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Do significant others influence college-aged students texting and driving behaviors? Examination of the mediational influence of proximal and distal social influence on distracted driving

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ABSTRACT

Texting while driving is prevalent among college-aged students, despite distracted driving laws. Social Norms Theory suggests that individuals are influenced by perceptions of how their social groups act. Proximal sources of social influence, such as significant others (S.O.) may be more likely to effect college-aged students than distal sources (e.g. people they know in their friend or peer group, but don't identify as people with whom they have a particularly important or meaningful relationship). We investigated whether perceived S.O. texting behaviors mediated the relationship between perceived risk of texting while driving and reported texting while driving among college-aged students. A sample of 835 undergraduate licensed drivers were surveyed about the influence of perceived risk of texting while driving on texting while driving within the past month. We examined whether seeing one's S.O. (versus their friends) texting while driving mediated this effect. Two groups of drivers were considered: low-risk drivers, who never received a traffic citation nor got into a crash, and high-risk drivers, who had ever received traffic citation and been involved in a crash. We also examined gender differences within low-risk and high-risk groups. A series of logistic regressions, adjusting for gender and ethnicity, were conducted along with Sobel Tests to evaluate the significance of the mediation effect. Results showed that perceptions of the S.O. partially mediated the relationship between perceived risk of texting while driving and texting while driving. This effect was also observed for low risk (female only) and high risk drivers. There was no mediation effect for distal sources. These findings bolster the limited research on the importance of proximal sources of social influence and suggest prevention efforts should focus on proximal social networks of college-aged students as opposed to distal social influences when targeting young adults distracted driving.

1. Introduction

In the United States, distracted driving is a major contributing factor to motor vehicle crashes among young drivers, and mobile cell phone use is responsible for approximately 33% of crashes by those who were distracted (NHTSA, 2017).

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Individuals between the ages of 18–25 are at higher risk of motor vehicle crashes due to distracted driving behaviors, such as texting on cell phones (Gliklich, Guo, & Bergmark, 2016; Olsen, Shults, & Eaton, 2013). Research has indicated the severity of texting while driving, as well as the need to increase efforts to prevent distracted driving in general (Caird, Johnston, Willness, Asbridge, & Steel, 2014). Fatal crashes due to distracted driving have increased by 8.8% from 2014 to 2015, in the U.S. (NHTSA, 2015). Approximately 29% of young drivers, ages 20–29 years old, reported being involved in a car crash due to distracted driving, and 39% of those who were distracted, were using a cell phone (NHTSA, 2015). With new and innovative technology use, research has shown that young drivers continue to engage in texting while driving, despite knowing the consequences (McDonald & Sommers, 2015; Rudisill & Zhu, 2016).

Young drivers are more prone to utilizing mobile phones while driving than any other population, due to a myriad of social factors (Caird et al., 2014). Social influence and peer pressure have been shown to be both risk factors and protective factors for young drivers (Shope & Bingham, 2008). Prior research has indicated that having friends who engage in risky driving predicts future driving risk for newly licensed drivers (Bingham et al., 2016; McDonald & Sommers, 2015). Association with peer networks who engage in distracted driving has been shown to be predictive of adolescent distracted driving (Carter, Bingham, Zakrajsek, Shope, & Sayer, 2014). However, only limited research has been conducted to distinguish the effects that different types of relationships have on the causal pathway of texting while driving among young adults. Research in the area of risky alcohol consumption has shown that proximal influences, that include those individuals who are particularly significant, such as a parent, significant other (S.O.), or a person who acts as a role model, norm reinforcer, source of information or has consistent contact with the person, have a significant effect on risky drinking of young adults (Perkins & Berkowitz, 1986; Salvy, Pedersen, Miles, Tucker, & D'Amico, 2014). Proximal influence of others does not refer to the physical proximity of the individual while in the motor vehicle, but instead to the status of their relationship. On the other hand, distal relationships refer to individuals who do not readily or directly influence the behavior among emerging adults.

Other research has suggested that risky drivers, who have received traffic tickets or citations for a moving violation or experienced a traffic crash, are exponentially more likely to text while driving or engage in other risky driving behaviors (Ferdinand et al., 2014; O'Connor et al., 2013). One study with college-aged students found that those who texted and accessed the web while driving everyday received significantly more citations than those who seldom or never texted while driving (Cook & Jones, 2011). In addition, research suggests that gender differences may differentially occur among emerging adults' engagement in texting while driving (Struckman-Johnson, Gaster, Struckman-Johnson, Johnson, & May-Shinagle, 2015). Different predictors of distracted driving exist based on motivation to engage in texting while driving and risk of texting while driving, based on gender (Simons-Morton, Lerner, & Singer, 2005). In a simulator study, young male drivers were more likely to decrease their attention on the road in the presence of a male passenger; however, passenger presence did not affect risky driving behaviors (Ouimet et al., 2013). As for young female drivers, one study reported that those females with lower mindfulness tended to report more frequent texting while driving (Feldman, Greeson, Renna, & Robbins-Monteith, 2011). The research on risky driving difference between young male and female drivers varies, resulting in a gap in the literature. Examining their social norms may help reduce this gap.

Social Norms Theory posits that an individual's perceptions of those in their social networks can influence their actions (Perkins & Berkowitz, 1986). Adolescents and young adults may be especially influenced by their perceptions of what other people in their social network think and how they behave. Further, the closeness of their relationship to people in their social network should be particularly important for shaping their perceptions and behaviors. Research, based on Social Norms Theory, shows that distracted driving in a sample of college students, was predicted by their perceptions of how prevalent this behavior is among their social influence network (Hill et al., 2015). The theory states that "pluralistic ignorance" occurs when individuals overestimate the behaviors of those in their social network, and rationalize their behavior in accordance with how they perceive their peers behaving. College students may tend to perceive that their S.O. text while driving, therefore this misperception influences continuance of their own behavior (Berkowitz, 2004; Berkowitz, 2005; Miller & McFarland, 1991). Understanding the source of influence (proximal vs. distal) and changing these perceived norms can mitigate the prevalence of pluralistic ignorance.

A nationally representative study of emerging adults and their peers found that participants, whose peers reported frequently texting while driving, were significantly more likely to text while driving the following year (Trivedi, Haynie, Bible, Liu, & Simons-Morton, 2017). A recent study of college students (Beck & Watters, 2016) also found that reported texting while driving was related to both proximal sources (my S.O. text and drove) and distal (all my friends text and drive). The significant other was defined as "that one person that is the most important to them out of all the social circles they have." Thus, descriptive studies have shown that there is a direct relationship between perceptions of risk and risky driving, and a relationship between one's social norms and risky driving. What remains unclear is if social norms shape these perceptions and mediate the relationship between risk perceptions and driver behaviors. Further, it is unclear if the type of social influence (proximal vs. distal) varies in their mediational effect. Understanding the direct and indirect effects of social influences can aid in the development of driving safety campaigns and initiatives. Additional research on proximal and distal social networks must be done to understanding the causal pathways for these influences.

1.1. The current study

The purpose of this study was to examine whether different social normative relationships (proximal or distal) mediate the pathway between perceptions of risk associated with texting while driving and reported texting and driving, among a