=9323.411, *SE*=2311.488, *p*<.001, 95% CI: 4781.025, 13865.797), indicating that higher internal locus of control (means the accident happened due to the perpetrator) determines assigning higher fine to the perpetrator/responsible driver. Internal locus of control did not mediate the relationship between severity of outcome and assigning higher fine to the perpetrator/responsible driver.

(2) *Path Coefficient of External Locus of Control*

The a-path of severity of outcome to external locus of control was not significant, (*b*=.108, *SE*=.092, *p*=.239, 95% CI: -.072, .289, R^2=.003).

And the b-path of external locus of control to fine was also not significant, (*b*=-2234.630, *SE*=1344.672, *p*=.097, 95% CI: -4877.091, 407.831). External locus of control did not mediate

the relationship between severity of outcome and assigning higher fine to the perpetrator/responsible driver.

(3) Path Coefficient of Sympathy towards the Victim

The a-path of severity of outcome to sympathy towards the victim was significant, (*b*=1.131, *SE*=.182, *p*<.001, 95% CI: .773, 1.489, R^2=.077), indicating that severe accident outcome generated greater sympathy toward the victim in comparison with mild accident outcome.

In addition, the b-path of sympathy towards the victim to fine was significant, (*b*=6261.161, *SE*=649.313, *p*<.001, 95% CI: 4985.174, 7537.149), indicating that greater sympathy towards the victim generated assigning higher fine to the perpetrator/responsible driver. That means, sympathy towards the victim mediated the relationship between severity of outcome and assigning higher fine to the perpetrator/responsible driver.

Total and Indirect Effect

The total effect was significant, *b*=5990.881, *SE*=1560.756, 95% CI: 3002.766, 9160.351. The indirect effect of severity of outcome on fine through internal locus of control was not significant, *b*=-845.872, *SE*=595.342, 95% CI: -2226.617, 106.582. The indirect effect of severity of outcome on fine through external locus of control was not significant, *b*=-242.240, *SE*=282.770, 95% CI: -919.320, 190.279.

However, severity of outcome indirectly influenced assigning higher fine to the perpetrator/responsible person through sympathy towards the victim, *b*=7078.993, *SE*=1312.229, 95% CI: 4682.645, 9779.744. According to a-path and b-path, severity of outcome positively predicted sympathy towards the victim and sympathy towards the victim positively predicted assigning higher fine to the perpetrator/responsible driver.

The direct effect of severity of outcome to fine was significant. The relationship between severity of outcome and assigning higher fine to the perpetrator/responsible driver was partially mediated by sympathy towards the victim.

Attitude toward the Perpetrator

Severity of accident outcome was not related to attitude toward the perpetrator (Figure 7). The c′ path (direct effect) from severity of outcome to attitudes toward the perpetrator was not significant (*b*=-.025, *SE*=.127, *p*=.846, 95% CI: -.276, .226).

(1)*Path Coefficient of Internal Locus of Control*

The a-path of severity of outcome to internal locus of control was not significant, (*b*=-.063, *SE*=.069, *p*=.358, 95% CI: -.199, .072, R^2=.004). In addition, the b-path of internal locus of control to attitudes toward the perpetrator was not significant, (*b*=.055, *SE*=.132, *p*=.679, 95% CI: -.206, .315). Internal locus of control did not mediate the relationship between severity of outcome and attitude toward the perpetrator.

(2)*Path Coefficient of External Locus of Control*

The a-path of severity of outcome to external locus of control was not significant, (*b*=-.046, *SE*=.127, *p*=.717, 95% CI: -.295, .203, R^2=.001). However, the b-path of external locus of control to attitude toward the perpetrator was significant, (*b*=.229, *SE*=.065, *p*=.001, 95% CI: .101, .358), indicating that higher external locus of control (means the accident happened due to chance or bad luck) determines positive attitudes to the perpetrator/responsible person. External locus of control did not mediate the relationship between severity of outcome and attitude toward the perpetrator.

(3)Path Coefficient of Sympathy towards the Victim

The a-path of severity of outcome to sympathy towards the victim was significant, (*b*=.390, *SE*=.094, *p*<.001, 95% CI: .206, .575, R^2=.070), indicating that severe accident outcome generated greater sympathy towards the victim in comparison with mild accident outcome. In addition, the b-path of sympathy towards the victim to attitude toward the perpetrator was significant, (*b*=-.304, *SE*=.095, *p*=.002, 95% CI: -.491, -.118), indicating that greater sympathy towards the victim generated negative attitude toward the perpetrator. And lower sympathy to the victim generated positive attitude toward the perpetrator. That means, sympathy towards the victim mediated the relationship between severity of outcome and attitudes toward the perpetrator/responsible driver.

Total and Indirect Effect

The total effect was significant, *b*=-.133, *SE*=.068, 95% CI: -.282, -.015. The indirect effect of severity of outcome on attitudes toward the perpetrator/responsible driver through internal locus of control was not significant, *b*=-.004, *SE*=.014, 95% CI: -.038, .022. The indirect effect of severity of outcome on attitude toward the perpetrator/responsible driver through external locus of control was not significant, *b*=-.011, *SE*=.033, 95% CI: -.092, .044.

However, Severity of outcome indirectly influenced negative attitude to the perpetrator/responsible person through sympathy towards the victim, *b*=-.119, *SE*=.051, 95% CI: -.231, -.035. According to a-path and b-path, severity of outcome positively predicted sympathy towards the victim and sympathy towards the victim negatively predicted attitude toward the perpetrator/responsible driver.

The direct effect of severity of outcome to attitude toward the perpetrator was not significant. The relationship between severity of outcome and attitude toward the perpetrator was fully mediated by through sympathy towards the victim.

Attitudes toward the Victim

Severity of accident outcome was still related to attitudes toward the victim even after indirect effects of the mediating variables were taken into account (Figure 8). The c′ path (direct effect) from severity of outcome to attitudes toward the victim was significant (*b*=-.316, *SE*=.102, *p*=.002, 95% CI: -.517, -.115), indicating that participants in mild accident outcome condition had more positive attitudes toward the victim than the participants in the severe accident outcome condition.

(1)*Path Coefficient of Internal Locus of Control*

The a-path of severity of outcome to internal locus of control was not significant, (*b*=-.090, *SE*=.054, *p*=.096, 95% CI: -.196, .016, R^2=.006). In addition, the b-path of internal locus of control to attitudes toward the victim was also not significant, (*b*=.062, *SE*=.089, *p*=.487, 95% CI: -.113, .237). Internal locus of control did not mediate the relationship between severity of outcome and attitudes toward the victim.

(2)*Path Coefficient of External Locus of Control*

The a-path of severity of outcome to external locus of control was not significant, (*b*=.111, *SE*=.092, *p*=.228, 95% CI: -.070, .292, R^2=.003). In addition, the b-path of external locus of control to attitude toward the victim was also not significant, (*b*=-.086, *SE*=.052, *p*=.097, 95% CI: -.188, .016). External locus of control did not mediate the relationship between severity of outcome and attitudes toward the victim.

(3)*Path Coefficient of Sympathy towards the Victim*

The a-path of severity of outcome to sympathy towards the victim was significant, (*b*=1.142, *SE*=.182, *p*<.001, 95% CI: .784, 1.500, R^2=.079), indicating that severe accident outcome generated greater sympathy towards the victim in comparison with the mild accident outcome. In addition, the b-path of sympathy towards the victim to attitude toward the victim was significant, (*b*=.607, *SE*=.025, *p*<.001, 95% CI: .557, .656), indicating that greater sympathy towards the victim generated positive attitude toward the victim. That means, sympathy towards the victim mediated the relationship between severity of outcome and attitudes toward the victim.

Total and Indirect Effect

The total effect was significant, *b*=.678, *SE*=.120, 95% CI: .445, .917. The indirect effect of severity of outcome on attitudes toward the victim through internal locus of control was not significant, *b*=-.006, *SE*=.010, 95% CI: -.031, .010. The indirect effect of severity of outcome on attitude toward the victim through external locus of control was not significant, *b*=-.010, *SE*=.011, 95% CI: -.037, .007.

However, severity of outcome indirectly influenced positive attitude toward the victim through sympathy towards the victim, *b*=.693, *SE*=.118, 95% CI: .464, .930. According to a-path and b-path, severity of outcome positively predicted sympathy towards the victim and sympathy towards the victim positively predicted attitude toward the victim.

The direct effect of severity of outcome to attitude toward the victim was significant. The relationship between severity of outcome and attitude toward the victim was partially mediated by sympathy towards the victim.

Driver's Trait

Severity of accident outcome was not related to driver's traits (Figure 9). The c′ path (direct effect) from severity of outcome to driver's traits was not significant (*b*=.056, *SE*=.069, *p*=.413, 95% CI: -.079, .191).

(1)*Path coefficient of internal locus of control*

The a-path of severity of outcome to internal locus of control was not significant, (*b*=-.101, *SE*=.052, *p*=.055, 95% CI: -.203, .002, R^2=.080).

However, the b-path of internal locus of control to driver's trait was significant, (*b*=-.461, *SE*=.061, *p*<.001, 95% CI: -.581, -.340), indicating that higher internal locus of control (means the accident happened due to the perpetrator) determined less positive driver's traits (means lower self-discipline, alertness, and patience) and lower internal locus of control (means the accident did not happen due to the perpetrator) determined more positive driver's traits (means higher self-discipline, alertness, and patience). That means, internal locus of control did not mediate the relationship between severity of outcome and driver's traits.

(2)*Path Coefficient of External Locus of Control*

The a-path of severity of outcome to external locus of control was not significant, (*b*=.116, *SE*=.090, *p*=.198, 95% CI: -.061, .294, R^2=.053). However, the b-path of external locus of control to driver's traits was significant, (*b*=.126, *SE*=.035, *p*=.001, 95% CI: .057, .195), indicating that higher external locus of control (means the accident happened due to chance or bad luck) determined more positive driver's traits (perpetrator/responsible driver had self-discipline, alertness, and patience). External locus of control did not mediate the relationship between severity of outcome and driver's traits.

(3)*Path Coefficient of Sympathy towards the Victim*

The a-path of severity of outcome to sympathy towards the victim was significant, (*b*=1.120, *SE*=.183, *p*<.001, 95% CI: .761, 1.479, R^2=.083), indicating that severe accident outcome generated greater sympathy towards the victim in comparison with mild accident outcome. However, the b-path of sympathy towards the victim to driver's traits was not significant, (*b*=.013, *SE*=.017, *p*=.444, 95% CI: -.020, .046). That means, sympathy towards the victim did not mediate the relationship between severity of outcome and driver's traits.

Total and Indirect Effect

The total effect was significant, *b*=.076, *SE*=.037, 95% CI: .007, .151. The indirect effect of severity of outcome on driver's traits through internal locus of control was not significant, *b*=-.046, *SE*=.027, 95% CI: -.001, .104. The indirect effect of severity of outcome on driver's traits through external locus of control was also not significant, *b*=.015, *SE*=.014, 95% CI: -.009, .048. In addition, the indirect effect of severity of outcome on driver's traits through sympathy towards the victim was not significant *b*=.015, *SE*=.018, 95% CI: -.021, .052. That means, the relationship between severity of outcome and driver's traits was not mediated by internal locus of control, external locus of control, and sympathy towards the victim.

The indirect effect of severity of outcome and the DVs (attribution of responsibility to the perpetrator, fine, attitude toward the perpetrator, attitude toward the victim, and driver's traits) through internal and external locus of control was not significant. Hypothesis 3 was not supported.

The indirect effect of severity of outcome and the DVs (attribution of responsibility to the perpetrator, fine, attitude toward the perpetrator, and attitude toward the victim) through sympathy toward the victim was statistically significant. However, the indirect effect of severity

of outcome and driver's traits through sympathy towards the victim was not significant. Hypothesis 4 was partially supported.

Indirect Effect of Severity of outcome and Behavioral Intention through the Mediators

Research questions 4, and 5 asked – Do high/low internal and external locus of control and sympathy towards the victim mediate the relationship between severity of outcome and behavioral intention not to text while driving?

The findings are presented below:

Severity of accident outcome was not related to behavioral intention not to text while driving (Figure 10). The c′ path (direct effect) from severity of outcome to behavioral intention not to text while driving was not significant (*b*=-.083, *SE*=.088, *p*=.342, 95% CI: -.255, .089).

(1)*Path Coefficient of Internal Locus of Control*

The a-path of severity of outcome to internal locus of control was not significant, (*b*=-.097, *SE*=.052, *p*=.062, 95% CI: -.199, .005, R^2=.090). In addition, the b-path of internal locus of control to behavioral intention to not to text while driving was not significant, (*b*=-.090, *SE*=.079, *p*=.253, 95% CI: -.245, .065). Internal locus of control did not mediate the relationship between severity of outcome and behavioral intention not to text while driving.

(2)*Path Coefficient of External Locus of Control*

The a-path of severity of outcome to external locus of control was not significant, (*b*=.130, *SE*=.090, *p*=.147, 95% CI: -.046, .307, R^2=.065). In addition, the b-path of external locus of control to behavioral intention to not to text while driving was not significant, (*b*=.009, *SE*=.045, *p*=.842, 95% CI: -.080, .098). External locus of control did not mediate the relationship between severity of outcome and behavioral intention not to text while driving.

(3)*Path Coefficient of Sympathy towards the Victim*

The a-path of severity of outcome to sympathy towards the victim was significant, (*b*=1.153, *SE*=.182, *p*<.001, 95% CI: .795, 1.511, R^2=.087), indicating that severe accident outcome generated greater sympathy towards the victim in comparison with mild accident outcome. However, the b-path of sympathy towards the victim to behavioral intention not to text while driving was not significant, (*b*=-.007, *SE*=.022, *p*=.746, 95% CI: -.049, .035). Sympathy towards the victim did not mediate the relationship between severity of outcome and behavioral intention not to text while driving.

Total and Indirect Effect

The total effect was not significant, *b*=.002, *SE*=.027, 95% CI: -.052, .054. The indirect effect of severity of outcome on behavioral intention not to text while driving through internal locus of control was not significant, *b*=.009, *SE*=.010, 95% CI: -.008, .032. The indirect effect of severity of outcome on behavioral intention to not to text while driving through external locus of control was also not significant, *b*=.001, *SE*=.008, 95% CI: -.016, .017. In addition, the indirect effect of severity of outcome on behavioral intention to not to text while driving through sympathy towards the victim was not significant *b*=-.008, *SE*=.024, 95% CI: -.055, .039. There is no mediating effect of internal locus of control, external locus of control, and sympathy towards the victim on the severity of outcome and the behavioral intention not to text while driving.

Indirect Effect of Narratives and the DVs through the Mediators

Research question 6 asked if internal and external locus of control mediate the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver, fine, attitudes toward the perpetrator, attitudes toward the victim, driver's traits, and behavioral intention not to text while driving.

Research question 7 asked if sympathy towards the victim mediates the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver, fine, attitudes toward the perpetrator, attitudes toward the victim, driver's traits, and behavioral intention not to text while driving.

Hayes Process Model (model 4) tests to see if any or all three mediators (internal locus of control, external locus of control, and sympathy towards the victim) mediate the relationship between narratives and the dependent variables in a simultaneous model. For example, in the model, attribution of responsibility to the perpetrator/responsible driver was entered as the outcome variable, narratives as the predictor variable, age and attitudes toward texting and driving as covariates, and all three variables (internal locus of control, external locus of control, and sympathy towards the victim) as mediators. No covariates were added for fine, attitudes toward the perpetrator, and attitudes toward the victim as no covariates were significantly correlated with these three dependent variables. Age, gender, and attitude toward texting while driving were significantly correlated with the driver's traits and added as covariates. Finally, car ownership, driving frequency, age, and attitudes toward texting while driving were significantly correlated with the behavioral intention not to text while driving and added as covariates.

The findings are presented below.

Attribution of Responsibility to the Perpetrator/Responsible Driver

Narratives was still related to attribution of responsibility to the perpetrator/responsible driver even after indirect effects of the mediating variables were taken into account (Figure 11). The c′ path (direct effect) from narratives to attribution of responsibility to the perpetrator/responsible driver was significant (*b*=.187, *SE*=.078, *p*=.016, 95% CI: .035, .339),

indicating that in the endangering-other narratives, participants assigned greater attribution of responsibility to the perpetrator in comparison with endangering-self narratives.

(1)Path Coefficient of Internal Locus of Control

The a-path of narratives to internal locus of control was significant, b=.241, SE=.051, p<.001, 95% CI: .141, .341, R^2=.340, indicating endangering-others narratives generated higher internal locus of control (means the accident happened due to the perpetrator).

In addition, the b-path of internal locus of control to attribution of responsibility to the perpetrator/responsible driver was also significant (b=.547, SE=.047, p<.001, 95% CI: .455, .639), indicating that higher internal locus of control (means the accident happened due to the perpetrator) determines higher attribution of responsibility to the perpetrator/responsible driver. Internal locus of control mediates the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver.

(2)Path Coefficient of External Locus of Control

The a-path of narratives to external locus of control was significant, b= -.282, SE=.089, p=.002, 95% CI: -.458, -.107, R^2=.259, indicating that endangering-others narrative generated lower external locus of control (means the accident did not happen due to chance or bad luck) and endangering-self condition generated higher external locus of control (means the accident happened due to chance or bad luck). In addition, the b-path of external locus of control to attribution of responsibility to the perpetrator/responsible driver was also significant (b=-.086, SE=.027, p=.002, 95% CI: -.139, -.033), indicating that lower external locus of control (means the accident did not happen due to chance or bad luck) determined higher attribution of responsibility to the perpetrator/responsible driver and higher external locus of control (means the accident happened due to chance or bad luck) determined lower attribution of responsibility

to the perpetrator. External locus of control mediated the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver.

(3)Path Coefficient of Sympathy towards the Victim

The a-path of narratives to sympathy towards the victim was significant, (b=3.06, SE=.125, p<.001, 95% CI: 2.817, 3.309, R^2=.753), indicating that endangering-others narrative generated greater sympathy towards the victim in comparison with endangering-self narrative.

However, the b-path of sympathy towards the victim to attribution of responsibility to the perpetrator was not significant, (b=-.006, SE=.019, p=.756, 95% CI: -.042, .031). Sympathy toward the victim did not mediate the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver.

Total and Indirect Effect

The total effect was not significant, b=.138, SE=.071, 95% CI: -.009, .272. The indirect effect of narratives on attribution of responsibility to the perpetrator/responsible driver through internal locus of control was significant, b=.132, SE=.031, 95% CI: .074, .193. According to a-path and b-path, narratives positively predicted internal locus of control and internal locus of control positively predicted attribution of responsibility to the perpetrator/responsible driver. That means, endangering-others narratives (in comparison with endangering-self narratives) generated higher internal locus of control (that means the accident happened due to the driver), which in turn increases attribution of responsibility to the perpetrator/responsible driver.

In addition, the indirect effect of narratives on the attribution of responsibility through the external locus of control was significant, b=.024, SE=.011, 95% CI: -.006, .047. According to the a-path and b-path, narratives negatively predicted external locus of control, and external locus of control negatively predicted attribution of responsibility to the perpetrator. That means,

endangering-others narratives (in comparison with endangering-self narratives) generated lower external locus of control (that means the accident did not happen due to chance or bad luck), and higher external locus of control (generated by endangering-others narratives) reduces attribution of responsibility to the perpetrator/responsible driver. Conversely, endangering-self narratives generated higher external locus of control (that means the accident happened due to chance or bad luck), and higher external locus of control (generated by endangering-self narratives) reduces attribution of responsibility to the perpetrator.

The direct effect of narratives on attribution of responsibility to the perpetrator/responsible driver was significant. Narratives had an effect on the attribution of responsibility to the perpetrator/responsible driver. In addition, internal locus of control and external locus of control both had a mediating effect on the attribution of responsibility to the perpetrator/responsible driver. In short, the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver was partially mediated by the internal locus of control and external locus of control. /

However, narratives did not indirectly influence attribution of responsibility to the perpetrator through sympathy towards the victim, b=-.018, SE=.064, 95% CI: -.147, .106.

Higher Fine

Narratives was still related to higher fine even after indirect effects of the mediating variables were taken into account (Figure 12). The c′ path (direct effect) from narratives to higher fine was significant (b=31103.641, SE=3876.912, p<.001, 95% CI: 23484.987, 38722.295), indicating that endangering-others narratives generated assigning higher fine to the perpetrator/responsible driver in comparison with endangering-self narratives.

(1)*Path Coefficient of Internal Locus of Control*

The a-path of narratives to internal locus of control was significant, (*b*=.244, *SE*=.053, *p*<.001, 95% CI:.140, .348, R^2=.044), indicating that endangering-others narratives generated higher internal locus of control (the accident happened due to the perpetrator/responsible driver).

In addition, the b-path of internal locus of control to fine was also significant, (*b*=4985.692, *SE*=2280.338, *p*=.029, 95% CI: 504.520, 9466.864), indicating that higher internal locus of control (means the accident happened due to the perpetrator) determined assigning higher fine to the perpetrator/responsible driver. Internal locus of control mediated the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver.

(2)*Path Coefficient of External Locus of Control*

The a-path of narratives to external locus of control was significant, (*b*=-.278, *SE*=.091, *p*=.002, 95% CI: -.458, -.099, R^2=.020). Endangering-others narratives determined lower external locus of control (means the accident did not happen due to chance or bad luck) and endangering-self narratives determined higher external locus of control (means the accident happened due to chance or bad luck).

However, the b-path of external locus of control to fine was not significant, (*b*=-415.941 *SE*=1329.982, *p*=.755, 95% CI: -3029.534, 2197.652). External locus of control did not mediate the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver.

(3)*Path Coefficient of Sympathy towards the Victim*

The a-path of narratives to sympathy towards the victim was significant, (*b*=3.064, *SE*=.125, *p*<.001, 95% CI: 2.819, 3.310, R^2=.564), indicating that endangering-others narratives generated greater sympathy towards the victim in comparison with endangering-self narratives.

In addition, the b-path of sympathy towards the victim to fine was also significant, (*b*=1814.252, *SE*=930.564, *p*=.052, 95% CI: -14.431, 3642.935), indicating that greater sympathy towards the victim generated assigning higher fine to the perpetrator/responsible driver. That means, sympathy towards the victim mediated the relationship between narratives and fine.

Total and Indirect Effect

The total effect was significant, *b*=6891.552, *SE*=2655.014, 95% CI: 1768.053, 12143.627.

The indirect effect of narratives on fine through internal locus of control was significant, *b*=1216.238, *SE*=569.720, 95% CI: 165.746, 2384.436. According to a-path and b-path, narratives positively predicted internal locus of control and internal locus of control positively predicted assigning higher fine to the perpetrator/responsible driver. That means, endangering-others narratives (in comparison with endangering-self narratives) generated higher internal locus of control (that means the accident happened due to the perpetrator/responsible driver), which in turn influences assigning higher fine to the perpetrator/responsible driver.

In addition, the indirect effect of narratives on fine through sympathy towards the victim was significant, *b*=5559.579, *SE*=2487.856, 95% CI: 755.889, 10409.778. According to a-path and b-path, narratives positively predicted sympathy towards the victim and sympathy towards the victim positively predicted assigning higher fine to the perpetrator. That means, endangering-

others narratives (in comparison with endangering-self narratives) generated greater sympathy to the victim, which in turn influenced assigning higher fine to the perpetrator/responsible driver.

The indirect effect of narratives on fine through external locus of control was not significant, *b*=115.736, *SE*=401.308, 95% CI: -711.863, 934.359.

The direct effect of narratives on assigning higher fine to the perpetrator/responsible driver was significant. Narratives had an effect on assigning fine to the perpetrator/responsible driver. In addition, the indirect effect of internal locus of control and sympathy towards the victim was also significant. Both internal locus of control and sympathy towards the victim had a mediating effect on assigning higher fine to the perpetrator/responsible driver. In short, the relationship between narratives and assigning higher fine to the perpetrator/responsible driver are partially mediated by the internal locus of control and sympathy towards the victim.

Attitudes toward the Victim

Narratives was still related to attitudes toward the victim even after indirect effects of the mediating variables were taken into account (Figure 13). The c′ path (direct effect) from narratives to attitudes toward the victim was significant (*b*=1.154, *SE*=.145, *p*=<.001, 95% CI: .869, 1.439), indicating that endangering-others narratives generated positive attitudes toward the victim in comparison with endangering-self narratives.

(1)*Path Coefficient of Internal Locus of Control*

The a-path of narratives to internal locus of control was significant, (*b*=.244, *SE*=.053, *p*<.001, 95% CI:.140, .348, R^2=.440), indicating that endangering-others narratives generated higher internal locus of control (the accident happened due to the perpetrator).

However, the b-path of internal locus of control to attitudes toward the victim was not significant, (*b*=-.018, *SE*=.085, *p*=.835, 95% CI: -.185, .149). Internal locus of control did not mediate the relationship between narratives and attitude toward the victim.

(2)*Path Coefficient of External Locus of Control*

The a-path of narratives to external locus of control was significant, (*b*=-.282, *SE*=.091, *p*=.002, 95% CI: -.461, -.102, R^2=.020), indicating that endangering-others narratives generated lower external locus of control (that means the accident did not happen due to chance or bad luck) and endangering-self narratives generated higher external locus of control (that means the accident happened due to chance or bad luck).

However, the b-path of external locus of control to attitudes toward the victim was not significant, (*b*=-.032, *SE*=.050, *p*=.514, 95% CI: -.130, .065). External locus of control did not mediate the relationship between narratives and attitude toward the victim.

(3)*Path Coefficient of Sympathy towards the Victim*

The a-path of narratives to sympathy towards the victim was significant, (*b*=3.071, *SE*=.125, *p*<.001, 95% CI: 2.826, 3.316, R^2=.568), indicating that endangering-others narratives generated greater sympathy to the victim in comparison with endangering-self narratives.

In addition, the b-path of sympathy towards the victim to attitude towards the victim was also significant, (*b*=.374, *SE*=.035, *p*<.001, 95% CI: .306, .443), indicating that greater sympathy towards the victim generated positive attitudes toward the victim. That means, sympathy towards the victim mediated the relationship between narratives and attitudes toward the victim.

Total and Indirect Effect

The total effect was significant, *b*=1.154, *SE*=.127, 95% CI: .904, 1.413.

The indirect effect of narratives on attitude towards the victim through internal locus of control was not significant, *b*=-.004, *SE*=.020, 95% CI: -.047, .033. The indirect effect of narratives on attitude towards the victim through external locus of control was not significant, *b*=.009, *SE*=.015, 95% CI: -.018, .042.

The indirect effect of narratives on attitude towards the victim through sympathy towards the victim was significant, *b*=1.149, *SE*=.125, 95% CI: .912, 1.40. According to a-path and b-path, narratives positively predicted sympathy towards the victim and sympathy towards the victim positively predicted attitudes toward the victim. That means, endangering-others narratives (in comparison with endangering-self narratives) generated greater sympathy towards the victim, which in turn generated positive attitudes toward the victim.

The direct effect of narratives on attitudes toward the victim was significant. Narratives had an effect on forming positive attitudes toward the victim. In addition, the indirect effect of sympathy towards the victim was also significant. Sympathy towards the victim had a mediated effect on forming positive attitudes toward the victim. In short, the relationship between narratives and attitudes toward the victim was partially mediated by the sympathy towards the victim.

Driver's Traits

Narratives was still related to driver's traits even after indirect effects of the mediating variables were taken into account (Figure 14).

The c′ path (direct effect) from narratives to driver's traits was significant (*b*=-.364, *SE*=.101, *p*<.001, 95% CI: -.563, -.165), indicating that endangering-others narratives generated less positive driver's traits (e.g., lower self-disciple, alertness, and patience) in comparison with endangering-self narratives.

(1)*Path Coefficient of Internal Locus of Control*

The a-path of narratives to internal locus of control was significant, (*b*=.241, *SE*=.051, *p*<.001, 95% CI:.140, .341, R^2=.115), indicating that endangering-others narratives (in comparison with endangering-self narratives) generated higher internal locus of control (the accident happened due to the perpetrator/responsible driver).

In addition, the b-path of internal locus of control to drive's traits was also significant, (*b*=-.431, *SE*=.061, *p*<.001, 95% CI: -.551, -.311), indicating that higher internal locus of control (that means the accident happened due to the perpetrator/responsible driver) generated less positive driver's traits (such as, lower self-discipline, alertness, and patience) and lower internal locus of control (that means the accident did not happened due to the perpetrator/responsible driver) generated more positive driver's traits (such as, higher self-discipline, alertness, and patience). In short, internal locus of locus mediated the relationship between narratives and driver's traits.

(2)*Path Coefficient of External Locus of Control*

The a-path of narratives to external locus of control was significant, (*b*=-.290, *SE*=.089, *p*=.001, 95% CI: -.465, -.114, R^2=.071), indicating that endangering-others narratives generated lower external locus of control (that means the accident did not happen due to chance or bad luck) and endangering-self narratives generated higher external locus of control (that means the accident happened due to chance or bad luck).

In addition, the b-path of external locus of control to driver's traits was also significant, (*b*=.108, *SE*=.035, *p*=.002, 95% CI: .038, .177), indicating that higher external locus of control (that means the accident happened due to chance or bad luck) generated higher driver's traits

(such as, higher self-discipline, higher patience, and higher alertness). In short, external locus of control mediated the relationship between narratives and driver's traits.

(3)*Path Coefficient of Sympathy towards the Victim*

The a-path of narratives to sympathy towards the victim was significant, (*b*=3.059, *SE*=.125, *p*<.001, 95% CI: 2.813, 3.305, R^2=.570), indicating that endangering-others narratives generated greater sympathy towards the victim in comparison with endangering-self narratives.

In addition, the b-path of sympathy towards the victim to driver's traits was also significant, (b=.083, *SE*=.024, *p*=.001, 95% CI: .035, .131), indicating that greater sympathy towards the victim generated more positive driver's traits (such as, higher self-discipline, alertness, and patience). In short, sympathy towards the victim mediated the relationship between narratives and driver's traits.

Total and Indirect Effect

The total effect was not significant, *b*=.119, *SE*=.086, 95% CI: -.050, .291.

The indirect effect of narratives on driver's traits through internal locus of control was significant, *b*=-.104, *SE*=.029, 95% CI: -.167, -.053. According to a-path and b-path, narratives positively predicted internal locus of control, and higher internal locus of control negatively predicted driver's traits. That means, endangering-others narratives increases internal locus of control (the accident happened due to the perpetrator/responsible driver), which in turn decreases driver's traits (that means driver had lower self-discipline, patience, and alertness).

The indirect effect of narratives on driver's traits through external locus of control was not significant, *b*=-.031, *SE*=.020, 95% CI: -.076, .003.

The indirect effect of narratives on driver's traits through sympathy towards the victim was significant, *b*=.254, *SE*=.077, 95% CI: .105, .409. Narratives positively predicted sympathy

towards the victim and sympathy towards the victim positively predicted driver's traits. That means, endangering-others narratives (in comparison with endangering-self narratives) generated greater sympathy to the victim, which in turn generated more positive driver's traits (higher self-discipline, alertness, and patience).

The direct effect of narratives to driver's traits was significant. The relationship between narratives and driver's traits was partially mediated by internal locus of control and sympathy towards the victim.

Behavioral Intention not to Text while Driving

The c′ path (direct effect) from narratives to behavioral intention not to text while driving was not significant (*b*=.058, *SE*=.131, *p*=.656, 95% CI: -.198, .315).

(1)*Path Coefficient of Internal Locus of Control*

The a-path of narratives to internal locus of control was significant, (*b*=.241, *SE*=.051, *p*<.001, 95% CI: 141, .341, R^2=.126), indicating that endangering-others narratives (in comparison with endangering-self narratives) generated higher internal locus of control (the accident happened due to the perpetrator/responsible driver).

However, the b-path of internal locus of control to behavioral intention not to text while driving was not significant, (*b*=-.088, *SE*=.079, *p*=.269, 95% CI: -.244, .068). Internal locus of control did not mediate the relationship between narratives and behavioral intention not to text while driving.

(2)*Path Coefficient of External Locus of Control*

The a-path of narratives to external locus of control was significant, (*b*=-.298, *SE*=.089, *p*=.001, 95% CI: -.473, -.123, R^2=.083), indicating that endangering-others narratives generated lower external locus of control (that means the accident did not happen due to chance or bad

luck) and endangering-self narratives generated higher external locus of control (that means the accident happened due to chance or bad luck).

However, the b-path of external locus of control to behavioral intention not to text while driving was not significant, (*b*=.010, *SE*=.046, *p*=.822, 95% CI: -.080, .100).

(3)*Path Coefficient of Sympathy towards the Victim*

The a-path of narratives to sympathy towards the victim was significant, (*b*=3.059, *SE*=.126, *p*<.001, 95% CI: 2.812, 3.306, R^2=.567), indicating that endangering-others narratives generated greater sympathy towards the victim in comparison with endangering-self narratives.

However, the b-path of sympathy to behavioral intention not to text while driving was not significant, (*b*=-.024, *SE*=.031, *p*=.452, 95% CI: -.085, .038). Sympathy towards the victim did not mediate the relationship between narratives and behavioral intention not to text while driving.

Total and Indirect Effect

The total effect was not significant, *b*=-.096, *SE*=.106, 95% CI: -.300, .116.

The indirect effect of narratives on behavioral intention not to text while driving through internal locus of control was not significant, *b*=-.021, *SE*=.022, 95% CI: -.070, .018.

The indirect effect of narratives on behavioral intention not to text while driving through external locus of control was not significant, *b*=-.003, *SE*=.016, 95% CI: -.034, .031.

The indirect effect of narratives on behavioral intention not to text while driving through sympathy towards the victim was not significant, *b*=-.072, *SE*=.098, 95% CI: -.261, .127.

The result suggested no mediation effect of internal locus of control, external locus of control, and sympathy towards the victim on behavioral intention not to text while driving.

Table 20 shows output of bootstrap mediation model (Hayes process model 4) for severity of outcome and DVs through the mediators. Table 21 shows output of bootstrap mediation model (Hayes process model 4) for narratives and DVs through the mediators.

Severity of outcome, and the Moderating Variables (JWH, Situational Similarities with the Perpetrator, and Situational Similarities with the Victim)

Two hypotheses and two research questions were proposed to show the relationship between severity of outcome, need to believe in a just world, situational similarities with the perpetrator (and the victim) and the dependent variables.

Hypothesis 5 stated that "there will be an interaction between severity of outcome and need to believe in a just world, such that high severity and high belief in a just world condition, participants are more likely to assign (a) greater responsibility to the perpetrator/responsible driver, (b) higher fine, (c) display negative attitudes toward the perpetrator, (d) display positive attitudes toward the victim, (e) rate the perpetrator negatively on driver's traits in comparison with mild severity and high need to believe in a just world".

Hypothesis 6 stated that "there will be an interaction between severity of outcome and situational similarities with the victim (and the perpetrator), such that high severity and high situational similarities with the victim (and low situational similarities with the perpetrator), participants are more likely to assign (a) greater responsibility to the perpetrator/responsible driver, (b) higher fine, (c) display negative attitudes toward the perpetrator, (d) display positive attitudes toward the victim, (e) rate the perpetrator negatively on driver's traits in comparison with mild severity and high situational similarities with the victim (and low situational similarities with the perpetrator)".

In addition, research questions 8 and 9 stated – "Is there an interaction between severity and need to believe in a just world such that, high severity and high belief in a just world results in lower behavioral intention to text while drive?" (RQ 8). "Is there an interaction between severity and situational similarities with the victim (and the perpetrator) such that, high severity and high situational similarities with the victim (and low situational similarities with the perpetrator) in lower behavioral intention to text while drive?" (RQ 9).

A 2 (severity of outcome: severe vs. mild) x 2 (narratives: endangering-self vs. endangering-others) x 2 (just world hypothesis: high vs. low) x 2 (similarities with the perpetrator: high vs. low) x 2 (similarities with the victim: high vs. low) x 2 (messages) repeated-measures ANOVA was conducted to test the relationship between the independent variables (severity of outcome and narrative types) and the moderating variables (need to believe in a just world, situational similarities with the perpetrator, and situational similarities with the victim) on the dependent variables (attribution of responsibility to the perpetrator/responsible driver, higher fine, attitudes toward the perpetrator, attitudes toward the victim, driver's traits, and behavioral intention to not to text while driving.

Just world hypothesis was a 4-item scale. The four items were averaged to create a composite score. The median value of the composite score was 3.75. Median responses of below 3.75 were labeled 0 (low JWH group), and median responses 3.75 and greater were labeled 1 (high JWH group). After splitting, the low JWH group had 214 participants (45.1%), and the high JWH group had 253 (53.3%).

Situational similarities with the perpetrator was a 3-items scale. The three items were averaged to create a composite score. The median value of the composite score was 1.33. Median responses of below 1.33 were labeled 0 (low situational similarities with the perpetrator group),

and median responses 1.33 and greater were labeled 1 (high similarities with the perpetrator group). After splitting, the low situational similarities with the perpetrator group had 165 participants (34.7%), and the high situational similarities with the perpetrator group had 302 (63.6%).

Situational similarities with the victim was a 3-item scale. The three items were averaged to create a composite score. The median value of the composite score was 3.00. Median responses of below 3.00 were labeled 0 (low situational similarities with the victim group), and median responses of 3.00 and greater were labeled 1 (high situational similarities with the victim group). After splitting, the low situational similarities with the victim group had 219 participants (46.1%), and the high situational similarities with the perpetrator group had 248 (52.2%).

Severity of Outcome and the Need to Believe in a Just World

The interaction result of severity of outcome and need to believe in a just world on the dependent variables (attribution of responsibility to the perpetrator, fine, attitudes toward the perpetrator and the victim, driver's traits and behavioral intention not to text while driving) are presented below -

Severity of Outcome and Need to Believe in a Just World on the Attribution of Responsibility to the Perpetrator/ Responsible person

There was no significant interaction between severity of outcome and need to believe in a just world for attribution of responsibility to the perpetrator/responsible driver (F (1, 433) = .28, p=.60, η_p^2=.00).

Severity of Outcome and Need to Believe in a Just World on Assigning Fine to the Perpetrator/Responsible driver

There was no significant interaction between severity of outcome and need to believe in a just world for assigning fine to the perpetrator/ responsible driver (F (1, 435) = .77, p=.38, η_p^2=.00).

Severity of Outcome and Need to Believe in a Just World on Attitudes toward the Victim

There was no significant interaction between severity of outcome and need to believe in a just world on attitudes toward the victim (F (1, 433) = .01, p=.93, η_p^2=.00).

Severity of Outcome and Need to Believe in a Just World on Driver's Traits

There was no significant interaction between severity of outcome and need to believe in a just world on driver's traits (F (1, 431) = .46, p=.50, η_p^2=.00).

Severity of Outcome and Need to Believe in a Just World on Behavioral Intention not to Text while Driving

There was no significant interaction between severity of outcome and need to believe in a just world on behavioral intention not to text while driving (F (1, 431) = .40, p=.53, η_p^2=.00).

The relationship between severity and need to believe in a just world on the attribution of responsibility to the perpetrator/responsible driver, higher fine, attitudes toward the victim, driver's traits was not significant. In addition, the relationship between severity and need to believe in a just world on behavioral intention to not to text while driving was not significant. Hypothesis 5 was not supported.

Severity of Outcome and Situational Similarities with the Perpetrator (and the Victim)

The interaction result of severity of outcome and situational similarities with the perpetrator (and the victim) on the dependent variables (attribution of responsibility to the

perpetrator, fine, attitudes toward the perpetrator and the victim, driver's traits and behavioral intention not to text while driving) are presented below:

Severity of Outcome and Situational Similarity with the Perpetrator on Attribution of Responsibility to the Perpetrator/Responsible person

There was no significant interaction between severity of outcome and situational similarities with the perpetrator on attribution of responsibility to the perpetrator/responsible driver (F (1, 433) = .07, p=.80, η_p^2=.00).

Severity of Outcome and Situational Similarity with the Perpetrator on Assigning Fine to the Perpetrator/ Responsible driver

There was no significant interaction between severity of outcome and similarities with the perpetrator on assigning fine to the perpetrator/ responsible driver (F (1, 435) = .00, p=.97, η_p^2=.00).

Severity of Outcome and Situational Similarity with the Perpetrator on Attitudes toward the Victim

There was no significant interaction between severity of outcome and situational similarities with the perpetrator on attitudes toward the victim (F (1, 433) = .70, p=.40, η_p^2=.00).

Severity of Outcome and Situational Similarity with the perpetrator on driver's traits

There was no significant interaction between severity of outcome and situational similarities with the perpetrator on driver's traits (F (1, 431) = .03, p=.87, η_p^2=.00).

Severity of Outcome and Situational Similarity with the Perpetrator on Behavioral Intention not to Text while Driving

Behavioral intention not to text while driving was measured by asking one-item question – "after seeing the message, how likely are you to text while drive?" (1=not at all likely, 7=extremely likely.)

The findings suggested a significant interaction between severity and similarities with the perpetrator on behavioral intention not to text while driving (F (1, 431) = 5.13, p=.024, η_p^2=.012). Estimated marginal mean suggested that when the outcome is severe and the similarities with the perpetrator is low participants assigned greater behavioral intention not to text while driving (M=1.49, SD=2.20) in comparison with when the outcome of the accident is severe and the similarities with the perpetrator are high (M=1.88, SD=1.60).

In addition, estimated marginal mean suggested that when the outcome of the accident is mild and the similarities with the perpetrator are low, participants assigned greater behavioral intention to not to text while driving (M=1.30, SD=2.27) in comparison with when the outcome is mild and the similarities with the perpetrator are high, (M=2.09, SD=1.53) (Figure 16).

However, when the similarities with the perpetrator are low, there was no difference between severe outcome and mild outcome group (F (1, 164) = 2.45, p=.12). In addition, when the similarities with the perpetrator are high, there was no difference between the severe and mild outcome groups (F (1, 301) = 3.22, p=.074). The findings suggested that low situational similarities with the perpetrator (narrated in the story) is necessary for participants to decide not to do texting-while-driving. For both severe and mild outcome condition, participants showed greater behavioral intention not to text and drive when their (participants) situational similarities with the perpetrator was low. Conversely, participants showed greater behavioral intention to

continue text and drive when their (participants) situational similarities with the perpetrator was high.

The relationship between severity of outcome and similarities with the perpetrator on the attribution of responsibility to the perpetrator/responsible driver, higher fine, attitudes toward the victim, and driver's traits were not statistically significant. Thus, hypothesis 6 was not supported.

Severity of Outcome and Situational Similarity with the Victim

The interaction result of severity of outcome and situational similarities with the perpetrator (and the victim) on the dependent variables (attribution of responsibility to the perpetrator, fine, attitudes toward the perpetrator and the victim, driver's traits and behavioral intention not to text while driving) are presented below:

Severity of Outcome and Situational Similarity with the Victim on Attribution of Responsibility to the Perpetrator/ Responsible driver

There was no significant interaction between severity of outcome and situational similarity with the victim on attribution of responsibility to the perpetrator/responsible driver (F (1, 433) = 1.92, p=.17, η_p^2=.00).

Severity of Outcome and Situational Similarity with the Victim on Assigning Fine to the Perpetrator/ Responsible driver

There was no significant interaction between severity of outcome and situational similarity with the victim on assigning fine to the perpetrator/ responsible driver (F (1, 435) = .14, p=.71, η_p^2=.00).

Severity of Outcome and Situational Similarity with the Victim on Attitudes toward the Victim

There was no significant interaction between severity of outcome and situational similarity with the victim on attitudes toward the victim (F (1, 433) = .43, p=.52, η_p^2=.00).

Severity of Outcome and Situational Similarity with the Victim on Driver's Traits

There was no significant interaction between severity of outcome and situational similarity with the victim on driver's traits (F (1, 431) = .86, p=.35, η_p^2=.00).

Severity of Outcome and Situational Similarity with the Victim on Behavioral Intention not to Text while Driving

There was no significant interaction between severity and situational similarity with the victim on behavioral intention not to text while driving (F (1, 431) =.43, p=.51, η_p^2=.00).

The relationship between severity of outcome and situational similarity with the victim on the attribution of responsibility to the perpetrator/responsible driver, higher fine, attitudes toward the victim, and driver's traits were not statistically significant. Thus, hypothesis 6 was not supported.

Narratives and the Moderating Variables (JWH, Situational Similarities with the Perpetrator, and the Victim)

Two research questions were proposed to show the relationship between narratives, need to believe in a just world, situational similarities with the perpetrator (and the victim) and the dependent variables.

Research question 11 asked – "is there an interaction between narrative types and need to believe in a just world such that, high/low need to belief in a just world and endangering-others narratives generates (a) greater responsibility to the perpetrator/responsible person, (b) higher fine, (c) positive attitudes toward the victim, (e) less positive driver's traits, and (f) lower behavioral intention to text while drive?"

In addition, research question 12 asked – "is there an interaction between narrative types high situational similarity with the victim (and low situational similarity with the perpetrator),

such that high/low situational similarity with the victim (and the perpetrator) and endangering-others narratives generates (a) greater responsibility to the perpetrator/responsible person, (b) higher fine, (c) positive attitudes toward the victim, (e) less positive driver's traits, and (f) lower behavioral intention to text while drive?" The findings are presented below:

Narratives and Need to Believe in a Just World on Attribution of Responsibility to the Perpetrator/Responsible driver

There was no significant interaction between narratives and need to believe in a just world for attribution of responsibility to the perpetrator/ responsible driver (F (1, 433) = .03, p=.86, η_p^2=.00).

Narratives and Need to Believe in a Just World on Assigning Fine

There was no significant interaction between narratives and need to believe in a just world on assigning fine to the perpetrator/responsible driver (F (1, 435) = .02, p=.89, η_p^2=.00).

Narratives and Need to Believe in a Just World on Attitudes toward the Victim

There was no significant interaction between narratives and need to believe in a just world on attitudes toward the victim (F (1, 433) = 1.47, p=.23, η_p^2=.00).

Narratives and Need to Believe in a Just World on Driver's Traits

There was no significant interaction between narratives and need to believe in a just world on driver's traits (F (1, 431) = 3.10, p=.08, η_p^2=.01).

Narratives and Need to Believe in a Just World on Behavioral Intention not to text while driving

There was no significant interaction between narratives and need to believe in a just world on behavioral intention not to text while driving (F (1, 431) = 3.01, p=.08, η_p^2=.01).

The relationship between narratives and need to believe in a just world on the attribution of responsibility to the perpetrator/responsible driver, higher fine, attitudes toward the victim, and driver's traits were not statistically significant.

Narratives and Situational Similarity with the Perpetrator

Narratives and Situational Similarity with the Perpetrator on Attribution of Responsibility to the Perpetrator/ Responsible Driver

There was no significant interaction between narratives and situational similarities with the perpetrator on attribution of responsibility to the perpetrator/responsible driver (F (1, 433) = .07, p=.79, η_p^2=.00).

Narratives and Situational Similarity with the Perpetrator on Assigning Fine to the Perpetrator/Responsible driver

There was no significant interaction between narratives and situational similarities with the perpetrator on assigning fine to the perpetrator/responsible driver (F (1, 435) = 2.85, p=.09, η_p^2=.01).

Narratives and Situational Similarity with the Perpetrator on Attitudes toward the Victim

There was a significant interaction between narratives and situational similarities with the perpetrator on attitudes toward the victim (F (1, 433) = 21.46, p<.001, η_p^2=.047), such that for the endangering-others condition and low similarities with the perpetrator, participants displayed positive attitudes to the victim (M=5.40, SD=2.02) in comparison with endangering-self condition and low situational similarities with the perpetrator (M=2.39, SD=1.84). In addition, for the endangering-others condition and high situational similarities with the perpetrator, participants displayed positive attitudes to the victim (M=4.93, SD=1.37) in comparison with

endangering-self condition and high situational similarities with the perpetrator (M=2.94, SD=1.38) (Figure 17).

In a word, endangering-others condition (in comparison with endangering-self condition) generated positive attitudes to the victim for both low and high situational similarities with the perpetrator.

A one-way ANOVA showed that when the similarities with the perpetrator was low, there was a significant difference between endangering-self and endangering-others condition on attitudes toward the victim (F (1, 162) = 285.40, p<.001). When the similarities with the perpetrator was low, endangering-others condition generated positive attitudes toward the victim (M=5.40, SD=1.13) in comparison with endangering-self condition (M=2.39, SD=1.07). In addition, a one-way ANOVA showed that when the similarities with the perpetrator is high, there was a significant difference between endangering-self and endangering-others condition on attitudes toward the victim (F (1, 299) = 253.81, p<.001). When the similarities with the perpetrator is high, endangering-others condition generated positive attitudes toward the victim (M=4.93, SD=1.00) in comparison with endangering-self condition (M=2.94, SD=1.16).

Narratives and Situational Similarity with the Perpetrator on Driver's Traits

There was no significant interaction between narratives and situational similarities with the perpetrator on driver's traits (F (1, 431) = .53, p=.47, η_p^2=.00).

Narratives and Situational Similarity with the Perpetrator on Behavioral Intention not to Text while Driving

There was no significant interaction between narratives and situational similarities with the perpetrator on behavioral intention to not to text while driving (F (1, 431) = .16, p=.69, η_p^2=.00).

The relationship between narratives and situational similarities with the perpetrator on the attribution of responsibility to the perpetrator/responsible driver, a higher fine, driver's traits, and behavioral intention not to text while driving was not significant. However, the relationship between narratives and situational similarities with the perpetrator on attitudes toward the victim was significant. The findings of narratives and situational similarities with the perpetrator on attitudes toward the victim suggested that endangering-others narratives generated positive attitudes toward the victim when the situational similarities with the perpetrator were low. Conversely, participants displayed more positive attitudes toward the victim when the situational similarities with the perpetrator were high in the endangering-self condition. Participants were less positive toward the victims in the endangering-self condition. Less positive attitudes toward the victims suggested victim derogation.

Narratives and Situational Similarity with the victim

The interaction result of narratives and situational similarity with the victim on the dependent variables are presented below:

Narratives and Situational Similarity with the Victim on Attribution of Responsibility to the Perpetrator/Responsible Driver

There was no significant interaction between narratives and situational similarity with the victim on attribution of responsibility to the perpetrator/responsible driver (F (1, 433) = .26, p=.61, η_p^2=.00).

Narratives and Situational Similarity with the Victim on Assigning Fine to the Perpetrator/Responsible Driver

There was no significant interaction between narratives and situational similarity with the victim on assigning fine to the perpetrator/responsible driver (F (1, 435) = .01, p=.93, η_p^2=.00).

Narratives and Situational Similarity with the Victim on Attitudes toward the Victim

There was no significant interaction between narratives and situational similarity with the victim on attitudes toward the victim (F (1, 433) = .19, p=.67, η_p^2=.00).

Narratives and Situational Similarity with the Victim on Driver's Traits

There was no significant interaction between narratives and situational similarity with the victim on driver's traits (F (1, 431) = .51, p=.47, η_p^2=.00).

Narratives and Situational Similarity with the Victim on Behavioral Intention not to Text while Driving

There was no significant interaction between narratives and situational similarity with the victim on behavioral intention not to text while driving (F (1, 431) = 1.17, p=.28, η_p^2=.00).

The relationship between narratives and situational similarity with the victim on the attribution of responsibility to the perpetrator, higher fine, attitudes toward the victim, driver's traits, and behavioral intention not to text while driving was not significant.

Table 22 (Descriptive Statistics of Severity of Outcome, Narratives and Need to Believe in a Just World on the Dependent Variables), table 23 (Descriptive Statistics of Severity of Outcome, Narratives and Situational Similarity with the Perpetrator on the Dependent Variables, and table 24 (Descriptive Statistics of Severity of Outcome, Narratives and Situational Similarity with the Victim on the Dependent Variables) summarizes the results.

Chapter 5

Discussion

The severity of the accident outcome is a common message feature in the mediated texting-while-narratives narratives awareness campaign. However, it is unknown how audiences process severity-based mediated texting-while-driving narrative campaigns. The assumption was that the severity of the accident outcome might generate audiences' defensive activism. As a result, audiences will separate themselves from the perpetrator by attributing more responsibility, assigning higher fines, showing negative attitudes, and less favorable driver traits to the perpetrator/responsible driver. In addition, participants reading a severe outcome-based narrative will display positive attitudes toward the victim and greater behavioral intention not to text while driving.

The other assumption was that internal locus of control, external locus of control, and sympathy towards the victim might mediate the relationships between outcome severity, narratives, and the dependent variables. In addition, three other variables – need to believe in a just world, situational similarities with the perpetrator, and situational similarities with the victim may act as moderators.

The research problem, hypotheses, and research questions were proposed based on four theories predominantly used in the accident-related study — defensive attribution theory (DAT), modified defensive attribution theory (MDAT), need to believe in a just world, and rational decision stage model. The aim was to examine the impact of texting-while-driving narratives on the audience's attitudes toward the victims and behavior to continue texting and driving. An experiment was designed to test the relationships among two manipulated variables (severity of the accident outcome and narrative types), three mediating variables (internal locus of control,

external locus of control, and sympathy towards the victim), three moderating variables (need to believe in a just world, situational similarities with the perpetrator, and situational similarities with the victim), and six dependent variables.

The results showed that both outcome severity and narratives influenced audiences' judgments regarding the perpetrator/responsible driver and the innocent victim. Severe accident outcome (and endangering-others narratives) determined assigning higher fines to the perpetrator/responsible driver, forming positive attitudes toward the victim and negative attitudes toward the perpetrator. However, the severity of the accident outcome generated less responsibility to the perpetrator/responsible driver and rated the responsible drivers positively on driver traits. On the contrary, mild accident outcomes generated greater responsibility for the perpetrator/responsible driver. Audiences rated the responsible drivers more positively on driver traits.

There was a significant indirect effect of the mediators on the relationship between independent and dependent variables. For example, the relationship between severity of outcome (independent variable) and responsibility to the perpetrator (dependent variable), higher fine (dependent variable), attitudes toward the perpetrator (dependent variable), and attitudes toward the victim (dependent variable) was mediated by sympathy towards the victim.
Similarly, the relationship between narratives (independent variable) and attribution of responsibility to the perpetrator/responsible driver (dependent variable) was mediated by the internal locus of control (mediator) and external locus of control (mediator). In addition, the relationship between narratives (independent variable) and driver traits (dependent variable) was mediated by the internal locus of control (mediator), external locus of control (mediator), and sympathy towards the victim (mediator). Also, the relationship between narratives (independent

variable) and attitudes toward the victim (dependent variable) and higher fine (dependent variable) was mediated by sympathy towards the victim (mediator).

The discussion below will proceed as follows: First, the main effect of severity of outcome and narratives will be discussed. Second, the interaction effect of severity and narratives will be discussed. Third, the indirect effect of internal locus of control, external locus of control, and sympathy towards the victim on the relationship between outcome severity and dependent variables will be discussed. Fourth, the indirect effect of internal locus of control, external locus of control, and sympathy towards the victim on the relationship between narratives and dependent variables will be discussed. Fifth, the theoretical implication will be discussed. Sixth, limitations and recommendations for future research will be discussed. Lastly, conclusion will be discussed.

Main Effect of Severity of Outcome and Narratives on the Dependent Variables

As predicted, the severity of the outcome (independent variable) positively affected assigning fine to the perpetrator/responsible driver and attitudes toward the victim. However, severity of the outcome had the opposite effect on the attribution of responsibility to the perpetrator/responsible driver and driver traits. Mild accident outcomes generated greater attribution of responsibility to the perpetrator and less positive driver's traits (Table 25). Therefore, the severity of the outcome did not generate defensive activism in the audience. Rather, the mild outcome generated defensive activism. As a result, subjects assigned responsibility to the perpetrator/responsible driver and less positive driver's traits than the former severe outcome condition. However, as predicted, endangering-others narratives generated greater responsibility, fines, less positive driver traits toward the perpetrator/responsible driver, and positive attitudes toward the victim.

Table 25

Main Effects Findings

Main effect – severity of outcome		
Hs and RQs	**Direction**	
H1	Sev (high) -→	ARP
	Sev (high) +→	Fine
	Sev (high) +→	AttVic
	Sev (high) +→	Traits
Main effect – Narratives		
H2	Narr (EO) +→	ARP
	Narr (EO) +→	Fine
	Narr (EO) +→	AttVic
	Narr (EO) -→	Traits

Notes: Sev = severity of outcome (0=mild outcome, 1=severe outcome). Narr=Narratives (1=endangering-self narratives, 2=endangering-others narratives). DV=Dependent variables. ARP=Attribution of responsibility to the perpetrator/responsible driver. Fine=Assigning higher fine to the perpetrator/responsible driver. AttVic=Attitudes toward the victim. Traits = Driver's traits. Only significant main effects and interaction effects are shows.

Interaction Effects of Severity of Outcome and Narratives on the Dependent Variables

The interaction results highlighted some discrepancies between endangering-self (severe and mild) and endangering-others (severe and mild) on the attribution of responsibilities to the perpetrator, driver traits, and attitudes toward the victim. First, the endangering-others severe and mild outcome means for attributing responsibility to the perpetrator were almost the same.

However, the endangering-self severe and mild outcome means for attribution of responsibility to the perpetrator were very different. Second, the endangering-self severe outcome generated more positive driver's traits, and mild outcome generated less positive driver's traits (opposite of the way hypothesis predicted). However, the endangering-others severe outcome generated less positive driver's traits, and mild outcome generated more positive driver's traits (in the direction of the hypothesis). Finally, the endangering-self severe and mild outcomes generated less positive attitudes toward the victim than the endangering-others severe and mild outcomes.

The means of attribution of responsibility to the perpetrator/responsible driver for endangering-others severe outcome condition (mean=6.68) and endangering-others mild outcome condition (mean=6.69) were almost the same. Participants perceived that the perpetrator's responsibility of killing an innocent driver (severe outcome) or mildly injuring an innocent driver (mild condition) was identical for both conditions (Figure 1 of the result section).

However, the means of attribution of responsibility to the perpetrator/responsible driver for endangering-self severe outcome condition and endangering-self mild outcome condition were very different from each other. Endangering-self severe outcome narratives generated the least responsibility to the perpetrator/responsible driver than the other three conditions (endangering-self mild outcome, endangering-others severe outcome, and endangering-others mild outcome) (mean=6.21). Conversely, assigning responsibility to the perpetrator/responsible driver was higher when the outcome was mild (mean=6.52) in the endangering-self condition (Figure 1 of the result section).

In addition, participants assigned better driver traits (higher self-discipline, higher alertness, and more patience) to the responsible driver in the endangering-self severe outcome condition (mean=2.2). However, participants assigned less positive driver traits (lower self-

discipline, less alertness, and less patience) to the driver in endangering-self mild outcome condition (mean=1.87). Conversely, participants assigned less positive driver's traits (less self-discipline, alertness, and patience) to the responsible driver in the endangering-others severe outcome condition (mean=1.78). But participants assigned more positive driver traits (higher self-discipline, alertness, and patience) to the responsible driver in the endangering-others mild outcome condition (mean=1.82). The findings of the driver's traits of endangering-others conditions were in the hypothesis's predicted direction (Figure 4 of the result section).

Finally, in the endangering-others narratives condition, the interaction means of attitudes toward the victim for the severe and mild outcomes were almost the same. Endangering-others severe outcome mean for attitudes toward the victim was 5.08 and the endangering-others mild outcome mean for attitudes toward the victim was 5.07. That means audiences felt the same way for the innocent victim in the severe condition (the victim died in the crash) and the mild condition (the victim was mildly injured). However, the endangering-self severe outcome mean for attitudes toward the victim was 3.12 and the endangering-self mild outcome mean for attitudes toward the victim was 2.40. Attitudes toward the victim were a 7-point scale measurement. The mean value for the severe and mild outcomes suggested less positive attitudes toward the responsible victim (Figure 3 of the result section).

The difference between the severe and mild outcome means for attribution of responsibility, driver's traits and attitudes toward the victim in the endangering-self narratives (and endangering-others narratives) merit more discussion. Furthermore, the role of the mediators (internal locus of control, external locus of control, and sympathy towards the victim) discussing next, explaining the differences between severe and mild outcome means for the dependent variables.

The Role of the Mediators on the Relationship between Severity of Outcome and the Dependent Variables

One of the key aims was to examine the role of mediating variables - the internal locus of control (ILC), external locus of control (ELC), and sympathy towards the victim (SymVic) on the relationship between outcome severity (Sev) and the DVs. The relationship between severity of outcome (Sev) and attribution of responsibility to the perpetrator/responsible driver (ARP), higher fine (fine), and attitudes toward the victim (AttVic) was partially mediated by sympathy towards the victim (SymVic). In addition, the relationship between outcome severity (Sev) and attitudes toward the perpetrator (AttPerp) was fully mediated by sympathy towards the victim, (Table 26).

Table 26

Indirect Effects of Severity of Outcome and DVs through Sympathy towards the Victim and Internal Locus of Control

Hs and RQs	Direction
H4	Sev (high) + SymVic + ARP
	Sev (high) + SymVic + Fine
	Sev (high) + SymVic - AttPerp
	Sev (high) + SymVic + AttVic

Note. Sev=Severity of outcome (0=mild outcome, 1=severe outcome), SymVic=sympathy towards the victim, ARP=Attribution of responsibility to the perpetrator/responsible driver, Fine=Assigning higher fine to the perpetrator/responsible driver, AttPerp=Attitudes toward the perpetrator, AttVic=Attitudes toward the victim. Only significant indirect effects are shown.

According to Table 26, the relationship between severity of outcome and attribution of responsibility to the perpetrator was partially mediated by sympathy towards the victim. A significant direct negative relationship existed between severity of outcome and attribution of responsibility to the perpetrator, such that severe accident outcome generated lower attribution of responsibility to the perpetrator/responsible driver. Furthermore, the direct negative relationship between severity of outcome and attribution of responsibility to the perpetrator changed when sympathy towards the victim mediated the relationship.

The relationship between severity of outcome and sympathy towards the victim was positive, and the relationship between sympathy towards the victim and attribution of responsibility to the perpetrator was also positive. When the accident outcome was severe, participants felt more sympathy towards the victim, and high sympathy towards the victim determined higher responsibility to the perpetrator/responsible driver.

In the endangering-self severe outcome condition, the responsible drivers (also the victim) were texting while driving and killed themselves. Thus, participants were sympathetic to them (the victim drivers) and did not attribute responsibilities. In the endangering-self mild outcome condition, the responsible driver (also the victim) mildly injured themselves. The audiences did not sympathize with these drivers who mildly injured themselves due to texting while driving. Thus, participants assigned more responsibility to the responsible driver in the endangering-self mild outcome condition. Finally, in the endangering-others condition, a driver was texting-while-driving and killed or mildly injured another driver/pedestrian. Here, participants were sympathetic towards the victim for their death or injury and attribute responsibilities to the perpetrator/responsible driver who hit the victim. For this reason,

attribution of responsibility to the perpetrator/responsible driver of endangering-others severe outcome and mild outcome condition were almost the same (Figure 1 of the result section).

Moreover, sympathy towards the victim partially mediated the relationship between severity of outcome and fine. A significant direct positive relationship existed between severity of outcome and fine, such that severity of outcome determined assigning higher fine to the perpetrator/responsible driver. In addition, outcome severity increased sympathy towards the victim, which in turn determined assigning higher fine to the perpetrator.

Similarly, sympathy towards the victim partially mediated the relationship between severity of outcome and attitudes toward the victim. A significant direct negative relationship existed between severity of outcome and attitudes toward the victim, such that severe outcome decreased attitudes toward the victim and mild outcome increased attitudes toward the victim. The direct negative relationship between severity of outcome and attitudes toward the victim changed when sympathy towards the victim mediated the relationship.

The relationship between severity of outcome and sympathy towards the victim was positive, and the relationship between sympathy towards the victim and attitudes toward the victim was also positive. When the accident outcome was severe, participants felt more sympathy towards the victim, and high sympathy towards the victim determined positive attitudes toward the victim.

Conversely, sympathy towards the victim fully mediated the relationship between severity of outcome and attitudes towards the perpetrator, such that severity of outcome increased sympathy towards the victim, which in turn determined negative attitudes toward the perpetrator. There were no significant direct relationship between severity of outcome and attitudes toward the perpetrator.

In summary, severity elements in a mediated texting-while-driving communication campaign can generate audiences' emotional reactions, such as sympathy toward the victim. Sympathy towards the victim can motivate observers to increase responsibility and assign a higher fine to the perpetrator/responsible driver. Sympathy towards the victim is also essential to derogate the perpetrator who killed others, forming less favorable attitudes toward the responsible victim and more positive attitudes toward the innocent victim.

The Role of Mediators on the Relationship between Narratives and the Dependent Variables

The relationship between narratives (Narr) and attribution of responsibility to the perpetrator/responsible driver (ARP) was partially mediated by the internal locus of control (ILC) and external locus of control (ELC). Moreover, the relationship between narratives (Narr) and higher fine (fine) was partially mediated by sympathy towards the victim (SymVic) and internal locus of control (ILC). In addition, the relationship between narratives (Narr) and attitudes toward the victim (AttVic) was partially mediated by sympathy towards the victim (SymVic). Finally, the relationship between narratives (Narr)) and driver's traits (traits) was partially mediated by sympathy towards the victim (SymVic), and internal locus of control (ILC). (Table 27).

Table 27

Indirect Effects Findings of Narratives and DVs through Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim

Hs and RQs	Direction
RQ7	Narr (EO) → (+) ILC → (+) ARP
	Narr (EO) → (-) ELC → (-) ARP
	Narr (EO) → (+) SymVic → (+) Fine
	Narr (EO) → (+) ILC → (+) Fine
	Narr (EO) → (+) SymVic → (+) AttV
	Narr (EO) → (+) SymVic → (+) Traits
	Narr (EO) → (+) ILC → (-) Traits

Notes: Narr=Narratives. EO=Endangering-others narratives. ILC = Internal locus of control. ELC = External locus of control. SymVic= Sympathy towards the victim. ARP = Attribution of responsibility to the perpetrator/responsible driver. Fine = assigning higher fine to the perpetrator/responsible driver. AttV = Attitudes toward the victim. Traits = Driver's traits. Only significant indirect effects are shown.

According to Table 27, the relationship between narratives and attribution of responsibility to the perpetrator/responsible driver was partially mediated by internal locus of control and external locus of control.

In the endangering-others narrative condition (the responsible driver was texting-while-driving and killed or mildly injured another driver/pedestrian), participants thought the accident could have been avoided if the driver had taken the right action, followed road safety rules and

regulations, and careful enough during the driving (higher ILC). In addition, the accident did not happen due to fate, chance, or bad luck, the accident was not outside the responsible driver's control, and the accident did not happen due to the technology (lower ELC). For this reason, participants assigned greater attribution of responsibility to the perpetrator/responsible driver in EO condition. However, in the ES narrative condition (drivers were texting-while-driving and killed or mildly injured themselves), participants think the accident happened due to fate, chance, or bad luck, the accident was caused by outside the driver's control, and the accident happened due to the technology (higher ELC). For this reason, participants assigned lower attribution of responsibility to the responsible driver.

Conversely, sympathy towards the victim partially mediated the relationship between narratives and fine. In the endangering-self (severe and mild outcome) narrative condition, participants felt sympathy towards the victim (drivers who were texting-while-driving and killed themselves). Still, participants assigned fines to the driver (victim) for the road or road median damage. For the endangering-self severe outcome, participants were assigned $29,783.75 as a fine and for the mild outcome, participants were assigned $28,081.36 as a fine. The difference in the fine between the two conditions was $1,702.39. Participants felt sympathetic toward the responsible driver (victim of the accident), and due to this, the assignment of fine for endangering-self severe and mild outcome conditions did not change much.

However, in the endangering-others severe outcome condition, participants were assigned $89528.77 as a fine. For the mild outcome, participants were assigned $44397.82 as a fine. The difference in the fine between the two conditions was $45,130.95. The fine difference between the severe and mild outcomes of the endangering-others condition was high. Participants felt sympathetic toward the victim (in endangering-others condition, the perpetrator and victim were

two separate individuals) and assigned fines to the perpetrator depending on the accident severity. Due to this, the fine assignment for endangering-others severe and mild outcome conditions was high.

In addition, internal locus of control partially mediated the relationship between narratives and fine. In the endangering-others narrative condition, participants thought the accident could have been avoided if the driver had taken the right action, followed road safety rules and regulations, and careful during the driving (higher internal locus of control). Higher internal locus of control determined assigning higher fine to the perpetrator.

Moreover, sympathy towards the victim partially mediated the relationship between narratives and attitudes toward the victim. In the endangering-self (severe and mild outcome) narrative condition, participants felt sympathy towards the victim (drivers who were texting while driving and killed themselves). But participants did not have many positive attitudes toward the drivers who were responsible for their condition. For the endangering-self severe outcome, the mean for attitudes toward the victim was 3.12. Moreover, for the mild outcome, the mean for attitudes toward the victim was 2.4.

However, in the endangering-others severe outcome condition, the mean for attitudes toward the victim was 5.08. Moreover, for the EO mild outcome, the mean for attitudes toward the victim was 5.07. The attitudes toward the victim means were almost identical in the endangering-others severe and mild outcome conditions. Participants had the same positive feelings toward the victim, although the condition was separated by severe outcome (the perpetrator/responsible driver killed victim) and mild outcome (the perpetrator/responsible driver mildly injured victim).

Lastly, ILC, and SymVic partially mediated the relationship between Narr (independent variable) and driver's traits (dependent variable). The relationship between narratives and internal locus of control was positive. Endangering-others narratives determined higher internal locus of control. Higher internal locus of control determined negative driver traits. In the endangering-others condition, the perpetrator/responsible driver was texting-while-driving and killed or mildly injured another driver/pedestrian. Participants thought the accident could have been avoided if the driver had taken the right action, followed road safety rules and regulations, and careful during the driving (higher internal locus of control). Higher internal locus of control determined less positive driver's traits (lower self-discipline, less patience, and less alertness).

In addition, the relationship between narratives and sympathy toward the victim was positive, and the relationship between sympathy toward the victim and driver's traits was positive. In the endangering-others condition, participants felt more sympathetic towards the victim. Furthermore, higher sympathy toward the victim determined more positive driver traits (higher self-control, higher alertness, and more patience).

In summary, narratives can motivate a participant to process a texting-while-driving accident rationally and emotionally. Participants thought about the accident rationally before attributing responsibility to the perpetrator. Furthermore, participants thought about the accident both rationally and emotionally before assigning fines and driver traits to the perpetrator. However, participants processed the accident emotionally to display positive attitudes toward the victim.

Behavioral Intention not to Text while Driving

Earlier scholarship on texting-while-driving did not find a determinant motivating drivers to do texting-while-driving. Therefore, the current study was interested to find out if message

features and narrative types impacted audiences' behavioral intention to text while driving. There was no effect of outcome severity, and narratives on behavioral intention not to text while driving. However, covariates and situational similarities with the perpetrator (moderating variable) gave insight into drivers' behavioral intention not to text while driving.

The covariates data suggested that participants' prior attitudes toward texting-while-driving determined whether they would like to continue texting-while-driving after reading the narratives. A higher number of participants responded that they think texting while driving is unsafe, distracting, and should be illegal (3-scale items to measure attitudes toward texting-while-driving). Participants who perceived that texting-while-driving is unsafe, distracting, and should be illegal were reluctant to continue texting-while-driving. In addition, participants who do not drive every day (drive less than six days per week) were showed greater behavioral intention not to text while driving.

In addition, when participants found their similarities with the perpetrator in the story was low (that means unlike the perpetrator in the story, participants had little or no history of texting-while-driving related incidents), they indicated a greater behavioral intention not to text while driving. Moreover, when participants found their similarities with the perpetrator was high (similar to the perpetrator in the story, participants had a history of texting-while-driving-related incidents), they indicated a higher behavioral intention to continue texting-while-driving.

Theoretical Implication and Findings from Available Research

As stated earlier, the current study applied four theories on the incident of texting while driving: (a) defensive attribution theory (DAT) (Walster, 1964), (b) modified defensive attribution theory (Shaver, 1970), (c) need to believe in a just world (Lerner & Miller, 1978), and (d) rational decision stage model (Weiner, 1995). The findings supported defensive attribution

theory, modified defensive attribution theory, need to believe in a just world, and rational decision stage model.

Defensive Attribution Theory (DAT)

The first theory that guided this study was defensive attribution theory (DAT) (Walster, 1964). DAT stated that when the audiences witnesses a severe accident, they try to find the causes of the accident. Witnessing a severe accident may generate defensive activism of the audience, and they (audiences) try to separate themselves from the perpetrator/responsible driver by attributing more responsibility to them. In Walster's (1964) study, the perpetrator and victim were the same individuals. However, her theory could not determine whether audiences will assign responsibility to a non-victim for a severe accident (Walster, 1964).

The current study followed Walster's (1964) study by having an endangering-self condition where a subject met an accident by texting-while-driving. In addition, the study had another narrative condition (endangering-others narrative) where a subject was texting-while-driving and killed another driver/pedestrian. Endangering-others condition tried to examine whether the audiences assign responsibility to a non-victim. Adding endangering-others condition answered whether audiences assign responsibility to a non-victim and extends defensive attribution theory.

Several prior study findings supported DAT that severity of outcome increased attribution of responsibility to the perpetrator/responsible driver (DeJoy & Klippel, 1984; Gleason & Harris, 1976; Mitchell & Wood, 1980; Ugwuegbu & Hendrick, 1974). However, the current study did not find support that the severity of outcome increases the assignment of responsibility to the perpetrator/responsible driver. Instead, the current study found that severe accident outcome generated lower attribution of responsibility to the perpetrator/responsible

driver. Conversely, mild accident outcome generated higher attribution of responsibility to the perpetrator/responsible driver. In the mild accident scenario, audiences' defensive activism generated, and the audience tried to separate themselves from the perpetrator/responsible driver by attributing more responsibility to them.

However, severe accident outcome generated sympathy for the victim. DAT did not talk about emotional reaction that can be generated while observing a severe accident outcome. Higher sympathy to the victim increased attribution of responsibility to the perpetrator, higher fine, and less positive driver traits. Earlier research also found that observers tend to recommend more strict punishments for the perpetrator as the severity of the outcome increases (DeJoy & Klippel, 1984; Gleason & Harris, 1976; Mitchell & Wood, 1980; Ugwuegbu & Hendrick, 1974). Higher sympathy toward the victim also generated positive attitudes toward the victim and negative attitudes toward the perpetrator.

Finally, to test DAT, it is essential to separate the role of the perpetrator and the victim to assign responsibility to the perpetrator/responsible driver. The endangering-others narrative condition separated the role of the perpetrator and the victim. On the other hand, the endangering-self narrative condition had one victim responsible for the texting-while-driving accident outcome. Thus, endangering-others narratives generated greater responsibility to the perpetrator/responsible driver than endangering-self narratives. The separate perpetrator and victim role also helped the audience think about the accident more rationally and assign higher fine, less positive driver's traits, and positive attitudes toward the victim in the endangering-others condition than the endangering-self condition.

Modified Defensive Attribution Theory (MDAT)

The severity of the outcome alone cannot generate an assignment of responsibility (Shaver, 1970). Shaver (1970) proposed a modification of defensive attribution theory by introducing two new variables – personal and situational similarities between the perpetrator and the audience. Shaver (1970) argued that when the audience finds personal and situational similarities between the perpetrator and themselves, they will assign less responsibility to the perpetrator/responsible driver. In addition, when the audiences do not find personal and situational similarities between the perpetrator and themselves, they will assign more responsibility to the perpetrator/responsible driver.

The study applied situational similarities with the perpetrator and situational similarities with the victim as moderators to examine if these two variables strengthen the relationship of severity of the outcome (and narratives) on the dependent variables. The study found some support regarding the effect of situational similarities with the perpetrator on attitudes toward the victim and behavioral intention not to text while driving.

First, situational similarities with the perpetrator interacted with the narratives on forming positive attitudes toward the victim. For example, in the endangering-self condition (drivers texting-while-driving and killed themselves), participants with high situational similarities with the perpetrator showed positive attitudes toward the victim compared with endangering-self narratives and low situational similarities with the perpetrator.

However, in the endangering-others condition (drivers texting-while-driving and killed another driver/pedestrians), participants with low situational similarities with the perpetrator showed positive attitudes toward the victim compared with endangering-others high situational similarities with the perpetrator (Figure 29 of the result section).

Second, behavioral intention not to text while driving was measured by asking the question – after seeing the message, how likely are you to text while drive? (1=not at all likely and 7= extremely likely). When situational similarities with the perpetrator was low, witnessing a mild accident outcome motivated audiences not to continue texting-while-driving (mean=1.33). However, when situational similarities with the perpetrator was high, witnessing a severe outcome motivated audiences not to text-while-driving (mean=1.88) (Figure 28 of the result section).

The findings suggested motivational bias of the audience regarding continuing texting while driving in the future and forming attitudes toward the victim. The findings supported the modified defensive attribution theory that higher situational similarities between the audience and the perpetrator motivated the audiences to had better attitudes toward the responsible driver. However, high situational similarities between audience and perpetrator helped the audience to understand the negative consequence of texting-while-driving and motivated the audience not to do texting-while-driving in real life.

Need to Believe in a Just World

This study's third theory was the need to believe in a just world (Lerner and Miller, 1978). Need to believe in a just world was measured by asking four questions to the participants- "I feel that people get what they deserve," "I feel that people earn the rewards and punishments they get," "I feel that people get what they are entitled to have," and "I feel that when people meet with misfortune, they have brought it upon themselves" (1=strongly disagree, 7=strongly agree). According to the just-world hypothesis, people believe that the world is just and fair. Therefore, when people encounter an event (e.g., a severe accident) that challenges people's

belief, people try to justify their belief that "the world is a just place" by derogating the victim involved in the accident.

The study findings did not find support that the high JWH lead to victim derogation. The current study found that subjects were less positive to the responsible victim who met the accident while texting and driving in the endangering-self condition. Conversely, subjects were more positive to the innocent victims in the endangering-others condition where a texting driver (non-victim) killed another driver (victim). In addition, participants were positive towards the innocent victim in the endangering-others mild outcome condition where a texting driver (non-victim) mildly injured another driver (victim). This finding supported Stokols and Schopler's (1973) statement that responsible victims were less attractive than innocent victims. In that sense, victim derogation may only apply to the responsible victim in the endangering-self condition.

Rational Decision Stage Model

The rational decision stage model stated that all attributions share causal dimensions, such as internal locus of control (the cause of the accident lies within the individual), external locus of control (the cause of the accident lies outside of the individual). The controllability of an event (e.g., the accident is due to the driver or the accident is due to chance or bad luck) is related to emotions, such as sympathy (Graham & Weiner, 1997). This emotional reaction can lead to adverse reactions, such as assigning responsibility and punishment for the accident outcome to the perpetrator/responsible driver.

The severity of the outcome increased sympathy towards the victim. In turn, sympathy towards the victim raised adverse reactions, such as assigning responsibility and higher fines to the perpetrator/driver responsible for the accident and assigning negative attitudes toward the

perpetrator/responsible driver. In addition, sympathy toward the victim also raised positive attitudes toward the innocent victim. The severity of the outcome also helped the audiences to evaluate the accident rationally before assigning the driver's trait to the responsible driver.

Moreover, narratives, especially endangering-others narratives increased sympathy towards the victim. Sympathy towards the victim raised negative reactions, such as assigning a higher fine to the perpetrator/responsible driver. Sympathy towards the victim also raised positive attitudes toward the victim. Participants reading the endangering-others narratives evaluated the accident rationally (through ILC and ELC) before assigning responsibility and driver's traits to the responsible driver.

The effects of the mediator (internal locus of control, external locus of control, and sympathy towards the victim) on the relationship of outcome severity, narratives, and DVs support prior study that assigning responsibility and punishment was a rational process (Graham & Weiner, 1997). Participants weighed evidence from the narrative stories to make inferences about perpetrator/responsible drivers' controllability and responsibility for the accident. They (participants) experienced emotions (sympathy towards the perpetrator/responsible driver) and then make judgments (e.g., assigning responsibility to the perpetrator, monetary punishment, and rated driving skills) and attitudes toward the perpetrator and the victim involved in the accident. The findings supported the "person as judge" metaphor that the rational decision stage model discussed (Weiner, 1992; 1995).

Limitations of the Study and Suggestions for Future Research

The study was not without of limitations. The study faced several problems while designing and analyzing the participants' data. Future research focusing on the effect of texting-while-driving narratives and attribution theories can address the limitations discussed below.

First, the study chose manipulated stories from EndDD.org, a campaign website by Casey Feldman Foundation. Casey's parents launched this campaign website after her death by a distracted driver. The website shares the stories of many drivers who were somehow affected by distracted driving. The study chose stories that narrate the drivers' consequences affected by texting-while-driving. The stories were separated into severe and mild outcomes stories. All severe outcome stories describe the death of a driver who was texting-while-driving or describes the death of a driver killed by another driver who was texting-while-driving. All mild outcome stories narrated that the car was damaged, but the victim was unhurt. For most participants, mild outcome stories contain elements of severity, such as engaging in a motor vehicle crash and damaging the vehicle. The stories narrated in severe outcomes are rare and not very common in audiences' lives. Future studies may address this problem by manipulating severity of outcome with three levels: severe (driver is dead), mild (driver is mildly injured), and no injury of the driver (driver is unhurt).

Second, there are not an adequate number of current studies on texting-while-driving that applied and tested variables of attribution theories. The study did not find a set of questions with a good or acceptable level of reliability to measure situational similarities with the perpetrator and situational similarities with the victim. The situational similarities with the perpetrator and victim used in this study were adapted and modified from another study. The scale reliability of the situational similarities with the perpetrator was .689, and the scale reliability of the situational similarities with the victim was .777. The scale reliabilities of these two variables were not good. However, the study finds the effect of situational similarities with the perpetrator on reducing the behavioral intention to text while driving. Also, the study finds the effect of situational similarities with the victim on forming positive attitudes toward the victim. Future

research may design a set of items with a good or acceptable level of scale reliability to test the effect of situational similarities with the perpetrator and situational similarities with the victim variables.

Third, the age of the participants was significantly correlated with attribution of responsibility to the perpetrator/responsible driver, driver traits, and behavioral intention not to text while driving. The finding suggests that different age groups perceive a texting-while-driving narrative differently and react to the narratives differently. The current study had participants who were at least 18 years old and didn't include teen participants. Teen participants may perceive the messages differently than the other age groups. For example, teens may not perceive the texting-while-driving messages showing damage of vehicle was a risky behavior. Thus, the findings of this study is not generalizable among all age groups. Future studies may consider designing studies targeting the different age group.

Fourth, while reading an endangering-self severe outcome narrative, participants rated lower attribution of responsibility to the perpetrator/responsible driver. In addition, while reading an endangering-self mild outcome narrative, participants rated higher attribution of responsibility to the perpetrator/responsible driver. The difference between endangering-self severe and mild outcomes on assigning attribution of responsibility to the perpetrator/responsible driver is large. One of the reasons for this difference can be that people do not speak "ill of the dead." Perhaps that explains why participants assigned the least responsibility to the driver in the endangering-self severe outcome condition. However, the difference between endangering-others severe and mild outcomes on assigning responsibility to the perpetrator/responsible driver is almost the same. In addition, the severity of outcome predicted assigning higher fine and positive attitudes toward the victim. Future studies can consider attribution of responsibility to the

perpetrator/responsible driver as a mediator. The severity of the outcome cause changes in the attribution of responsibility to the perpetrator/responsible driver, which changes the outcome response.

Finally, the study measured attitudes toward the perpetrator and the victim. However, the study did not measure participants' attitudes toward the messages.

Conclusion

The following general research questions were proposed at the beginning of the study: (a) Do people process the narrative texting-while-driving campaign normatively (as the rational decision stage model suggested)? (b) Do people process the narrative texting-while-driving motivationally (as defensive attribution theory, modified defensive attribution theory, and need to believe in a just world suggested)?

Processing texting-while-driving accident narratives required both rational and motivational routes. It is crucial to incorporate the severity of the outcome element in the story to convey the dangers of texting while driving. The severity of the outcome is an effective message strategy to raise audiences' emotions (e.g., sympathy) and rational thinking before responding to the message.

Narratives can also be useful to warn audience about the negative consequences of texting and driving. Previously, many health communication research found the positive effect of narratives on audiences' cognitive and emotional processing of the message, such as reducing counterarguing and increasing message acceptance. Adapting a narrative-based campaign will benefit texting-while-driving campaigns by increasing message acceptance. However, the campaign designers should be cautious before choosing narratives for the texting-while-driving campaign. For example, it may not be a great idea to choose a narrative that shows drivers killing

themselves while texting and driving (as narrated in endangering-self narratives). Narratives showing drivers killing themselves due to texting while driving may reduce the assignment of responsibility to the responsible driver and generate counterarguing. Instead, it may be a good idea to choose a narrative where a perpetrator (texting driver) killed or injured another innocent driver (as narrated by endangering-others narratives). Narratives showing drivers killing others due to texting while driving may increase the assignment of responsibilities to the perpetrator and message acceptance. Lastly, the narratives should be situationally similar to ordinary people's everyday lives. In the study, participants with low situational similarities with the perpetrator (participants had little or no history of texting-while-driving) showed greater behavioral intention not to text while driving. In short, the campaign narratives should tell a story to which the general audience can relate. It may impact audiences' texting-while-driving behavior.

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Appendix 1 - Tables

Table 1

Mean Difference between Endangering-Self Question (Q.1) in Endangering-Self Condition and Endangering-Others Condition.

	Endangering-self		Endangering-others		
	M	SD	M	SD	t-value
Endangering-self question	5.78	1.53	4.38	2.04	5.10***

****p<.001*

Table 2

Mean Difference between Endangering-Others Questions (Q.2) in Endangering-Self Condition and Endangering-Others Condition.

	Endangering-self		Endangering-others		
	M	SD	M	SD	t-test
Endangering others question	2.71	1.80	5.40	1.58	-10.51***

****p<.001*

Table 3 - *Means and Standard Deviations of Endangering-Self and Endangering-Others Questions in High Severity of Outcome Condition.*

	Endangering-self question (consequences of the driver)			Endangering-others question (consequences of other people)		
Endangering-self stories	N	M	SD	N	M	SD
Story 1	40	6.23	1.48	41	2.39	2.05
Story 2	41	6.59	1.18	41	2.24	1.92
Story 3	41	6.34	1.20	41	2.46	2.29
Story 4	41	6.63	0.79	41	2.49	1.92
Story 5	41	6.66	0.96	41	2.54	2.18
Story 6	41	6.39	1.30	41	2.71	1.89
Story 7	41	6.63	1.16	41	2.39	1.94
Story 8	41	6.46	1.14	41	2.20	1.60
Story 9	41	6.46	1.12	41	2.90	2.09
Story 10	41	6.51	1.12	41	2.44	1.84
Endangering-others stories	N	M	SD	N	M	SD
Story 1	45	4.89	2.27	45	5.02	2.36
Story 2	45	4.69	2.36	45	5.78	1.93
Story 3	45	4.84	2.42	45	5.56	2.06
Story 4	45	4.80	2.41	45	5.62	1.95
Story 5	45	4.33	2.27	45	5.71	1.82
Story 6	45	4.33	2.36	45	5.93	1.67
Story 7	45	4.31	2.41	45	5.93	1.80
Story 8	45	4.58	2.38	45	5.78	1.95
Story 9	45	4.71	2.37	45	5.80	1.99
Story 10	45	4.13	2.32	45	6.16	1.59

Table 4 - *Means and Standard Deviations of Endangering-Self and Endangering-Others Questions in Mild Severity of Outcome Condition.*

	Endangering-self question (consequences of the driver)			Endangering-others question (consequences of other people)		
Endangering-self stories	N	M	SD	N	M	SD
Story 1	47	4.74	1.93	47	2.81	2.06
Story 2	47	5.30	1.71	47	2.94	2.22
Story 3	47	5.11	2.02	47	2.62	1.95
Story 4	47	4.94	1.89	47	3.11	1.82
Story 5	47	5.13	1.87	47	2.62	2.19
Story 6	47	5.23	1.81	47	3.51	2.07
Story 7	47	5.49	1.71	47	2.85	2.28
Story 8	47	5.40	1.76	47	3.00	2.18
Story 9	47	5.32	1.81	47	2.87	2.29
Story 10	47	5.11	1.88	47	2.81	2.18
Endangering-others stories	N	M	SD	N	M	SD
Story 1	42	4.05	1.93	42	5.02	1.60
Story 2	42	4.55	1.89	42	5.07	1.76
Story 3	42	4.07	1.98	42	4.90	1.79
Story 4	42	4.21	2.04	42	4.86	1.75
Story 5	42	4.00	1.95	42	5.36	1.51
Story 6	40	4.15	2.07	41	4.83	1.69
Story 7	42	4.05	2.06	42	4.88	1.63
Story 8	42	4.40	1.77	42	5.26	1.65
Story 9	42	4.10	1.88	42	5.10	1.65
Story 10	42	4.17	2.13	42	5.24	1.57

Table 5

Mean Difference of Severity of Outcome between Endangering-Self Mild Outcome and Endangering-Self Severe Outcome Condition.

	Endangering-self mild outcome		Endangering-self severe outcome		
	M	SD	M	SD	t-test
Severity	3.55	1.63	6.64	.51	-5.948***

****p<.001*

Table 6

Mean Difference of Severity of Outcome between Endangering-Others Mild Outcome and Endangering-Others Severe Outcome Condition.

	Endangering others mild outcome		Endangering others severe outcome		
	M	SD	M	SD	t-test
Severity	2.86	1.95	6.29	.85	-4.884***

****p<.001*

Table 7

Mean Difference of Severity of Outcome between Endangering-Self Severe Outcome and Endangering-Self Mild Outcome (Story 2).

	Endangering- self severe outcome (Story 2)		Endangering-self mild outcome (Story 2)		
	M	SD	M	SD	t-test
Severity	6.91	.30	3.78	1.97	4.72**

****p<.001, **p=.001*

Table 8

Mean Difference of Severity of Outcome between Endangering-Self Severe Outcome and Endangering-Self Mild Outcome (Story 9).

	Endangering- self severe outcome (Story 9)		Endangering-self mild outcome (Story 9)		
	M	SD	M	SD	t-test
Severity	6.86	.32	3.50	1.77	5.63***

****p<.001*

Table 9

Mean Difference of Severity of Outcome between Endangering-Others Severe Outcome and Endangering-Others Mild Outcome (Story 2).

	Endangering- others severe outcome (Story 2)		Endangering-others mild outcome (Story 2)		
	M	SD	M	SD	t-test
Severity	6.55	0.91	3.18	2.31	4.44**

***p=.001*

Table 10

Mean Difference of Severity of Outcome between Endangering-Others Severe Outcome and Endangering-Others Mild Outcome (Story 4).

	Endangering- others severe outcome (Story 4)		Endangering-others mild outcome (Story 4)		
	M	SD	M	SD	t-test
Severity	6.50	0.90	2.45	2.17	5.61***

****p<.001*

Table 11 - *Means and Standard Deviations of Severity of Outcome of Endangering-self and Endangering-others Condition*

	Severity of outcome – high			Severity of outcome-low		
Endangering-self stories	N	M	SD	N	M	SD
Story 1	11	6.68	0.46	9	3.00	1.85
Story 2	11	6.91	0.30	9	3.78	1.97
Story 3	11	6.23	1.51	9	3.55	1.91
Story 4	11	6.18	1.58	9	3.55	1.81
Story 5	11	6.77	0.51	9	4.11	1.73
Story 6	11	6.73	0.51	9	3.33	1.66
Story 7	11	6.73	0.51	9	3.11	1.51
Story 8	11	6.50	0.67	9	4.00	1.44
Story 9	11	6.86	0.32	9	3.50	1.77
Story 10	11	6.77	0.41	9	3.61	1.83
Endangering-others stories	N	M	SD	N	M	SD
Story 1	9	6.22	1.17	11	2.91	2.01
Story 2	9	6.55	0.91	11	3.18	2.31
Story 3	9	6.39	0.99	11	2.50	2.00
Story 4	9	6.50	0.90	11	2.45	2.17
Story 5	9	5.55	0.98	11	3.50	2.02
Story 6	9	6.11	0.96	11	3.04	2.13
Story 7	9	6.39	0.93	11	2.59	1.97
Story 8	9	6.39	0.86	11	2.95	2.14
Story 9	9	6.50	1.00	11	2.73	2.09
Story 10	9	6.28	0.97	11	2.73	2.13

Table 12

Mean Difference of Endangering-Self Question between Endangering-Self Condition and Endangering-Others Condition.

	Endangering-self		Endangering-others		
	M	SD	M	SD	t-value
Endangering-self question	5.82	1.38	3.49	2.15	13.99***

****p<.001*

Table 13

Mean Difference of Endangering-Others Question between Endangering-Self condition and Endangering-Others Condition.

	Endangering-self		Endangering-others		
	M	SD	M	SD	t-value
Endangering-others question	2.86	1.76	5.77	1.36	19.10***

****p<.001*

Table 14

Mean Difference of Severity of Outcome between Endangering-Self Severe Outcome and Endangering-Self Mild Outcome.

	Endangering- self severe outcome (N=118)		Endangering-self mild outcome (N=115)		
	M	SD	M	SD	t-test
Severity	6.83	.49	3.22	1.87	19.96***

****p<.001*

Table 15

Mean Difference of Severity of Outcome between Endangering-Others Severe Outcome and Endangering-Others Mild Outcome.

	Endangering- others severe outcome (N=118)		Endangering-others mild outcome (N=116)		
	M	SD	M	SD	t-test
Severity	6.69	.73	3.59	1.92	16.22***

****p<.001*

Table 16

Socio-Demographic Characteristics of the Participants

Variable	**N**	**M (SD)**	**%**
Age	467	30.18 (9.10)	-
Driving frequency	467	5.61 (2.13)	-
Gender			
Male	234		50.1
Female	233		49.9
Ethnicity			
White	377	-	81.1
Hispanic or Latino	27		5.8
American Indian or Alaskan Native	2		.4
Asian	22		4.7
Other	37		8
Education			

Some high school, no diploma	6	1.3
High school graduate, diploma, or equivalent	44	9.4
Some college credit, no degree	107	22.9
Associate degree	45	9.6
Bachelor's degree	193	41.3
Master's degree	47	10.1
Professional degree	13	2.8
Doctorate	12	2.6
Employment status		
Employed for wages	289	62
Self-employed	54	11.6
Student	86	18.5
Military	1	.2
Retired	4	.9
Unable to work	32	6.9
Income		
Less than $10,000	78	16.7
$10,000-$19,999	39	8.4
$20,000-$29,999	48	10.3
$30,000-$39,999	67	14.3
$40,000-$49,999	54	11.6
$50,000-$59,999	42	9
$60,000-$69,999	33	7.1

$70,000 and above	93	19.9
Prefer not to answer	13	2.8
Cell phone plan		
Yes	459	98.3
No	8	1.7

Table 17

Repeated Measures ANCOVA Direct Effect Table

Dependent variables	Sum of squares	Df	Mean square	F	P	Partial eta square
Attribution of responsibility						
Severity	5.74	1	5.74	7.51	.006	.016
Narrative	23.93	1	23.93	31.34	<.001	.064
Severity x narrative	4.84	1	4.84	6.34	.012	.014
Age	9.08	1	9.08	11.90	.001	.025
Attitude toward texting and driving	7.20	1	7.20	9.43	.002	.020
Error	351.97	461	.76			
Higher Fine						
Severity	128021609652.51	1	12802160965 2.51	137.93	<.001	.23
Narrative	337677815748.09	1	33767781574 8.09	363.81	<.001	.44
Severity x narrative	110083883569.90	1	11008388356 9.90	118.60	<.001	.20
Error	429742330993.60	463	42974233099 3.60			
Attitude toward the perpetrator						
Severity	2.85	1	2.85	1.53	.22	.007
Error	429.04	231	1.86			
Attitude toward the victim						
Severity	31.72	1	31.72	13.60	<.001	.029
Narrative	1241.78	1	1241.78	532.49	<.001	.54
Severity x narrative	29.05	1	29.05	12.46	<.001	.026
Error	1075.07	461	2.33			
Driver's traits						
Severity	4.38	1	4.38	3.85	.05	.008
Narrative	12.86	1	12.86	11.31	.001	.024
Severity x narrative	7.85	1	7.85	6.90	.009	.015
Age	5.73	1	5.73	5.04	.025	.011
Attitude toward texting and driving	29.77	1	29.77	26.18	<.001	.054
Error	521.95	459	1.14			
Behavioral intention						
Severity	1.38	1	1.38	.86	.35	.002
Narrative	.26	1	.26	.16	.69	.000
Severity x narrative	1.51	1	1.51	.94	.33	.002
Age	6.68	1	6.68	4.18	.042	.009

Attitude toward texting and driving	256.34	1	256.34	160.39	<.001	.26
Car own	4.13	1	4.13	2.58	.11	.006
Driving frequency	12.97	1	12.97	8.12	.005	.017
Error	733.56	459	1.60			

Table 18

Descriptive Statistics of the Main Effects of Severity of Outcome and Narratives on the Dependent Variables

Dependent variables	Severity of outcome (severe) Mean (SD)	Severity of outcome (mild) Mean (SD)	p-value
Attribution of responsibility to the perpetrator/responsible driver	**6.45 (.69)**	**6.60 (.61)**	**.006**
Higher fine	**59656.26 (37457.42)**	**36239.59 (21980.76)**	**<.001**
Attitudes toward the perpetrator	1.88 (.93)	2.03 (.99)	.22
Attitudes toward the victim	**4.10 (1.50)**	**3.73 (1.68)**	**<.001**
Driver's traits	**1.99(.82)**	**1.85(.77)**	**.05**
Behavioral intention to not to text while driving	1.73 (.89)	1.80 (.90)	.35
Dependent variables	**Endangering-self narrative Mean (SD)**	**Endangering-others narrative Mean (SD)**	**p-value**
Attribution of responsibility to the perpetrator/responsible driver	**6.37 (.68)**	**6.69 (.59)**	**<.001**
Higher fine	**28932.55 (21889.93)**	**66963.29 (30937.91)**	**<.001**
Attitudes toward the perpetrator	-	-	-
Attitudes toward the victim	**2.76 (1.15)**	**5.07 (1.06)**	**<.001**
Driver's traits	**2.03 (.79)**	**1.80 (.79)**	**<.001**
Behavioral intention to not to text while driving	1.78 (.90)	1.75 (.90)	.69

Note. The tests are across rows and significantly different means are in bold.

Table 19

Descriptive Statistics of the Interaction of Severity of Outcome and Narratives on the Dependent Variables

Dependent variables	Severity of outcome (severe) x endangering-self narrative	Severity of outcome (severe) x endangering-others narrative	
	Mean (SD)	**Mean (SD)**	**p-value**
Attribution of responsibility to the perpetrator	**6.21 (.74)**	**6.68 (.56)**	**<.001**
Higher fine	**29783.75 (30271.62)**	**89528.77 (30336.51)**	**<.001**
Attitudes toward the perpetrator	-	-	-
Attitudes toward the victim	**3.12 (1.53)**	**5.08 (1.51)**	**<.001**
Driver's traits	**2.20 (1.07)**	**1.78 (1.07)**	**<.001**
Behavioral intention not to text while driving	1.66 (1.05)	1.75 (.97)	.52
Dependent variables	**Severity of outcome (mild) x endangering-self narrative**	**Severity of outcome (mild) x endangering-others narrative**	
	Mean (SD)	**Mean (SD)**	**p-value**
Attribution of responsibility to the perpetrator	**6.52 (.59)**	**6.69 (.63)**	**<.001**
Higher fine	**28081.36 (30663.92)**	**44398.82 (30596.87)**	**<.001**
Attitudes toward the perpetrator	-	-	-
Attitudes toward the victim	**2.40 (1.54)**	**5.07 (1.53)**	**<.001**
Driver's traits	1.87 (1.07)	1.82 (1.07)	.55
Behavioral intention not to text while driving	1.90 (1.15)	1.75 (1.08)	.32

Note. The tests are across rows and significantly different means are in bold.

Table 20

Output of Bootstrap Mediation Model (Hayes Process Model 4) for severity of outcome and DVs through the mediators

Path	Effect	b (SE)	95% CI	t
DV- Attribution of responsibility to the perpetrator/responsible driver. N=465, R^2 =.356				
a-path	Severity of outcome → internal locus of control	-.099*(.052)	-.202;.003	-1.911
	Severity of outcome → external locus of control	.123 (.090)	-.054; .300	1.366
	Severity of outcome → sympathy towards the victim	1.139** (.182)	.781; 1.497	6.249
b-path	Internal locus of control → attribution of responsibility to the perpetrator	.552**(.047)	.461; .644	11.87
	External locus of control → attribution of responsibility to the perpetrator	-.093*(.027)	-.1457; -.041	-3.504
	Sympathy towards the victim → attribution of responsibility to the perpetrator	.038*(.013)	.013; .063	2.952
Indirect effect	Severity of outcome→internal locus of control→attribution of responsibility to the perpetrator	-.055(.031)	-.121; .001	-
	Severity of outcome→external locus of control→attribution of responsibility to the perpetrator	-.012 (.009)	-.031; .005	-
	Severity of outcome→Sympathy towards the victim→attribution of responsibility to the perpetrator	.043 (.016)	.015; .079	-
Direct. effect		-.132* (.052)	-.234; -.030	-2.551

Total effect		-.024 (.039)	-.103; .049	-
DV- Higher fine. N=465, R^2=.318				
a-path	Severity of outcome→internal locus of control	-.091 (.054)	-.197; .015	-1.684
	Severity of outcome→external locus of control	.108 (.092)	-.072; .289	1.178
	Severity of outcome→sympathy towards the victim	1.131 **(.182)	.773; 1.489	6.207
b-path	Internal locus of control→higher fine	9323.411* (2311.488)	4781.025; 13865.797	4.034
	External locus of control→higher fine	-2234.630 (1344.672)	-4877.091; 407.831	-1.662
	Sympathy towards the victim→higher fine	6261.161** (649.313)	4985.174; 7537.149	9.643
Indirect effect	Severity of outcome→internal locus of control→higher fine	-845.872 (595.342)	-2226.617; 106.582	-
	Severity of outcome→external locus of control→higher fine	-242.240 (282.770)	-919.320; 190.279	-
	Severity of outcome→sympathy towards the victim→higher fine	7078.993 (1312.229)	4682.645; 9779.744	-
Direct effect		17109.762** (2646.112)	11909.796; 22309.729	6.466
Total effect		5990.881 (1560.756)	3002.766; 9160.351	-

Path	Effect	b (SE)	95% CI	t
Attitudes toward the perpetrator. N=232. R^2=.116				
a-path	Severity of outcome→ internal locus of control	-.063(.069)	-.199;.072	-.920
	Severity of outcome→ external locus of control	-.046 (.127)	-.295; .203	-.364
	Severity of outcome→ sympathy towards the victim	.390** (.094)	.206; .575	4.169
b-path	Internal locus of control→ attitudes toward the perpetrator	.055(.132)	-.206; .315	.415
	External locus of control→ attitudes toward the perpetrator	.229*(.065)	.101; .358	3.515
	Sympathy towards the victim→ attitudes toward the perpetrator	-.304*(.095)	-.491; -.118	-3.212
Indirect effect	Severity of outcome→internal locus of control→attitudes toward the perpetrator	-.004(.014)	-.038; .022	-
	Severity of outcome→external locus of control→attitudes toward the perpetrator	-.011 (.033)	-.092; .044	-
	Severity of outcome→sympathy towards the victim→attitudes toward the perpetrator	-.119 (.051)	-.231; -.035	-
Direct effect		-.025 (.127)	-.276; .226	-.194
Total effect		-.133 (.068)	-.282; -.015	-
DV- Attitudes toward the victim. N= 463. R^2=.575				
a-path	Severity of outcome→ internal locus of control	-.090 (.054)	-.196; .016	-1.668
	Severity of outcome→ external locus of control	.111 (.092)	-.070; .292	1.207

	Severity of outcome→ sympathy towards the victim	1.142 **(.182)	.784; 1.500	6.267
b-path	Internal locus of control→ attitudes toward the victim	.062 (.089)	-.113; .237	.695
	External locus of control→ attitudes toward the victim	-.086 (.052)	-.188; .016	-1.666
	Sympathy towards the victim→ attitudes toward the victim	.607** (.025)	.557; .656	24.181
Indirect effect	Severity of outcome→ internal locus of control→ attitudes toward the victim	-.006 (.010)	-.031; .010	-
	Severity of outcome→ external locus of control→ attitudes toward the victim	-.010 (.011)	-.037; .007	-
	Severity of outcome→ sympathy towards the victim→ attitudes toward the victim	.693 (.118)	.464; .930	-
Direct effect		-.316* (.102)	-.517; -.115	-3.095
Total effect		.678 (.120)	.445; .917	-
Driver's traits. N=464. R^2=.083				
a-path	Severity of outcome→ internal locus of control	-.101*(.052)	-.203;.002	-1.927
	Severity of outcome→ external locus of control	.116 (.090)	-.061; .294	1.289
	Severity of outcome→ sympathy towards the victim	1.120** (.183)	.761; 1.479	6.129
b-path	Internal locus of control→driver's traits	-.461**(.061)	-.581; -.340	-7.500
	External locus of control→driver's raits	.126*(.035)	.057; .195	3.567
	Sympathy towards the victim→driver's traits	.013(.017)	-.020; .046	.767

Indirect effect	Severity of outcome→internal locus of control→driver's traits	.046(.027)	-.001; .104	-
	Severity of outcome→external locus of control→driver's traits	.015 (.014)	-.009; .048	-
	Severity of outcome→sympathy towards the victim→driver's traits	.0145 (.0181)	-.021; .052	-
Direct effect		.056 (.069)	-.079; .191	.820
Total effect		.076 (.037)	.007; .151	-
Behavioral intention to not to text while driving. N=465. R^2=.305				
a-path	Severity of outcome→internal locus of control	-.097 (.052)	-.199; .005	-1.873
	Severity→external locus of control	.130 (.090)	-.046; .307	1.454
	Severity of outcome→ sympathy towards the victim	1.153 **(.182)	.795; 1.511	6.328
b-path	Internal locus of control→behavioral intention to not to text while driving	-.089 (.079)	-.245; .065	-1.144
	External locus of control→ behavioral intention to not to text while driving	.009 (.045)	-.080; .098	.200
	Sympathy towards the victim→ behavioral intention to not to text while driving	-.007 (.022)	-.049; .035	-.325
Indirect effect	Severity of outcome→internal locus of control→behavioral intention to not to text while driving	.009 (.010)	-.008; .032	-

	Severity of outcome→external locus of control→ behavioral intention to not to text while driving	.001 (.008)	-.016; .017	-
	Severity of outcome→sympathy towards the victim→ behavioral intention to not to text while driving	-.008 (.024)	-.055; .039	-
Direct effect		-.083 (.088)	-.255; .089	-.952
Total effect		.002 (.027)	-.052; .054	-

*$p<.05$, **$p<.001$

Table 21

Output of Bootstrap Mediation Model for narratives (Hayes Process Model 4) for narratives and DVs through the mediators

Path	Effect	b (SE)	95% CI	t
DV- Attribution of responsibility to the perpetrator/responsible driver. N=465, R^2=.355				
a-path	Narratives → internal locus of control	.241**(.051)	.141;.341	4.726
	Narratives → external locus of control	-.282* (.890)	-.458; -.107	-3.165
	Narratives → sympathy towards the victim	3.063** (.125)	2.817; 3.309	24.472
b-path	Internal locus of control → attribution of responsibility to the perpetrator	.547**(.047)	.455; .639	11.666
	External locus of control → attribution of responsibility to the perpetrator	-.086*(.027)	-.139; -.033	-3.191
	Sympathy towards the victim → attribution of responsibility to the perpetrator	-.006 (.019)	-.042; .031	-.311
Indirect effect	Narratives→internal locus of control→attribution of responsibility to the perpetrator	.132 (.031)	.074; .193	-
	Narratives→external locus of control→attribution of responsibility to the perpetrator	.024 (.011)	.006; .047	-
	Narratives→Sympathy towards the victim→attribution of responsibility to the perpetrator	-.018 (.064)	-.147; .106	-
Direct. effect		.187* (.078)	.035; .339	2.415

Total effect		.138 (.071)	-.009; .272	-
DV- Higher fine. N=465, R^2 =.347				
a-path	Narratives → internal locus of control	.244** (.053)	.140; .348	4.616
	Narratives → external locus of control	-.278* (.091)	-.458; -.099	-3.050
	Narratives → sympathy towards the victim	3.064 **(.125)	2.819; 3.310	24.490
b-path	Internal locus of control→higher fine	4985.692* (2280.338)	504.520; 9466.864	.347
	External locus of control→higher fine	-415.941 (1329.982)	-3029.534; 2197.652	-.313
	Sympathy towards the victim→higher fine	1814.252* (930.564)	-14.431; 3642.935	1.950
Indirect effect	Narratives→internal locus of control→higher fine	1216.238 (569.720)	165.746; 2384.436	-
	Narratives →external locus of control→higher fine	115.736 401.308)	-711.863; 934.359	-
	Narratives →sympathy towards the victim→higher fine	5559.579 (2487.856)	755.889; 10409.778	-
Direct effect		31103.641** (3876.912)	23484.987; 38722.295	8.023
Total effect		6891.552 (2655.014)	1768.053; 12143.627	-

DV- Attitudes toward the victim. N= 463. R^2=.619				
a-path	Narratives→ internal locus of control	.244** (.053)	.140; .348	4.605
	Narratives→ external locus of control	-.282* (.091)	-.461; -.102	-3.086
	Narratives→ sympathy towards the victim	3.071**(.125)	2.826; 3.316	24.600
b-path	Internal locus of control→ attitudes toward the victim	-.018 (.085)	-.185; .149	-.208
	External locus of control→ attitudes toward the victim	-.032 (.050)	-.130; .065	-.653
	Sympathy towards the victim→ attitudes toward the victim	.374** (.035)	.306; .443	10.733
Indirect effect	Narratives→ internal locus of control→ attitudes toward the victim	-.004 (.020)	-.047; .033	-
	Narratives → external locus of control→ attitudes toward the victim	.009 (.015)	-.018; .042	-
	Narratives→ sympathy towards the victim→ attitudes toward the victim	1.149 (.125)	.912; 1.403	-
Direct effect		1.154** (.145)	.869; 1.439	7.952
Total effect		1.154 (.127)	.904; 1.413	-
DV – Driver's traits. N=464. R^2=.255				
a-path	Narratives→ internal locus of control	.241**(.051)	.140;.341	4.707
	Narratives → external locus of control	-.290* (.089)	-.465; -.114	-3.244
	Narratives→ sympathy towards the victim	3.059** (.125)	2.813; 3.305	24.481
b-path	Internal locus of control→driver's traits	-.431**(.061)	-.551; -.311	-7.062
	External locus of control→driver's raits	.108*(.035)	.038; .177	3.055
	Sympathy towards the victim→driver's traits	.083*(.024)	.035; .131	3.415

Indirect effect	Narratives→internal locus of control→driver's traits	-.104(.029)	-.167; -.053	-
	Narratives →external locus of control→driver's traits	-.031 (.020)	-.076; .003	-
	Narratives→sympathy towards the victim→driver's traits	.254 (.077)	.105; .409	-
Direct effect		-.364**(.101)	-.563; -.165	-3.600
Total effect		.119 (.086)	-.050; .291	-
DV - Behavioral intention to not to text while driving. N=465. R^2=.304				
a-path	Narratives→internal locus of control	.241** (.051)	.141; .341	4.739
	Narratives →external locus of control	-.298* (.089)	-.473; -.123	-3.353
	Narratives→ sympathy towards the victim	3.059 **(.126)	2.812; 3.306	24.334
b-path	Internal locus of control→behavioral intention to not to text while driving	-.088 (.079)	-.244; .068	-1.106
	External locus of control→ behavioral intention to not to text while driving	.010 (.046)	-.080; .100	.225
	Sympathy towards the victim→ behavioral intention to not to text while driving	-.024 (.031)	-.085; .038	-.752
Indirect effect	Narratives→internal locus of control→behavioral intention to not to text while driving	-.021 (.022)	-.070; .018	-
	Narratives→external locus of control→ behavioral intention to not to text while driving	-.003 (.016)	-.034; .031	-

	Narratives→sympathy towards the victim→ behavioral intention to not to text while driving	-.072 (.098)	-.261; .127	-
Direct effect		.058 (.131)	-.198; .315	.446
Total effect		-.096 (.106)	-.300; .116	-

*Note. *p<.05, **p<.001*

Table 22

Descriptive Statistics of Severity of Outcome, Narratives and Need to Believe in a Just World (moderating variable) on the Dependent Variables

Dependent variables	Severity of outcome (severe) x need to believe in a just world (high)	Severity of outcome (severe) x need to believe in a just world (low)	Severity of outcome (mild) x need to believe in a just world (high)	Severity of outcome (mild) x need to believe in a just world (low)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Attribution of responsibility to the perpetrator	6.51 (.92)	6.45 (.92)	6.63 (.91)	6.65 (1.06)
Higher fine	60110.36 (33596.41)	60724.73 (34026.71)	33857.94 (31436.05)	38355.63 (36059.94)
Attitudes toward the victim	4.18 (1.69)	4.07 (1.69)	3.75 (1.52)	3.66 (1.82)
Driver's traits	1.92 (1.23)	1.92 (1.23)	1.74 (1.06)	1.84 (1.22)
Behavioral intention to not to text while driving	1.70 (1.38)	1.67 (1.38)	1.76 (1.22)	1.63 (1.52)
Dependent variables	Narrative (endangering-self) x need to believe in a just world (high)	Narrative (endangering-self) x need to believe in a just world (low)	Narrative (endangering-others) x need to believe in a just world (high)	Narrative (endangering-others) x need to believe in a just world (low)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Attribution of responsibility to the perpetrator	6.41 (.92)	6.38 (.92)	6.73 (.91)	6.72 (1.06)

Higher fine	27363.86 (32065.56)	30214.00 (33827.00)	66604.65 (32963.97)	68866.36 (36243.39)
Attitudes toward the victim	2.65 (1.69)	2.68 (1.69)	5.28 (1.67)	5.05 (1.82)
Driver's traits	2.03 (1.08)	1.94 (1.23)	1.64 (1.06)	1.82 (1.22)
Behavioral intention to not to text while driving	1.66 (1.23)	1.73 (1.38)	1.80 (1.37)	1.57 (1.37)

Note. *p<.05, **p<.001

Table 23

Descriptive Statistics of Severity of Outcome, Narratives and Situational Similarity with the Perpetrator (moderating variable) on the Dependent Variables

Dependent variables	Severity of outcome (severe) x similarity with the perpetrator (high)	Severity of outcome (severe) x similarity with the perpetrator (low)	Severity of outcome (mild) x similarity with the perpetrator (high)	Severity of outcome (mild) x similarity with the perpetrator (low)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Attribution of responsibility to the perpetrator	6.40 (.77)	6.57 (1.08)	6.57 (.76)	6.71 (1.22)
Higher fine	60849.10 (28513.99)	59985.99 (38386.06)	36447.68 (27027.36)	35765.90 (39472.35)
Attitudes toward the victim	4.10 (1.38)	4.16 (2.00)	3.77 (1.37)	3.64 (1.98)
Driver's traits	2.10 (.92)	1.73 (1.38)	1.96 (.91)	1.62 (1.37)
Behavioral intention to not to text while driving	**1.88* (1.08)**	**1.49* (1.54)**	**2.09* (1.06)**	**1.30* (1.52)**
Dependent variables	Narrative (endangering-self) x similarity with the perpetrator (high)	Narrative (endangering-self) x similarity with the perpetrator (low)	Narrative (endangering-others) x similarity with the perpetrator (high)	Narrative (endangering-others) x similarity with the perpetrator (low)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)

Attribution of responsibility to the perpetrator	6.31 (.77)	6.48 (1.08)	6.65 (.76)	6.79 (1.22)
Higher fine	31043.40 (27946.77)	26534.46 (37301.95)	66253.38 (27601.11)	69217.42 (40476.83)
Attitudes toward the victim	**2.94** (1.38)**	**2.39** (1.84)**	**4.93** (1.37)**	**5.40** (1.98)**
Driver's traits	2.13 (.92)	1.83 (1.23)	1.93 (.91)	1.52 (1.37)
Behavioral intention to not to text while driving	2.01 (1.08)	1.38 (1.54)	1.96 (1.06)	1.41 (1.67)

Note. *p<.05, **p<.001

Table 24

Descriptive Statistics of Severity of Outcome, Narratives and Situational Similarity with the Victim (moderating variable) on the Dependent Variables

Dependent variables	Severity of outcome (severe) x similarity with the victim (high)	Severity of outcome (severe) x similarity with the victim (low)	Severity of outcome (mild) x similarity with the victim (high)	Severity of outcome (mild) x similarity with the victim (low)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Attribution of responsibility to the perpetrator	6.47 (1.08)	6.50 (.92)	6.54 (1.06)	6.74 (.91)
Higher fine	60434.22 (34676.84)	60400.88 (32924.92)	36948.92 (34622.15)	35264.65 (33012.91)
Attitudes toward the victim	4.18 (1.69)	4.07 (1.69)	3.69 (1.67)	3.72 (1.67)
Driver's traits	1.90 (1.23)	1.93 (1.08)	1.85 (1.22)	1.74 (1.06)
Behavioral intention to not to text while driving	1.75 (1.38)	1.62 (1.38)	1.70 (1.37)	1.69 (1.37)
Dependent variables	Narrative (endangering-self) x similarity with the victim (high)	Narrative (endangering-self) x similarity with the victim (low)	Narrative (endangering-others) x similarity with the victim (high)	Narrative (endangering-others) x similarity with the victim (low)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)

Attribution of responsibility to the perpetrator	6.35 (.92)	6.44 (.92)	6.65 (1.06)	6.80 (.91)
Higher fine	29320.35 (31852.02)	28257.51 (34027.94)	68062.79 (37183.88)	67408.02 (31899.15)
Attitudes toward the victim	2.94 (1.38)	2.39 (1.84)	4.93 (1.37)	5.40 (1.98)
Driver's traits	1.98 (1.08)	1.99 (1.23)	1.77 (1.22)	1.68 (1.06)
Behavioral intention to not to text while driving	1.68 (1.23)	1.71 (1.38)	1.77 (1.52)	1.60 (1.22)

Note. *p<.05, **p<.001

Appendix 2 - Figures

Figure 1

Interaction Effect of Severity of Outcome and Narratives on Attribution of Responsibility to the Perpetrator

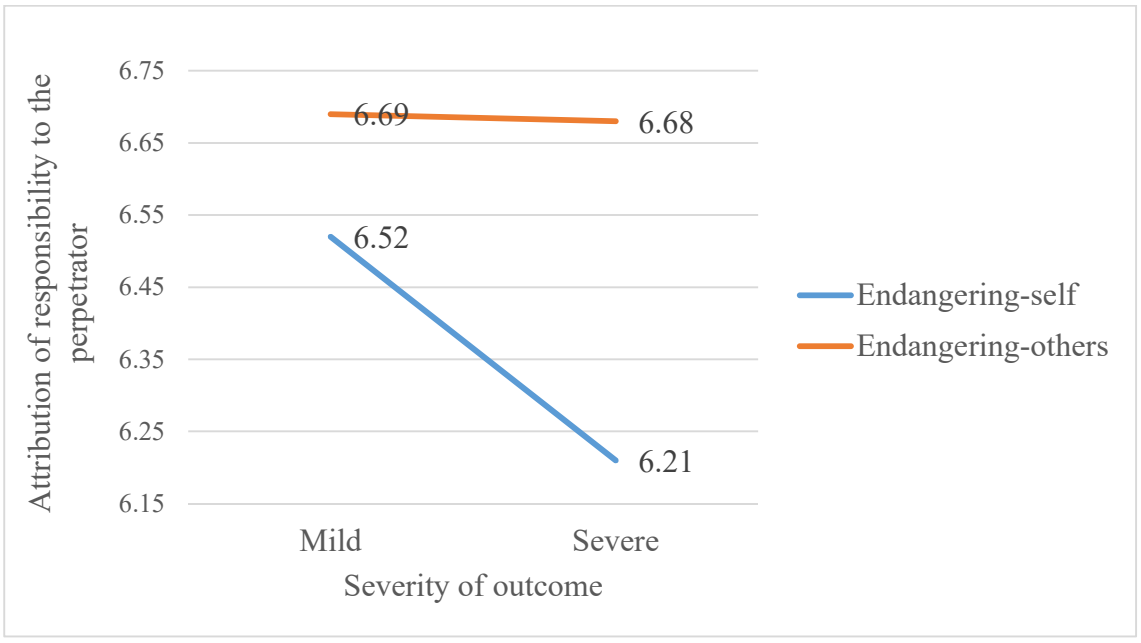


Figure 2

Interaction Effect of Severity of Outcome and Narratives on Assigning Higher Fine to the Perpetrator/Responsible Driver

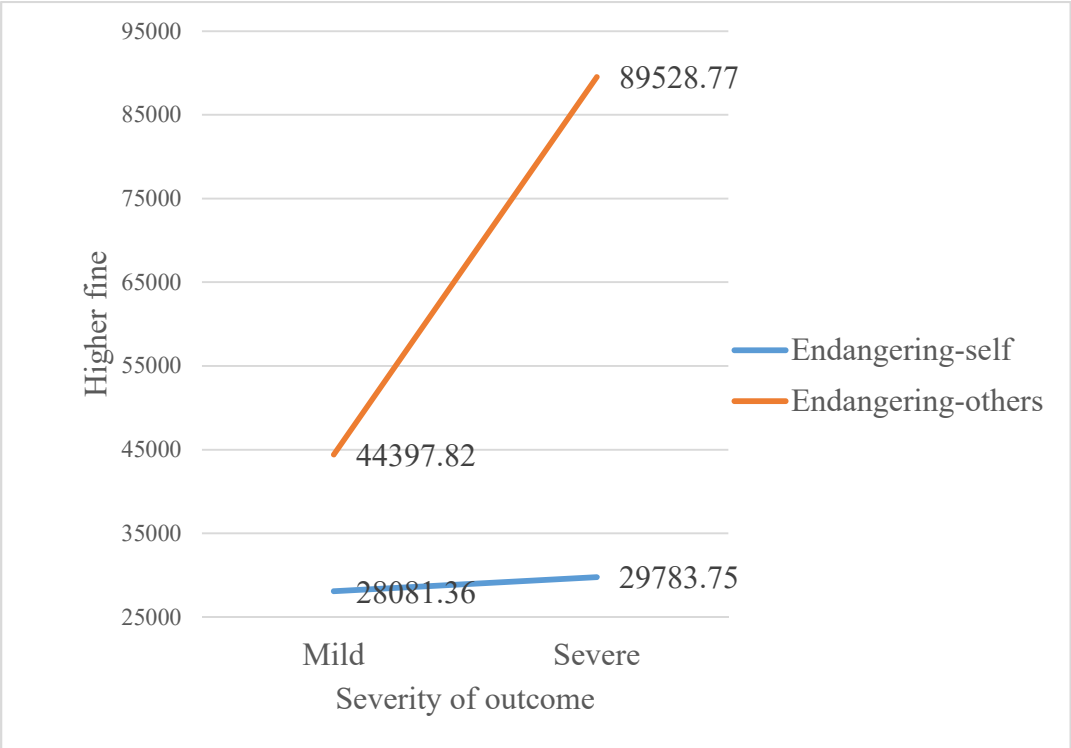


Figure 3

Interaction Effect of Severity of Outcome and Narratives on Attitudes toward the Victim

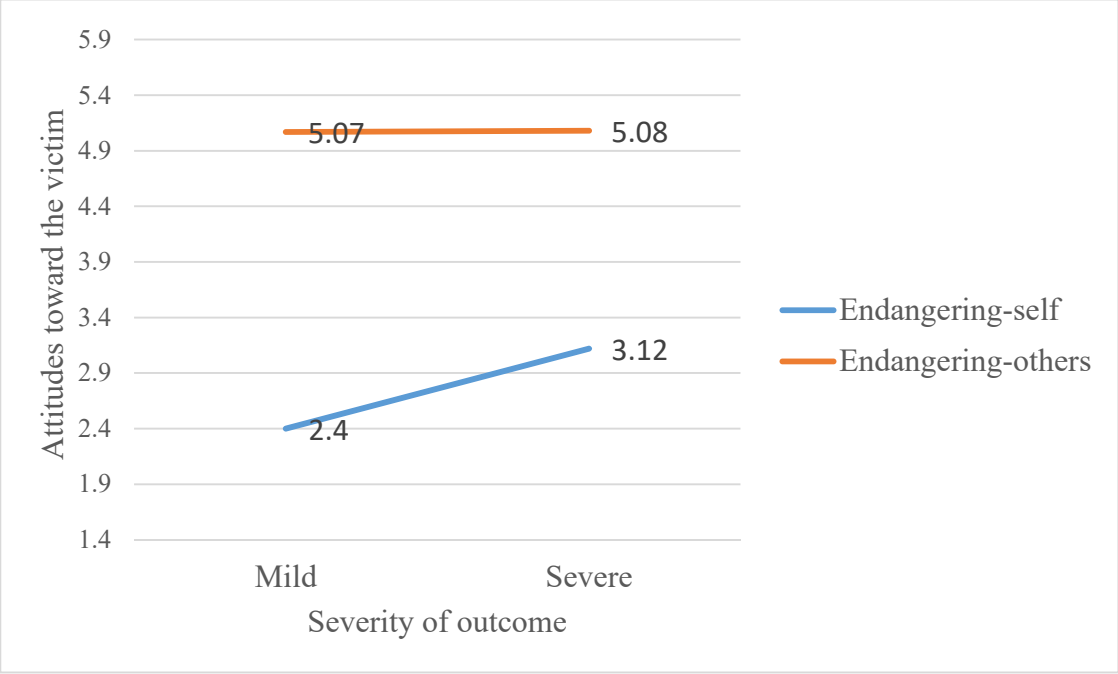


Figure 4

Interaction Effect of Severity of Outcome and Narratives on Driver's Traits

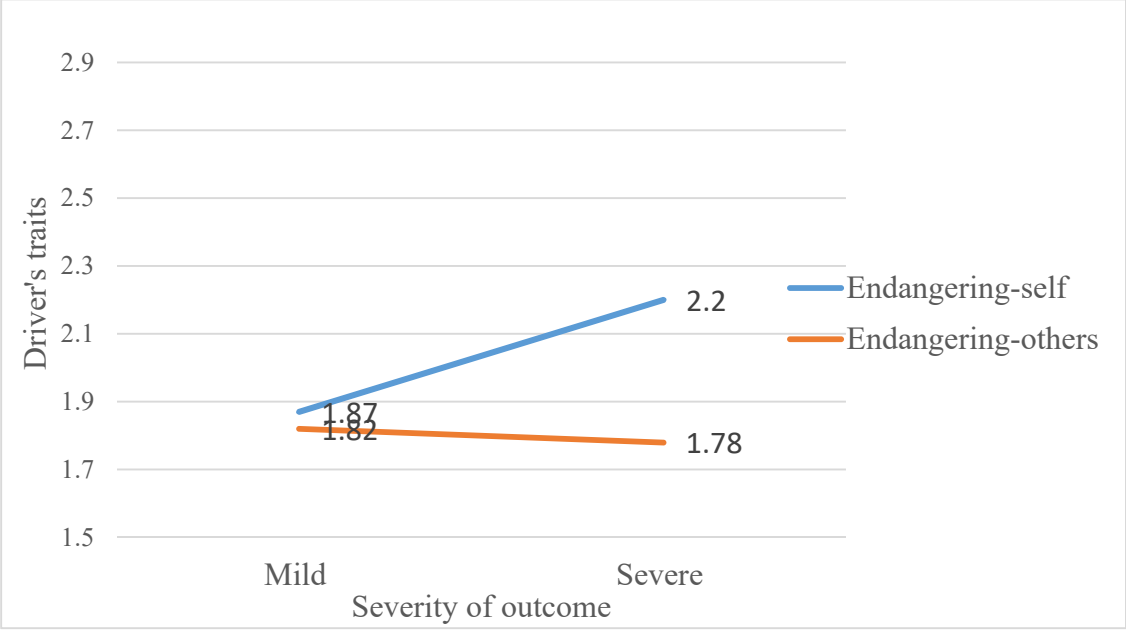
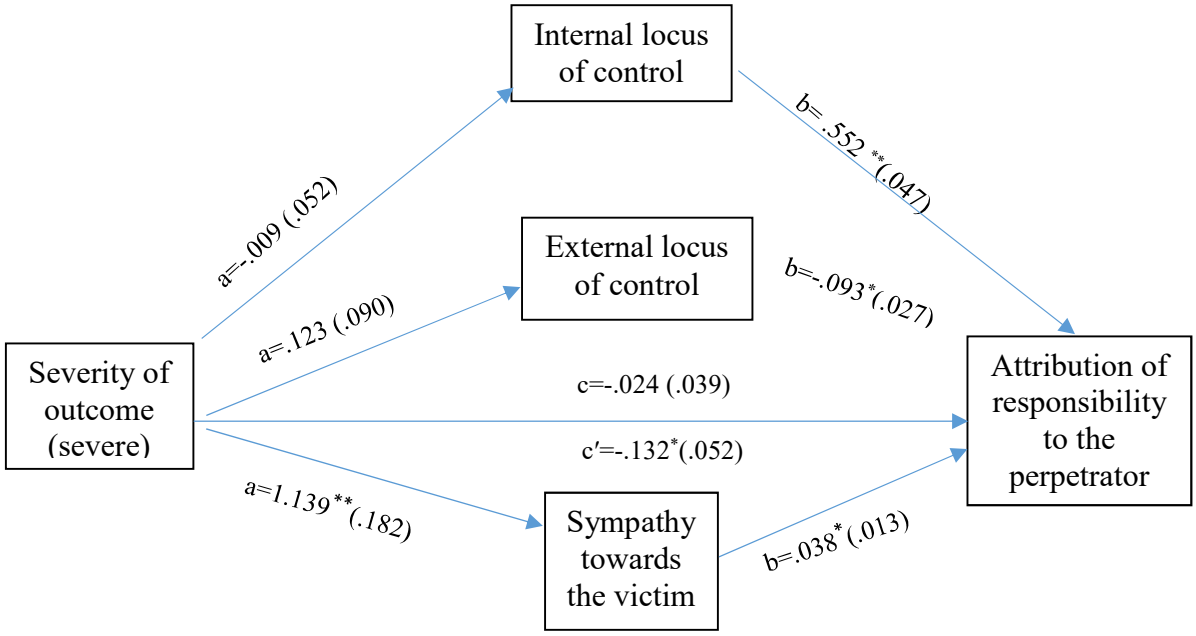


Figure 5

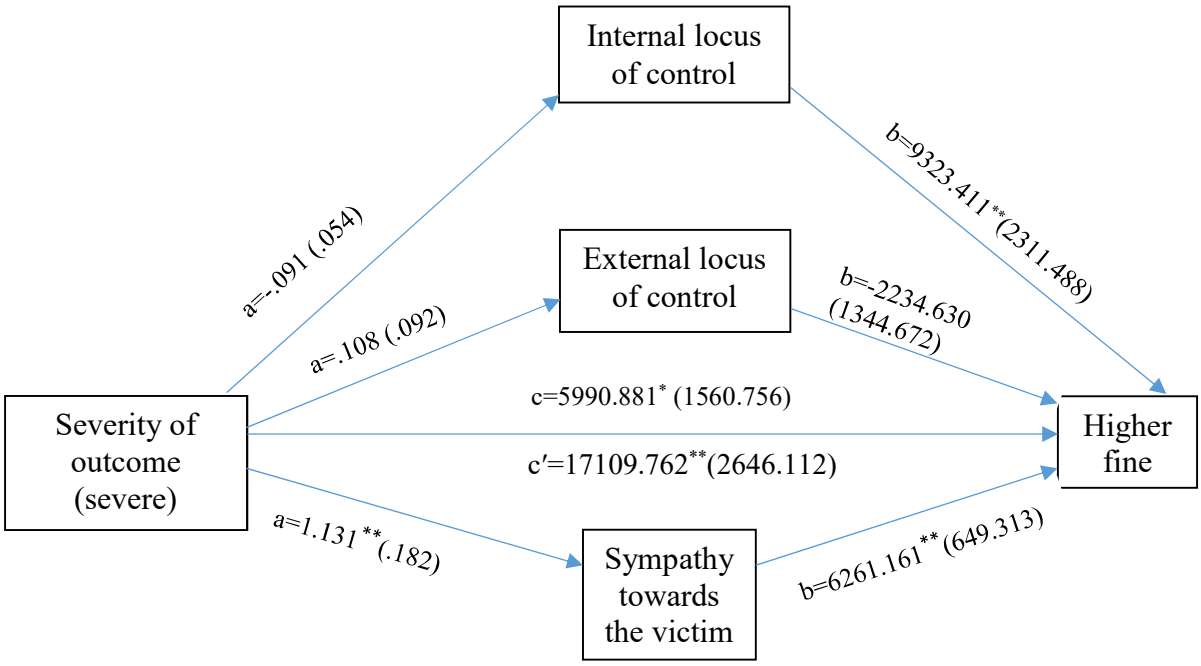
Indirect Effects Model for the Relationship between Severity of Outcome and Attribution of Responsibility to the Perpetrator/Responsible Driver as Mediated by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=465. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of severity on attribution of responsibility through the mediators. The c-prime path shows the direct effect of severity on attribution of responsibility. *p<.05, **p<.001.

Figure 6

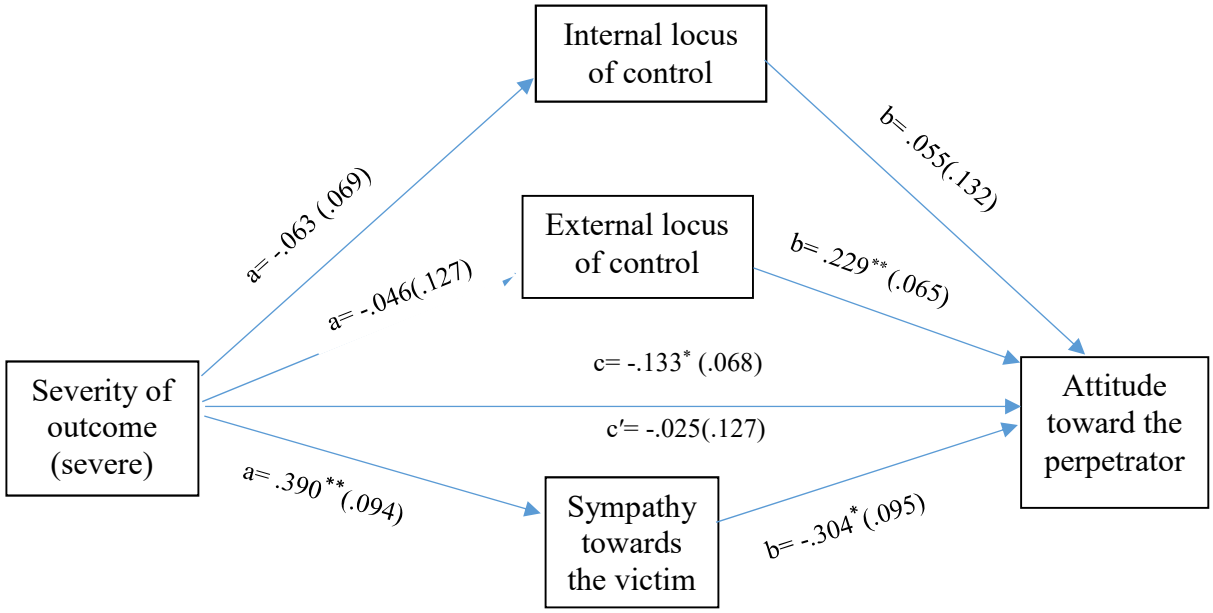
Indirect Effect Model for the Relationship between Severity of Outcome and Higher Fine as Mediated by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=465. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of severity of outcome on fine. The c-prime path shows the direct effect of severity of outcome on fine. *p<.05, **p<.001.

Figure 7

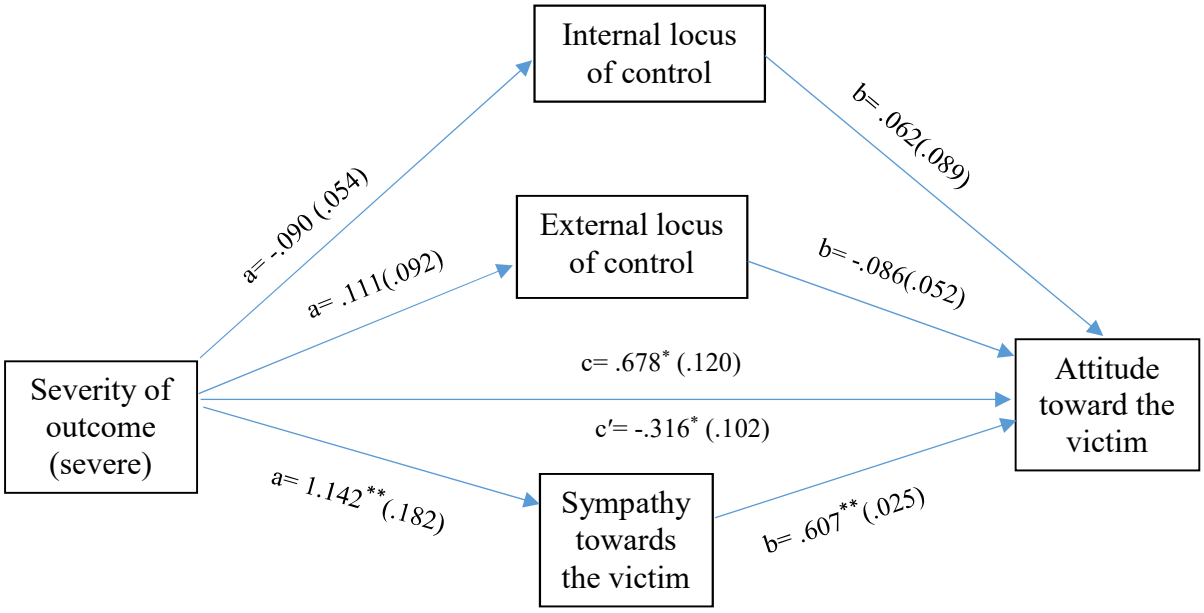
Indirect Effect Model for the Relationship between Severity of Outcome and Attitude toward the Perpetrator as Mediated by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=232. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of severity of outcome on attitudes toward the perpetrator. The c-prime path shows the direct effect of severity of outcome on attitudes toward the perpetrator. *p<.05, **p<.001.

Figure 8

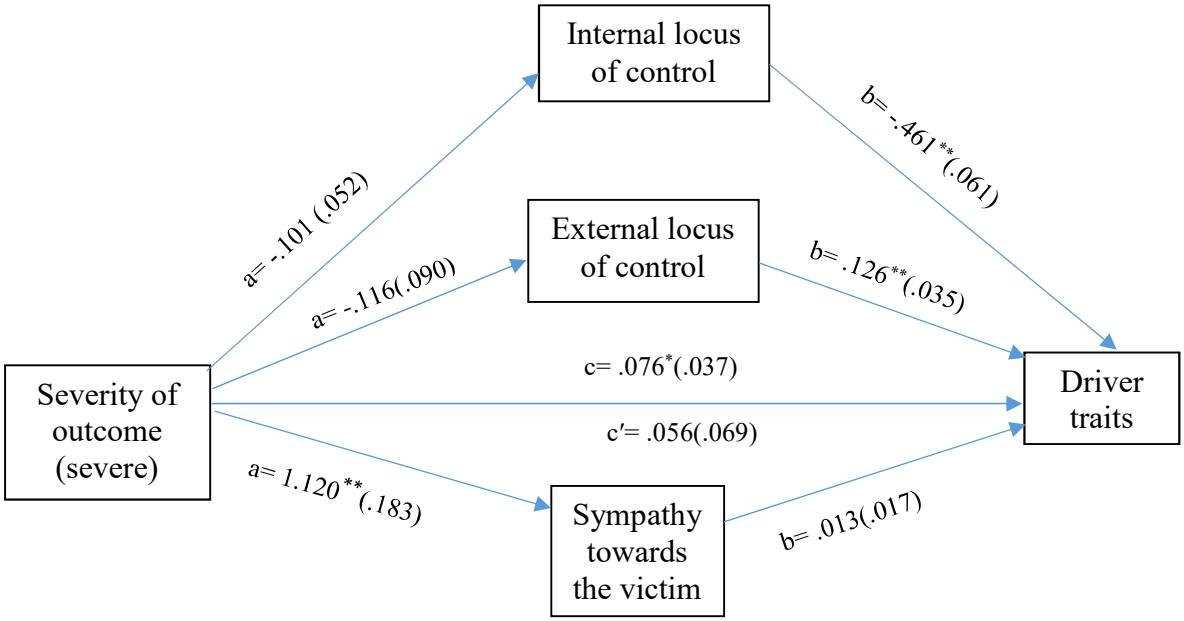
Indirect Effect Model for the Relationship between Severity of Outcome and Attitude toward the Victim as Mediated by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=463. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of severity of outcome on attitudes toward the victim. The c-prime path shows the direct effect of severity of outcome on attitudes toward the victim. *p<.05, **p<.001.

Figure 9

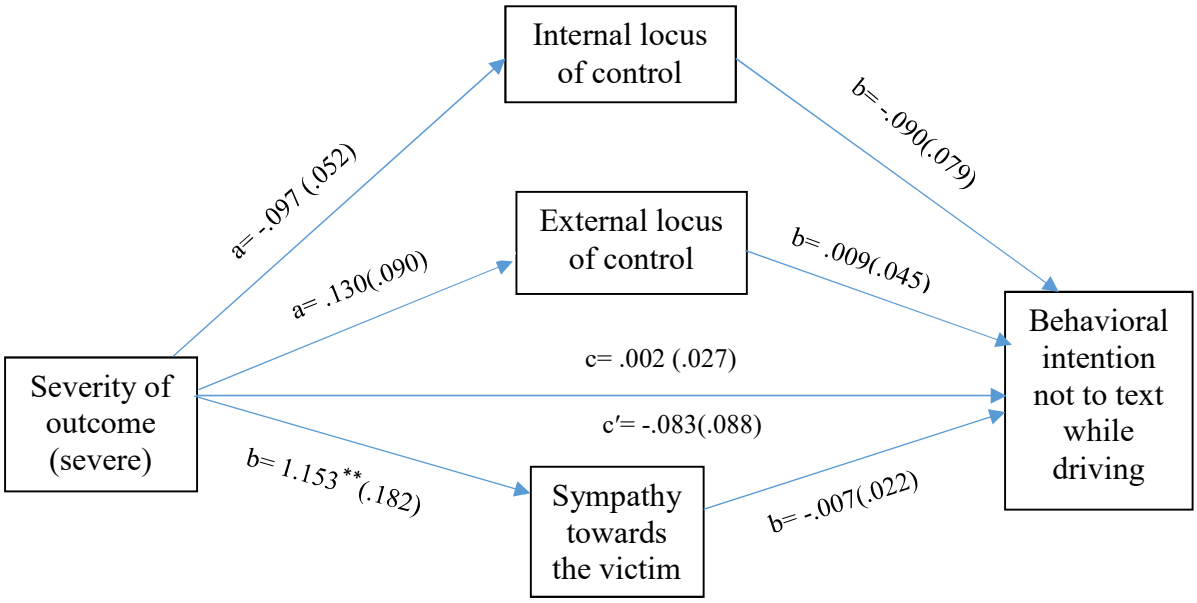
Indirect Effect Model for the Relationship between Severity of Outcome and Driver's Traits as Mediated by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=464. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of severity of outcome on driver's traits. The c-prime path shows the direct effect of severity of outcome on driver's traits. *p<.05, **p<.001.

Figure 10

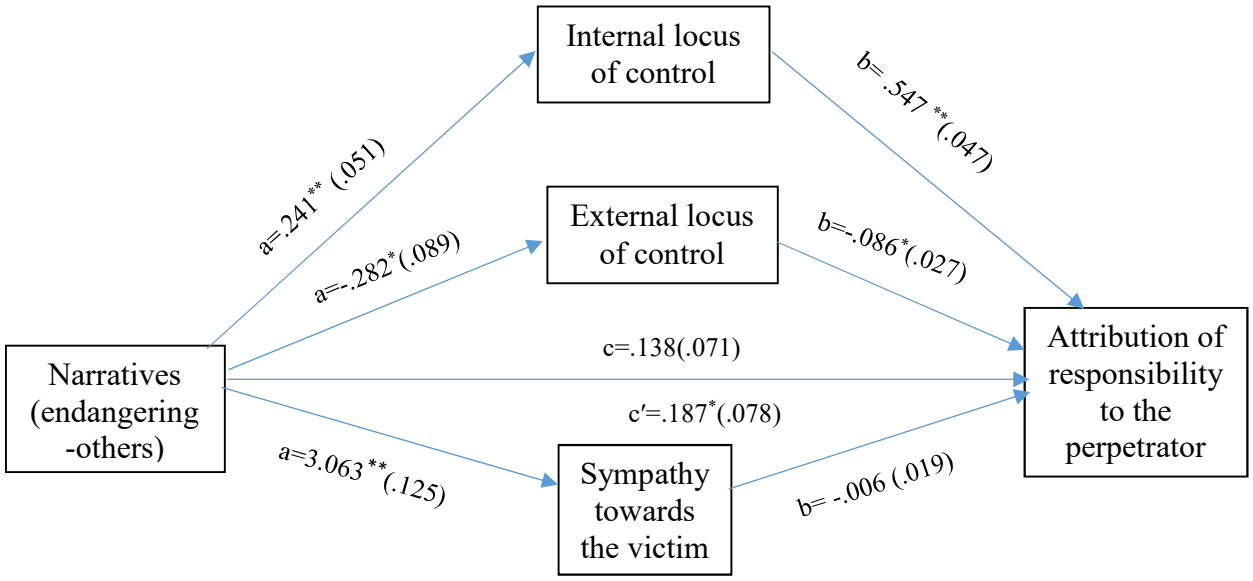
Indirect Effect Model for the Relationship between Severity of Outcome and Behavioral Intention not to Text while Driving by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=465. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of severity of outcome on behavioral intention to not to text while driving. The c-prime path shows the direct effect of severity of outcome on behavioral intention to not to text while driving. *p<.05, **p<.001.

Figure 11

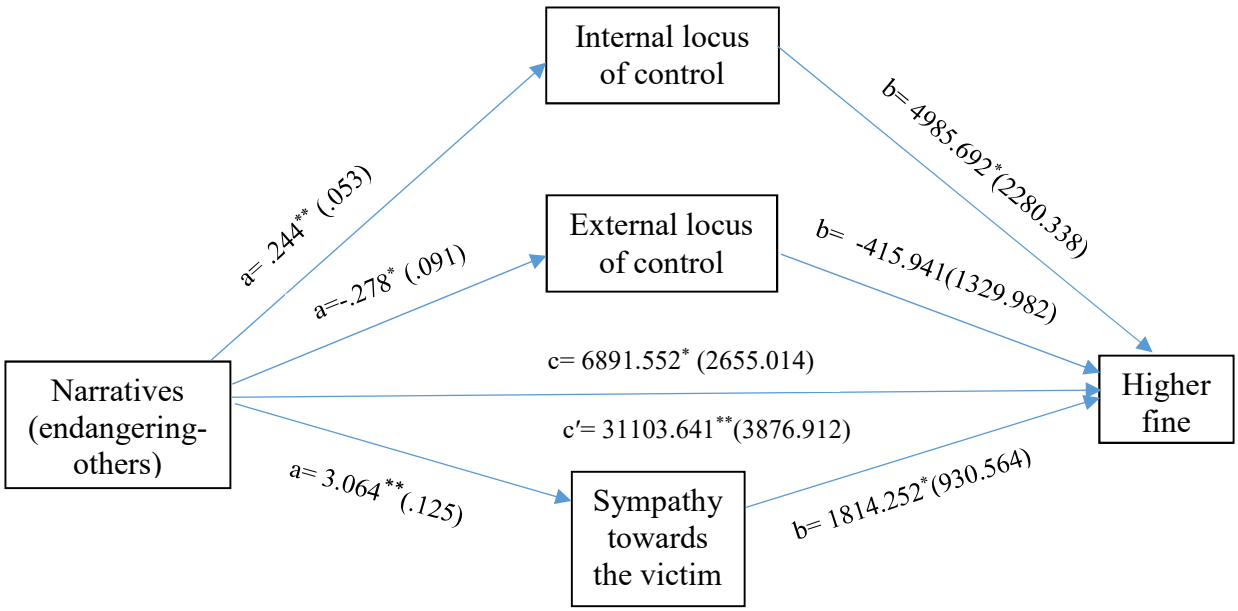
Indirect Effect Model for the Relationship between Narratives and Attribution of Responsibility to the Perpetrator/Responsible Driver by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=465. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of narratives on attribution of responsibility to the perpetrator through the mediators. The c-prime path showing the direct effect of narratives on attribution of responsibility to the perpetrator. *p<.05, **p<.001.

Figrue 12

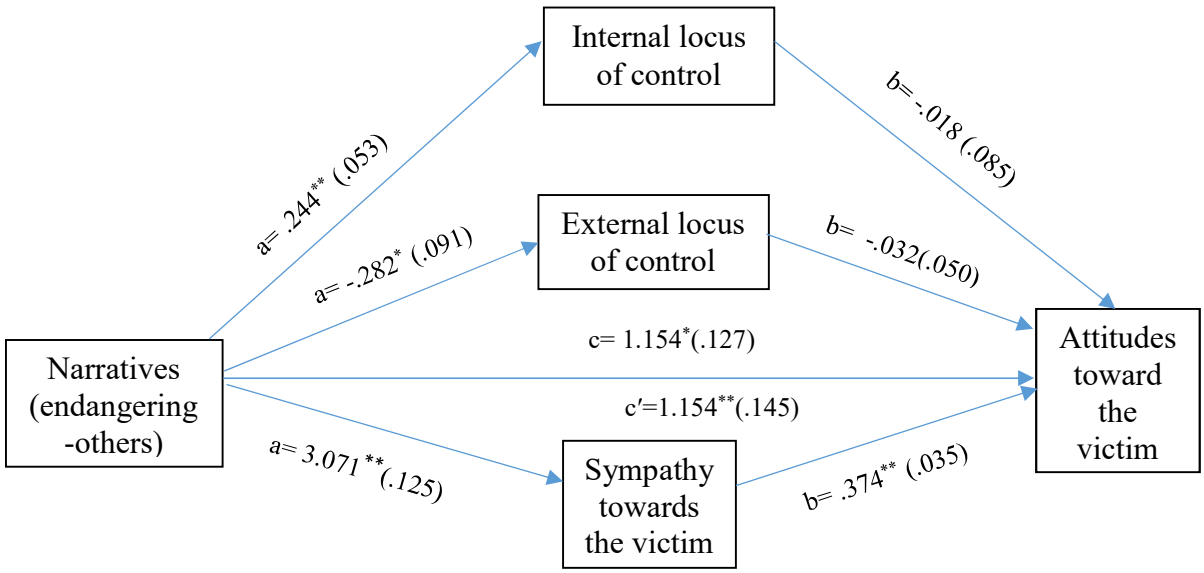
Indirect Effect Model for the Relationship between Narratives and Higher Fine by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=465. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of narratives on assigning fine through the mediators. The c-prime path shows the direct effect of narratives on assigning fine. *p<.05, **p<.001.

Figure 13

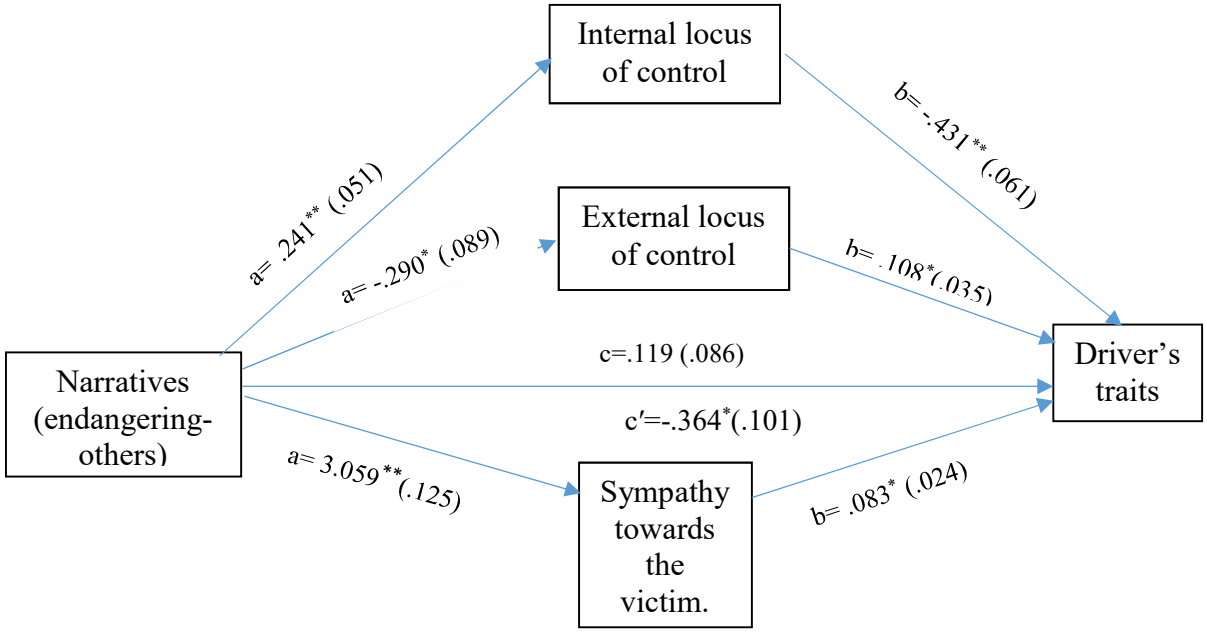
Indirect Effect Model for the Relationship between Narratives and Attitude towards the Victim by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=463. a, b, c, and c′ are path coefficients shows unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of narratives on attitudes toward the victim through the mediators. The c-prime path shows the direct effect of narratives on attitudes toward the victim. *p<.05, **p<.001.

Figure 14

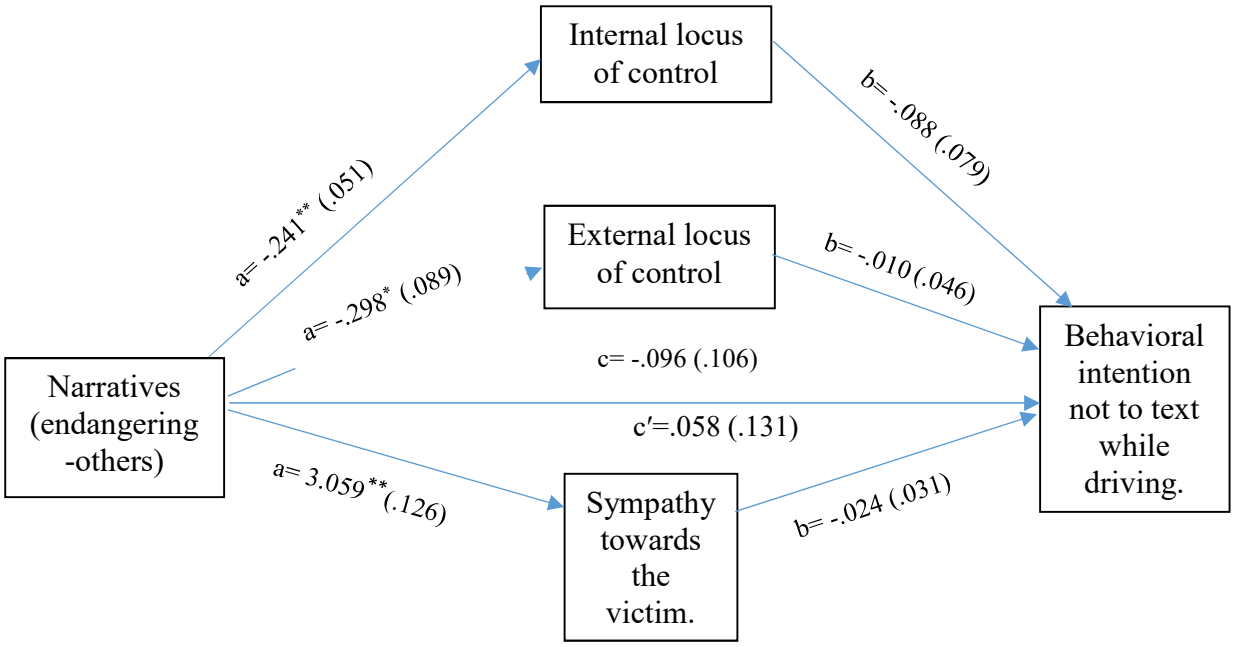
Indirect Effect Model for the Relationship between Narratives and Driver's Traits through Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=464. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of narratives on driver's traits through the mediators. The c-prime path shows the direct effect of narratives on driver's traits. *p<.05, **p<.001.

Figure 15

Indirect Effect Model for the Relationship between Narratives and Behavioral Intention to not to Text while Drive by Internal Locus of Control, External Locus of Control, and Sympathy towards the Victim.



Note. *N*=465. a, b, c, and c′ are path coefficients showing unstandardized regression weights and standard errors (in parenthesis). The c path coefficient shows the total effect of narratives on behavioral intention not to text while driving through the mediators. The c-prime path shows the direct effect of narratives on behavioral intention not to text while driving. *p<.05, **p<.001.

Figure 16

Severity of Outcome and Situational Similarity with the Perpetrator on Behavioral Intention not to Text while Driving.

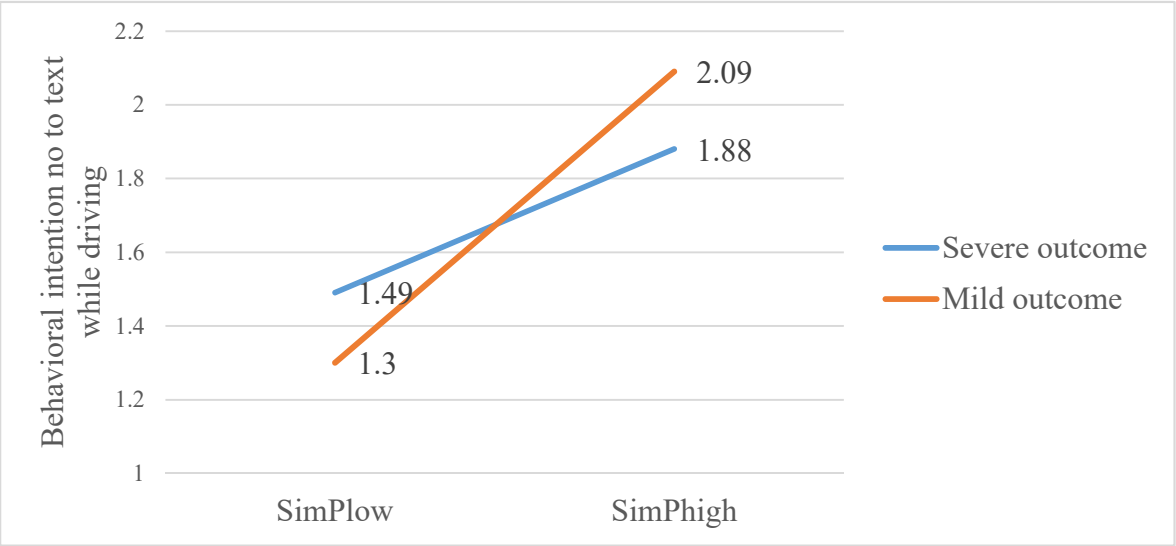
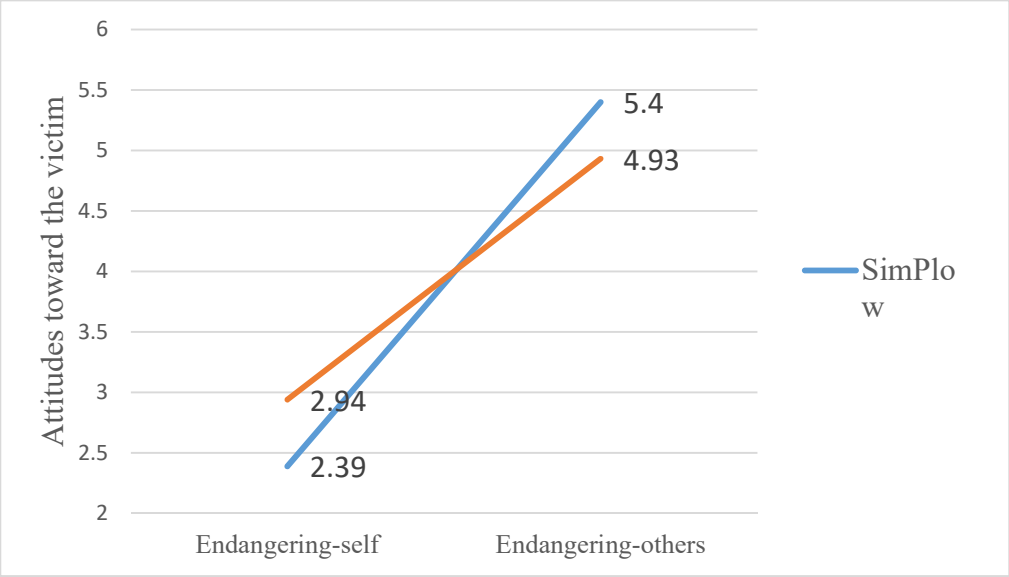


Figure 17

Narratives and Situational Similarity with the Perpetrator on Attitudes toward the Victim



Appendix 3 – IRB Approval Letters

IRB approval letter – Pretest



Institutional Review Board for the Protection of Human Subjects

Approval of Initial Submission – Exempt from IRB Review – AP01

Date: April 09, 2021 **IRB#:** 13258

Principal Investigator: Nafida Adib Banu **Approval Date:** 04/09/2021

Exempt Category: 2

Study Title: Texting while driving narratives and assignment of responsibility to the perpetrator: mediating effect of situational similarity, perceived locus of control, and perceived controllability.

On behalf of the Institutional Review Board (IRB), I have reviewed the above-referenced research study and determined that it meets the criteria for exemption from IRB review. To view the documents approved for this submission, open this study from the *My Studies* option, go to *Submission History*, go to *Completed Submissions* tab and then click the *Details* icon.

As principal investigator of this research study, you are responsible to:

- Conduct the research study in a manner consistent with the requirements of the IRB and federal regulations 45 CFR 46.
- Request approval from the IRB prior to implementing any/all modifications as changes could affect the exempt status determination.
- Maintain accurate and complete study records for evaluation by the HRPP Quality Improvement Program and, if applicable, inspection by regulatory agencies and/or the study sponsor. Notify the IRB at the completion of the project.

If you have questions about this notification or using iRIS, contact the IRB @ 405-325-8110 or irb@ou.edu.

Cordially,

Lara Mayeux, Ph.D.
Chair, Institutional Review Board

IRB approval letter – Main study

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Study Modification – Expedited Review – AP0

Date: September 20, 2021 **IRB#:** 13258

Principal Investigator: Nafida Adib Banu **Reference No: 719824**

Study Title: Texting while driving narratives and assignment of responsibility to the perpetrator: mediating effect of situational similarity, perceived locus of control, and perceived controllability.

Approval Date: 09/20/2021

Modification Description:
The current study modifies the pilot study by (1) asking each participant to read two stories and answer questions after that, (2) The new survey questionnaire is included (3) New participants (wants to recruit 800 participants) will be recruited from prolific - a survey site,(4)Each participant will get $2 compensation for their participation in the study.

The review and approval of this submission is based on the determination that the study, as amended, will continue to be conducted in a manner consistent with the requirements of 45 CFR 46.

To view the approved documents for this submission, open this study from the My Studies option, go to Submission History, go to Completed Submissions tab and then click the Details icon.

If the consent form(s) were revised as a part of this modification, discontinue use of all previous versions of the consent form.

If you have questions about this notification or using iRIS, contact the HRPP office at (405) 325-8110 or irb@ou.edu. The HRPP Administrator assigned for this submission: Kat L Braswell.

Cordially,



Lara Mayeux, Ph.D.
Chair, Institutional Review Board

Appendix 4 - Manipulation stories

Endangering-self story 1 (severe outcome) [69 words]

On May 26, 2018, 22-year-old Gabrielle was texting on Snapchat while driving her Chevy.

Gabrielle was driving eastbound on U.S. 56 in Larned when her Chevy rear-ended a semi-truck that was turning right.

Gabrielle was quickly transported to a local hospital from where she was airlifted to a trauma center in Wichita.

Gabrielle died on the operating table at the trauma center as a result of a severed artery.

Endangering-self story 1 (mild outcome) [69 words]

On May 26, 2018, 22-year-old Gabrielle was texting on Snapchat while driving her Chevy.

Gabrielle was driving eastbound on U.S. 56 in Larned when her Chevy rear-ended a semi-truck that was turning right.

Gabrielle was quickly transported to a local hospital from where she was airlifted to a trauma center in Wichita.

Gabrielle's car was damaged during the crash. Luckily, Gabrielle was unharmed and send home from the hospital.

Endangering-self story 2 (severe outcome) [85 words]

On May 2009, 19 years old Oliver was texting his elder sister Amanda while driving. "My mom called 30 minutes later and said Oliver had been in an accident", Amanda said.

Oliver was reading Amanda's message when he had clipped the median on the road's left-hand side. His truck flipped. Oliver was ejected through the driver's side door, and he landed in a ditch about 300 feet from his truck. Oliver was not wearing a seat belt during the accident.

He died three days later.

Endangering-self story 2 (mild outcome) [88 words]

On May 2009, 19 years old Oliver was texting his elder sister Amanda while driving. "My mom called 30 minutes later and said Oliver had been in an accident", Amanda said.

Oliver was reading Amanda's message when he had clipped the median on the road's left-hand side. His truck flipped. Oliver was ejected through the driver's side door, and he landed in a ditch about 300 feet from his truck. Oliver was not wearing a seat belt during the accident.

Oliver's car was damaged. Luckily, Oliver was unhurt.

Endangering-others story 1 (severe outcome) [93 words]

On Feb.1, 2012, 24 year-old Heather was texting while driving. She was traveling in the center of three southbound lanes, started drifting, and crossed over into the northbound lanes, crashing into a car head-on at approximately 75 mph.

The crashed car driver Connor and his passenger were driving northbound in the curb lane on Hwy 55 in Memphis, TN. The impact spun Connor's car counterclockwise and it was struck again by a day care bus.

Connor was kept on life support for 2 days and was pronounced brain dead on Feb 3, 2012.

Endangering-others story 1 (mild outcome) [86 words]

On Feb.1, 2012, 24 year-old Heather was texting while driving. She was traveling in the center of three southbound lanes, started drifting, and crossed over into the northbound lanes, crashing into a car head-on at approximately 75 mph.

The crashed car driver Connor and his passenger were driving northbound in the curb lane on Hwy 55 in Memphis, TN. The impact spun Connor's car counterclockwise and it was struck again by a day care bus.

Connor's car was damaged. Luckily, Connor was unhurt at the accident.

Endangering-others story 2 (severe outcome) (91 words)

On January 3, 2008, 24 year old James was driving a truck at 65 miles per hour and texting with his company in Orlando, Florida.

20 year old Hailey and her fiancée were traveling on the same highway to meet her parents at their wedding planner's office. On the way, James hit Hailey's car and eight other cars while they were stopped at a red light.

The truck driver, James, who was texting with his company at the time of the crash, never applied his brakes.

Hailey died at the scene.

Endangering-others story 2 (mild outcome) (94 words)

On January 3, 2008, 24 year old James was driving a truck at 65 miles per hour and texting with his company in Orlando, Florida.

20 year old Hailey and her fiancée were traveling on the same highway to meet her parents at their wedding planner's office. On the way, James hit Hailey's car and eight other cars while they were stopped at a red light. The truck driver, James, who was texting with his company at the time of the crash, never applied his brakes.

Hailey's car was damaged. Luckily, Hailey was unhurt.

Appendix 5 - Survey Questionnaire

Consent form
Consent to Participate in Research at the University of Oklahoma

[OU-NC IRB Number: 13258 Approval Date: September 20, 2021]

You are invited to participate in research about processing of texting while driving narratives.

If you agree to participate, you will **complete this approximately 12 minutes online survey.**

There are no risks or benefits.

If you participate, you will receive this compensation: You will receive $2 compensation for your participation in the study.

Your participation is voluntary and your responses will be anonymous. We will not share your data or use it in future research projects.

Even if you choose to participate now, you may stop participating at any time and for any reason.

Data are collected via an online platform not hosted by OU that has its own privacy and security policies for keeping your information confidential. No assurance can be made as to their use of the data you provide.

If you have questions about this research, please contact: Nafida Banu at nafida@ou.edu or Glenn Leshner at leshnerg@ou.edu. You can also contact the University of Oklahoma – Norman Campus Institutional Review Board at 405-325-8110 or irb@ou.edu with questions, concerns or complaints about your rights as a research participant, or if you don't want to talk to the researcher.

Please print this document for your records. By providing information to the researcher(s), I am agreeing to participate in this research.

Covariates questions

Car ownership - Do you own or lease a car?

(a) Own (b) Lease (c) Do not own

Driving frequency – How many days per week do you drive?

(a) 0 days (b) 1 day (c) 2 days (d) 3 days (e) 4 days (f) 5 days (g) 6 days (h) 7 days

Attitudes toward texting-while-driving (3 items 1-7 point scale)

It is unsafe to text while driving.

(1) Strongly disagree, (7) strongly agree.

It should be illegal to text while driving.

(1) Strongly disagree, (7) strongly agree.

Texting-while-driving is distracting.

(1) Strongly disagree, (7) strongly agree.

Cell phone plan - Do your cell phone plan included unlimited text messaging?

(a) Yes (b) No

Moderating variables (need to believe in a just world, situational similarity with the perpetrator, situational similarity with the victim)

Need to belief in a just world (4 items 1-7 point scale)

I feel that people get what they deserve.

(1) Strongly disagree, (7) strongly agree.

I feel that people earn the rewards and punishments they get.

(1) Strongly disagree, (7) strongly agree.

I feel that people get what they are entitled to have.

(1) Strongly disagree, (7) strongly agree.

I feel that when people meet with misfortune, they have brought it upon themselves.

(1) Strongly disagree, (7) strongly agree.

Situational similarities with the perpetrator (3 items 1-7 point scale)

In the past, how often have your vehicle drifted into adjacent lane because you were texting-while-driving?

(1) None, (7) often.

In the past, how often have you run a stop sign because you were texting-while-driving?

(1) None, (7) often.

In the past, how often have you exceeded the speed limit because you were texting-while-driving?

(1) None, (7) often.

Situational similarities with the victim (3 items 1-7 point scale)

In the past, how often has someone drifted to your lane because that driver was texting-while-driving?

(1) None, (7) often.

In the past, how often has someone run a stop sign and near hit your vehicle because that driver was texting-while-driving?

(1) None, (7) often.

In the past, how often has someone exceeded the speed limit and near hit your vehicle because that driver was texting-while-driving?

(1) None, (7) often.

Manipulation check questions. (Used in pretest and the main study)

Endangering-self manipulation check - To what extent do you think the story includes the consequences of the driver who was texting while driving?

(1) Not at all, (7) A lot.

Endangering-others manipulation check - To what extent do you think the story includes the consequences that affected other people (e.g., other drivers, pedestrians)?

(1) Not at all, (7) A lot.

Severity of outcome manipulation check (2 items 1-7 point scales)

To what extent do you think the driver's [Gabrielle] condition was severe?

(1) Not at all, (7) Very much.

To what extent do you think the driver's [Gabrielle] condition was serious?

(1) Not at all, (7) Very much.

Mediating variables (internal locus of control, external locus of control, and sympathy towards the victim) questions

Internal locus of control (3 items 1-7 point scales)

If the driver (driver's name) took the right action (e.g., not texting while driving), he/she could have avoided the accident.

(1) Strongly disagree, (7) strongly agree.

If the driver (driver's name) followed the road safety rules and regulations, he/she could have avoided this accident.

(1) Strongly disagree, (7) strongly agree.

The accident happened because the driver (driver's name) was not careful enough.

(1) Strongly disagree, (7) strongly agree.

External locus of control (3 items 1-7 point scales)

I think the driver's (driver's name) accident was mostly a matter of fate, chance or bad luck.

(1) Strongly disagree, (7) strongly agree.

I think the driver's (driver's name) accident was caused by accidental happening outside her control.

(1) Strongly disagree, (7) strongly agree.

I think the driver's (driver's name) accident happened due to the technology (texting feature on phone).

(1) Strongly disagree, (7) strongly agree.

Sympathy towards the victim (2 items 1-7 point scales)

How much sympathy do you feel toward the driver [driver's name]?

(1) Not at all, (7) A great deal.

How much compassion do you feel toward the driver [driver's name]?

(2) Not at all, (7) A great deal.

Dependent variables

DV1: Attribution of responsibility towards the perpetrator/responsible driver (3 items 1-7 point scales)

To what extent do you believe that the driver (driver's name) is responsible for the accident outcome?

(1) Not at all, (7) Very much.

To what extent do you believe that the driver (driver's name) is accountable for the accident outcome?

(1) Not at all, (7) Very much.

To what extent do you believe that the driver (driver's name) is to blame for the accident outcome?

(1) Not at all, (7) Very much.

DV2: Assigning higher fine to the perpetrator/responsible driver (1 item presented in a slider)

Please choose the compensation the driver's [driver's name] insurance company should pay to recover damages –

$0 - $100,000

DV3: Attitudes toward the perpetrator

DV4: Attitudes toward the victim (7-point Likert scale items)

How would you rate your overall impression of the driver [driver's name]?

(1) Bad – Good (7), (1) Negative – positive (7)

DV 5: Driver traits

How would you rate the driver [driver's name] based on the following traits?

Self discipline – (1) Not at all – a lot (7).

Patience - (1) Not at all – a lot (7).

Alertness (1) Not at all – a lot (7).

DV 6: Behavioral intention not to text while driving

After seeing the message, how likely are you to text while drive?

(1) Not at all likely – extremely likely (7).

Demographic questions [asked at the end of the survey]

Education question.

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

No schooling completed

Some high school, no diploma

High school graduate, diploma, or the equivalent

Some college credit, no degree

Associate degree

Bachelor's degree

Master's degree

Professional degree

Doctorate

Ethnicity question.

Please specify your ethnicity -

White

Hispanic or Latino

African American

Native American

Asian/ Pacific Islander

Other

Employment status question

Are you currently...?

Employed for wages

Self-employed

A student

Military

Retired

Unable to work

Income question.

What is your income last year?

Less than $10,000

$10,000 to $19,999

$20,000 to $29,999

$30,000 to $39,999

$40,000 to $49,999

$50,000 to $59,999

$60,000 to $69,999

$70,000 and above

Prefer not to answer