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Does Driver Safety Education have an Impact on Texting While Driving?

Kelli Noble & Duane Young

This is fulfillment of requirement for NRSG 598

Southern Adventist University

School of Nursing

Abstract

In today's society, Americans are more connected than ever. Gone are the days of pulling to the side of the road in order to find a pay phone to call for help, check in with family or find an address of a business in the yellow pages. All these tasks can now be accomplished while driving down the road. Most Americans have become accustomed to driving with distractions; changing the radio station, eating a snack or carrying on an in car conversation with passengers. Many profess that these distractions can be accomplished while maintaining an awareness of traffic conditions and eye contact on the road ahead. The driver of today is surrounded by technology that takes their attention away from the road; checking navigation systems, starting a movie for passengers or reading/sending text messages to family and friends. As automobilists take to the road in the 21st century, they will not only be faced with the continued threat of drunk drivers and those that complete daily tasks that should be accomplished in a bathroom, but now will have to contend with the driver who is distracted by reading or sending a text. While many of these drivers are teenagers and young adults, distracted driving is not limited to young drivers. This new phenomena is rapidly moving to the forefront of public safety.

The purpose of this study was to determine if a driver safety education class could positively affect the perceptions of drivers with regard to texting while driving. The study was a quantitative, repeated measures quasi-experimental design. The hypothesis was a driver safety education class focusing on the hazards of texting and driving, would improve distracted driving perceptions in middle school teachers. The results showed a change in driver perceptions of the hazards associated with texting and driving. The driver safety education had a positive influence on the participants of the study. Further, the effects of the educational intervention continued to

have a positive influence four weeks post education. Key words: *texting, driving while texting, distracted driving, texting and laws, safe texting, texting and statistics, public health*

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Does Driver Safety Education have an Impact on Texting While Driving?

Chapter One

Introduction

Background and Significance

Only recently has road safety become a leading public health concern. Motor vehicle crashes are a leading cause of deaths and debilitating injuries worldwide. The World Health Organization (WHO) report each year 1.3 million deaths result from a traffic collision, over 3000 deaths daily. At the same time, 20 to 50 million more people suffer disabling injuries, making it an internationally important cause of disability (WHO, 2009). The WHO (2009) reports traffic injuries are amongst the three leading causes of death for those between five and forty four each year, worldwide.

Neumann, Dellinger, Zaloshnia, Lawrence & Miller (2010) reported the United States spent over \$99 billion in one year for medical care and productivity losses resulting from injuries associated with a motor vehicle crash. Naumann, et al. (2010) goes on to say motor vehicle crashes are the leading cause of death for ages five to thirty four in the United States.

Automotive deaths of the late 19th and early 20th centuries were regarded as a social class issue. With the emergence of motorized vehicles used for travel versus the horse and buggy, it was usually the poor and working class killed as a result of motor vehicles driven by wealthier people (Fallon & O'Neil, 2005). Although historians debate over the first account of an automobile fatality, it likely goes back to 1869 wherein a lady passed away after being thrown from a steam carriage in Ireland (Fallon & O'Neill, 2005). Other early accounts of motor vehicle deaths include Henry Linfield, who in 1898 crashed his new automobile into a tree, later dying from his injuries. In 1899, Henry Bliss was killed after being struck by a taxi in the United

States as he stepped off a street car (Fallon & O'Neill, 2005). Regardless of when the first traffic fatality occurred, the posing dangers of motor vehicle crashes have risen exponentially, making it one of the leading traffic safety issues of modern day.

Advancing technologies present many opportunities that can bring unintended consequences. Mobile devices are becoming more readily available and popular. Because they are so widely used and accepted, texting and driving is becoming one of the leading safety concerns for the United States. Distracted driving caused by use of a cell phone quadruples the chance of a collision and the risk of fatality increases nine fold (Cramer, Mayer, & Ryan, 2007). Young drivers are particularly vulnerable due to their inexperience and sense of immortality. Students Against Destructive Decisions (SADD) and Liberty Mutual Insurance Group (2007) conducted a national survey of more than 900 teen drivers from 26 high schools and found 37 percent of teen drivers rated texting and driving as the most common “distracting” behavior while driving. The National Highway Traffic Safety Administration (NHTSA) reported there were 5,474 deaths in 2009 on U.S. highways that were the direct result of distracted driving. Among those fatal crashes, 18 percent reported use of a cell phone as the reason for their distraction (NHTSA, 2009). The report further states that drivers under the age of 20 made up the greatest percentage of distracted drivers. Sixteen percent of this age group was involved in distracted driving crashes that resulted in a fatality (NHTSA, 2009).

Texting while driving is not unique to young drivers. According to Madden & Rainie (2010), adult drivers are just as prone to have texted while driving and more likely to have talked on the phone while driving. Further, Madden & Rainie (2010) found that 82% of American adults, 18 and older, own cell phones with 47% reporting they had sent or received texts while driving. By comparison, Madden & Lenhart (2009) found that 75% of American teens, ages 12-

17; own cell phones with 66% sending or receiving texts. Wilson & Stimpson (2010) identified that drivers between 16-29 years old were responsible for 39% of distracted driving fatalities. Persons 30-49 years old were responsible for 33.2% and those over 50 years old were at 27.8%. Wilson & Stimpson (2010) further identified that in 2008, roughly one in six fatal collisions resulted from a distracted driver using a hand held device, such as cell phones or sending text messages while driving.

Problem Statement

Trepidation of the dangers associated with distracted driving makes it one of the leading public health issues facing our nation. National efforts, such as Healthy People 2020, are being prepared to address and counteract this new threat facing American drivers. Healthy People 2020 are a set of public health objectives set forth by the U.S. Department of Health and Human Services (USDHHS) every 10 years. The objectives for Healthy People 2020 were started in 2010 and are based on the examination of health trends over the past decade. The goal of the USDHHS is to increase public awareness of emerging health concerns, promote healthy lifestyles and disease prevention (USDHHS, 2010). Texting and driving is addressed by Healthy People 2020 under IVP HP2020-24 (Reduce motor vehicle crash-related deaths) and 25 (Reduce nonfatal motor vehicle crash-related injuries). Objective 24 states the national goal is to reduce motor vehicle crash-related deaths, a) per 100,000 population and b) per 100 million vehicle miles traveled (USDHHS, 2010). Objective 25 states the national goal is to reduce nonfatal motor vehicle crash-related injuries (USDHHS, 2010).

The NHTSA (2010) estimated 448,000 people were injured in nonfatal crashes where distracted driving was reported as the cause. As mobile devices become more widely used, these numbers will only increase unless a proactive, preventative outreach program is initiated.

Healthy People 2020 acknowledge motor vehicle deaths and injuries are becoming a national health concern (USDHHS, 2010). Therefore, making the program proposed in this paper, not only possible but necessary in meeting the stated objectives under IVP HP2020-24 and IVP HP2020-25. This study sought to explore driver's perceptions of the effect texting while driving has on their ability to drive safely. Additionally, subjective attitudes of appropriateness, legality and degree of danger were identified with regard to age, sex and gender.

Purpose

Mobile phones are readily available to most people. They are increasingly used by drivers. This phenomenon has become known as distracted driving (NHTSA, 2010). The purpose of this quantitative study was to explore perceptions and driving habits while providing Tennessee educators with information that could be incorporated into an educational tool addressing the hazards of distracted driving.

Hypothesis

The hypothesis of this research is that a driver safety education class, focused on the hazards of texting and driving, will improve distracted driving perceptions in middle school educators in Bradley County, Tennessee. The null hypothesis is that the driver safety education class will have no effect on the distracted driving perceptions in middle school educators in Bradley County, Tennessee.

Framework

The social learning theory proposed by Albert Bandura (1977) serves as the theoretical framework for this study. Central to this theory is self-efficacy and social modeling. Bandura (1977) suggests three core concepts essential to the social learning theory. First, people are capable of learning through observation and social modeling. Next, self-efficacy or the internal

mental state of the individual is central to the process of learning a new behavior. Finally, the theory recognizes the sum of learning may not give rise to individual behavioral change (Bandura, 1977).

According to Bandura, self-efficacy is a person's confidence in his or her capacity to succeed in a particular situation (Cramer, Neal, & Brodsky, 2009). These beliefs will then determine how people think, behave, and feel. For example, exposing participants to the risks of texting and driving will impact their behavior when driving. They will recognize the dangers associated with texting and driving thus changing how they think about the behavior. Once their thinking has been changed, the participants are more likely to not engage in the activity leading to a change in their feelings. This reinforces their thoughts regarding the activity ensuring a more permanent change in behavior.

Social modeling is another important source for the development of self-efficacy. Bandura proposes that seeing people similar to oneself succeed by sustained effort raises the observer's beliefs that they too possess the abilities to become proficient at comparable activities (Cramer, Neal, & Brodsky, 2009). For example, as participants make healthier choices and change behaviors, others will model their behavior in the same manner.

According to Bandura (1977), a symbolic model is one of the three basic models of observational learning encompassing real or fictional people displaying behaviors in books, films, television or online venues (Bandura, 1977). This is best illustrated through the driver safety education class where participants are presented symbolic models through real-life scenarios representing the consequences of distracted driving. Within the proposed model, expectations that individuals learning the potential risks associated with distracted driving will expand their understanding, bringing about healthier lifestyle choices.

While conducting this study, participants were encouraged to recognize and accept personal responsibility while driving, thus promoting a healthier lifestyle for the community at large. Feedback from participants can be modified and fine-tuned into a valuable educational tool that may be used in schools across the country.

Conceptual and Operational Definitions

Definitions

The NHTSA (2010) defines distracted driving as “a specific type of inattention that occurs when drivers divert their attention away from the driving task to focus on another activity instead” (p.1). The NHTSA (2010) goes on to say that “these distractions can be from electronic distractions, such as navigation systems and cell phones or more conventional distractions such as interacting with passengers and eating” (p. 1). Driver distractions can be categorized into three types: visual distraction, when the driver takes their eyes off the road; manual distraction, when the driver takes their hands off the wheel; and cognitive distraction, when the driver thinks about something other than driving or takes their mind off driving (NHTSA, 2010). Although any distraction while driving can compromise the safety of the driver, texting is the most disturbing because it involves all three categories of distraction: visual, manual and cognitive (NHTSA, 2010).

Variables

The independent variable defined in this study is the driver safety education class. This class focused on the dangers associated with texting while driving. The dependent variable to be measured is the effect the driver safety education class had on improving distracted driving perceptions of participants. A repeated measures research design was used to measure the

dependent variable in this study. Pre, post and four week questionnaires were distributed to gather data that could be used to explore the participant's perceptions.

Assumptions and Limitations

The assumptions held by the primary investigators of this study were that every participant owns or has access to a cellular phone. It was assumed that all participants are licensed drivers in the state of Tennessee and have engaged in distracted driving behaviors, such as talking on a cell phone while driving or texting while driving. It was further assumed that all participants will answer questions honestly with the reassurance of anonymity. The sample size used for this study was N=25. Participants were a homogenous group of middle school educators that are primarily female, which may have influenced the results. Further, the small sample size may not have adequately represented the target population.

Randomization was not possible since there were no control or experimental groups. The instrument (see appendix A) used for this study was created by the researchers and has not been previously used; therefore should be considered a limitation of this study. The survey instrument used to collect data to identify the effect the driver safety education class had on improving distracted driving perceptions, relied on subjective data generated from participant response and perceptions gathered from a pre-test, post-test and a four week questionnaire to measure change. Lastly, utilization of subjective tools of measurement coupled with human nature may skew reliability of the results versus data generated from objective tools of measurement.

Chapter Two

Literature Review

General Review

As with any new technology there come inadvertent consequences. Wireless technology has made mobile devices a part of our daily lives. Once a luxury enjoyed by a select minority, mobile phones have become a fixture of modern living, being more readily available to the masses. With the evolution of mobile devices, social norms of acceptance have materialized. What may have once been viewed as a device of safety is now a device of convenience. Due to availability and popularity, mobile phones are increasingly used by drivers. This phenomenon has become known as “distracted driving” (NHTSA, 2010).

The NHTSA (2010) defines distracted driving as “a specific type of inattention that occurs when drivers divert their attention away from the driving task to focus on another activity instead” (p. 1). They categorized three types of driver distraction as visual, manual or cognitive (NHTSA, 2010). Atchley & Little (2009) conducted a literature review showing that numerous studies had been performed on drivers talking on mobile devices while driving; however, there has been limited research regarding the hazards of texting while driving. According to the NHTSA (2010), texting while driving is one of the most dangerous distracted driving behaviors because it utilizes all three categories of distraction, visual, manual and cognitive. As mobile devices have evolved, texting has become easier and often the preferred method of communication. This has made texting and driving a leading health concern worldwide and one of the leading public health issues for the United States (WHO, 2009).

Theoretical Literature

As documented in Healthy People 2020, distracted driving as a public health issue is gaining momentum (USDHHS, 2010). The detrimental effects to driver performance where mobile devices are involved have been established in a study by the Virginia Tech Transportation Institute (VTTI, 2009). While most motorists are aware driving requires their full attention, people regularly engage in a variety of multitasking behaviors when behind the wheel. Research has shown the average daily commute to work is 25.5 minutes, with increasing focus on making that time more productive (Reschovsky, 2004). When applying Bandura's (1977) social learning theory, a person's self-efficacy will motivate behavioral change through the recognition of the dangers associated with texting and driving, thus changing how they think, and therefore changing their behavior by choosing not to participate.

Multitasking has become a way of life for most of us. People generally believe they are equipped to manage multiple tasks at any given time; however, according to Smiley (2005) this idea is not supported. Multitasking requires a rapid shift of attention from one cognitive task to another, making it impossible to effectively manage more than one task at a time (Smiley, 2005). Girard (2007) reports that people participating in a distracted driving exercise showed a decrease in braking reflexes and had difficulty keeping the simulated car on the road when they attempted to use a cell phone while driving. Strayer, Drews & Crouch (2006) suggests drivers have always had a number of distractions. They describe traditional distractions as talking to a passenger, eating, drinking, smoking, applying makeup, changing the dial on the radio, tending to children and so on.

However, the last ten years have shown rapid advances in technology. Today drivers still face the traditional distractions, along with technology that allows them to surf the internet,

send and receive email or faxes, talk on the phone, text and even watch television, all while driving (Strayer, et al., 2006). Growing sophistication in wireless technology increases the physical and cognitive challenges facing drivers, particularly when using cell phones for texting while driving (NHTSA, 2009).

The International Conference on Distracted Driving held in Canada in 2005 was hosted by the Canadian Automobile Association (CAA) and the Traffic Injury Research Foundation (TIRF). Information presented at this conference suggests that the public does not clearly understand what constitutes distracted driving nor do they view it as an important safety issue (CAA & TIRF, 2006). In a Canadian survey only 40% of respondents rated distracted driving as a “serious” or “extremely serious” safety issue (Beirness, 2005). A similar survey conducted in the United States, Sundeen (2005) found only half of the respondents perceived making or receiving a call while driving as dangerous. These surveys indicate the growing need for driver education. Once again referring back to Bandura’s social learning theory, social modeling occurs when seeing people similar to oneself succeed by sustained effort raises the observer’s beliefs that they too possess the abilities to become proficient at comparable activities (Cramer, Neal, & Brodsky, 2009). For example, as participants make healthier choices and change behaviors, others will model their behavior in the same manner.

Workshops conducted at the International Conference on Distracted Driving yielded five broad areas of priority for impacting driver distraction; research and evaluation, public awareness and education, laws and enforcement, incentives and penalties, and industry-government cooperation (CAA & TIRF, 2006). Specific target audiences were also identified, as well as mechanisms for delivering information. They suggested young and novice drivers would best benefit through driver education classes, graduated driver licensing programs, and social

media. Senior drivers may best be reached through medical offices or community programs. The conference further recommends high risk drivers, those who are found to be driving while distracted, should be required to complete remedial driving courses. The conference also suggests reaching a greater number of people through their employers where employees of individual companies are offered incentives through company policies and programs. They also acknowledge the importance of influence, such as role models, leaders, and children through various methods, including peer-to-peer programs (CAA & TIRF, 2006). This approach incorporates all three concepts of Bandura's social learning theory; self-efficacy, social modeling, and symbolic modeling (Bandura, 1977). Public awareness campaigns and education are an essential element in reducing risks associated with distracted driving. Surveys conducted in both Canada by Beirness (2005) and in the United States by Sundeen (2005) indicate public opinion does not consider distracted driving a serious problem. While very little research has been done on texting while driving, most are in agreement that it has become a leading public safety issue.

Research Literature

Although there has been an increased movement toward raising public awareness with regard to distracted driving, it has not received the same attention as other public safety concerns, such as drinking and driving. Research is growing, but fails to keep pace with new technology and remains inadequate. Many studies have addressed the use of cell phones while driving, but scarcely any have addressed texting while driving.

Teens and Texting While Driving

The NHTSA has conducted two Distracted Driving Summits in an effort to understand and mitigate motor vehicle crashes associated with driver distraction. Motor vehicle accidents are the leading cause of death for young people in the United States. Teens are three times more likely to be involved in a fatal crash. Of teens who text, one in three admits to texting while driving (NHTSA, 2010). As a result the NHTSA (2010) established six steps you can take to educate young drivers: 1) Be a good example; 2) Discuss texting and driving with your teen; 3) Create ground rules; 4) Have them sign a pledge; 5) Educate yourself and your family; and 6) Spread the word.

Adults and Texting While Driving

Although teens make up the largest group of those who text and drive, it is not limited to that population. A PEW (2010) internet survey found 82% of adults, 18 and older, own a cell phone (Madden & Rainie, 2010). More American adults are sending and receiving text messages. Of those surveyed 27% admitted to sending or receiving text messages while driving (Madden & Rainie, 2010). Clearly, this is becoming a safety issue irrespective of age.

Motor Vehicle Accidents

The NHTSA is conducting research on driver distraction as related to behavioral and vehicle safety countermeasures. Their efforts have given perspective into the range of the driver distraction dilemma. In 2009 the NHTSA published a paper titled, An Examination of Driver Distraction as Recorded in NHTSA Databases. Their results found distracted driving was responsible for 10% of all fatal crashes in 2008. Drivers under the age of 20 made up the greatest proportion of distracted drivers. Sixteen percent of this age group was involved in distracted driving crashes that resulted in a fatality. An estimated 22% of nonfatal injury crashes

could be traced back to distracted driving. Another 18% of motor vehicle crashes listed driver distraction as the critical reason for crashing (NHTSA, 2009).

Impact on Driver Performance

Hosking, Young and Regan (2006) at Monash University studied the impact texting had on young driver performance. Hosking, et al. (2006) found young drivers, distracted by texting looked away from the road 40% of the time compared to 10% by undistracted drivers. They were 70% more likely to swerve and failed to maintain correct positioning of their vehicle in the appropriate lane. They repeatedly failed to notice road signs instructing them of lane changes, the distracted group had 140% more incorrect lane changes (Hosking, et al., 2006). Hosking, et al. (2006) reported 95% of study participants acknowledged a decline in their driving performance when receiving a text and 100% reported a decline in their driving performance when sending a text. These results prompted Hosking, et al. (2006) to recommend advertising campaigns targeting young drivers should focus on mobile phone safety, given the increasing number of young drivers using these new technology devices while driving.

Robins (2010) conducted a simulator based study measuring the effects sending and receiving text messages had on driver awareness. The results were alarming; drivers writing a text message increased their rating of risk by 79% and drivers reading a text message increased their rating of risk by 78.9% (Robins, 2010). Robins (2010) also showed drivers perceived awareness of hazards decreased by 70% when sending a text message and by 62% when receiving a text message. Drivers also noted a significant decrease in their general performance when texting while driving (Robins, 2010). This validates similar findings by Hosking, et al. (2006) showing participants were aware that texting had detrimental effects on their driving performance, as well as showing the link between texting and attenuation in road safety.

Wilson & Stimpson (2010) conducted a study on the trends in fatalities from distracted driving in the United States between 1999 and 2008. They utilized the Fatality Analysis Reporting System (FARS) which records all fatalities occurring on public roadways in the United States. Wilson & Stimpson (2010) found, in 2008, 1 in 6 traffic fatalities resulted from driver distraction. Distracted drivers were 23% more likely to crash when compared to non-distracted drivers (Wilson & Stimpson, 2010). Results from this study suggest that with the rapid increase in text volumes the United States has seen a significant increase in traffic fatalities (Wilson & Stimpson, 2010).

In 2009 researchers at the VTTI released their findings from a naturalistic study on cell phone use and driving distraction. They used video cameras to study drivers for more than 6 million miles in their personal vehicles under real-world driving conditions (VTTI, 2009). VTTI (2009) found text messaging posed the greatest risk of a crash or near crash. Drivers who texted kept their eyes off the road 4.6 seconds in a 6 second interval, meaning if the driver was traveling at 55mph they drove the length of a football field without looking at the road (VTTI, 2009). VTTI (2009) offer the results of their study conclusively prove that keeping your eyes on the road significantly improves safety.

Summary of Literature

Distracted driving is gaining momentum as a public health issue worldwide, necessitating more research. Public awareness campaigns and education are a vital component in the battle to stop drivers from multitasking when behind the wheel. While research is limited most are in agreement that texting while driving has had an adverse impact on public safety.

Advancing technology coupled with a fast paced lifestyle has given a lot of drivers the means and motives to text and drive. Multitasking has become a way of life for most of us;

however, rapidly shifting attention from one task to another makes it impossible to manage more than one task at a given time (Smiley, 2005). Growing sophistication of wireless technology offers drivers new physical and cognitive distractions (NHTSA, 2009). Research has shown a reduction in reflex times of drivers who are distracted (Girard, 2007). The NHTSA (2010) has identified texting while driving the most dangerous form of distracted driving because it utilizes all three categories of distraction; visual, manual and cognitive. Short glances down at a mobile device when sending or reading a text may make one feel they are keeping their eyes on the road and maintaining control of their vehicle; however, the opposite is true. Looking down for just 4.6 seconds equates to traveling 100 yards at 55 mph (VTTI, 2009). That is a great distance to be disengaged from changing road conditions while driving.

Teenagers are not singled out as the only culprits when it comes to distracted driving incidents, but they do comprise the largest age group involved in fatal distracted driving accidents. Teenagers surveyed, admittedly looked away from the road while driving an astounding 40% of the time (Hosking, et al., 2006). That amounts to an amazing 24 minutes out of a one hour trip. The dangers of texting and driving are not limited to the actual act of typing and reading text messages. They may be cognitively disengaged because they are mentally processing the information that was just read in a text and formulating a response, rather than focusing on what is happening on the road in front of them.

Motor vehicle accidents are a leading cause of death, particularly in people younger than 25. According to VTTI (2009), a link between texting while driving and motor vehicle crashes has been shown. This destructive behavior can be eliminated through prevention and education; therefore, improving public health and safety for drivers and others they may impact.

CHAPTER THREE

Methodology

For the purpose of this quantitative study, a quasi-experimental, repeated measures research design was utilized to explore the effects a driver safety education class had on improving the distracted driving perceptions of participants. Data gathered from participants was collected using a pre, post and four week questionnaire. In addition, demographic data was collected using (appendix C) for this study.

The purpose of this quantitative study was to explore perceptions of middle school educators and increase participant awareness related to texting while driving through utilization of a repeated measures study design.

Research Design

This quantitative study utilized a quasi-experimental, repeated measure design to study the effects a driver safety education class had on improving the distracted driving perceptions of participants. Randomization was not possible, since there was not a control or experimental group.

Sample and Setting

The sample consisted of N=25 participants. The goal was for a convenience sample of 40 middle school educators in Bradley County, but was not limited to 40. Flyers were distributed in the school and via email inviting potential participants. Study participants were middle school educators, predominately Caucasian, and female. A local school served as the meeting place for the study. Participants met for a one hour class. This allotted time allowed for the completion of the informed consent, pre-test questionnaire, video, discussion and post-test questionnaire. The four week questionnaire was provided to the participants to take home, along with

instructions to return the survey in the self-addressed stamped envelope. Anonymity was maintained, so participants were free from influence when answering the questionnaires.

Ethical Considerations

The participants of this study were exposed to minimal risk. IRB approval was obtained before conducting this study. Further, participants were asked to sign a letter of informed consent prior to participation (see appendix B). Risks were decreased by the anonymity of the evaluation tools. The educational intervention contained a video that did not expose the participants to any graphic images of motor vehicle crashes. According to the Motion Picture Association of America (MPAA) ratings guide, this video was assigned a G rating indicating that this video contains nothing that would offend parents for viewing by their children. All responses were kept confidential, with names separated from responses, ensuring anonymity. Informed consent was obtained prior to starting the program and participants were made aware that they may withdraw at any time without fear of penalty.

Each participant who returned a four week questionnaire had their names placed in a drawing for a \$100 Staples gift card that may be used for their classroom. The winner was notified via telephone. The gift card served as motivation for returning the four week questionnaire.

Instrumentation

An exhaustive search through the literature was conducted to try and locate a driver safety educational tool. None were found. Therefore, the researchers developed the tool used for this study.

The instrument, which consisted of 18 Likert style questions (see appendix A), was used to collect data utilizing the pre-test, post-test design. Identical questions were used for the pre-

test, post-test and four- week questionnaires. Participants were asked to complete a pre questionnaire prior to starting the study. The post questionnaire was completed immediately following the educational intervention. Participants were provided a pre-addressed, stamped envelope containing the four week questionnaire. The participants were asked to complete and mail back the questionnaire four weeks following completion of the educational intervention.

Data Collection

On the scheduled day, participants arrived in the classroom. The meeting began with a greeting and then the informed consents were distributed. The informed consent was reviewed with the participants. They were made aware that participation was strictly voluntary and they could withdraw at any time without fear of penalty. After signing the informed consent, the pre-test was administered. Both the informed consent letters and pre-tests were collected prior to the educational intervention. Next, the educational intervention was presented which included a video comprised of families who had lost family members or friends by the actions of a driver who was texting while driving. At the end of the educational intervention participants were asked to complete a post-test. Once the post-tests were collected, participants were given a four week questionnaire that included a self-addressed stamped envelope and instructions for returning the information. The pre-test, post-test and four week questionnaire had an ID section at the top of the page. Participants did not use their name, only the assigned ID number. Names were not kept with ID numbers, therefore assuring the anonymity of participants. The ID numbers were used for comparison analysis only.

Data Analysis

All data were analyzed using IBM SPSS® 20. A Wilcoxon signed rank tests as well as descriptive statistics were used for analysis of the data. The dependent variable measured by the

Wilcoxon test was what effect the driver safety education class had on reducing distracted driving perceptions of participants. Participants were also asked to complete a four week questionnaire, allowing for a longer term analysis of the dependent variable.

Dissemination of Findings

It is the intent of the lead investigators to disseminate the findings of this study to Southern Adventist School of nursing faculty and students. Publication in peer reviewed nursing and community health journals is planned. This program can serve as a model for future programs that can be instituted in middle/high schools as well as community programs across the United States.

Chapter Four

Data Analysis

Introduction

This research study explored the perceptions of texting and driving among middle school educators. This repeated measures study used a non-parametric Kruskal-Wallis test, Wilcoxon rank test as well as descriptive statistics to investigate the hypothesis.

Participation

Study participants were solicited from a middle school in Cleveland Tennessee because school educators are in a position to influence the perceptions of teenagers with regards to texting while driving. Twenty five educators participated in the study out of 75 total middle school educators available. Although 25 participants were somewhat lower than the expected goal of 40, the researchers felt that valuable data could be obtained from this sample. Data were collected via questionnaires pre educational intervention and post intervention from 25 or one hundred percent of the participants. Of the 25 participants that attended the educational presentation only 14 (56%) four week questionnaires were returned.

Demographics

Gender was disproportionate with 19 (76%) out of 25 participants being female, while 6 (24%) were male. The summary of this information can be seen in Table 1.

Table 1

Response Summary by Gender

Gender	<i>n</i>	Percentage
Female	19	76
Male	6	24
Total	25	100

The response summary by age is seen in Table 2. Ages of participants range from 26 to 55 years old. The smallest group of participants $n = 6$ were ages 36 – 45. Slightly larger was the group of participants who were between ages 26 – 35, $n = 7$. While the largest group was $n = 12$ for those participants who were between age 46 – 55.

Table 2

Response Summary by Age

Age	<i>n</i>	Percentage
26-35	7	28
36-45	6	24
46-55	12	48
Total	25	100

The majority of the participants were Caucasian (88%). The remainder were American Indian (8%) and Hispanic (4%) (see Table 3).

Table 3

Response Summary by Race

Race	<i>n</i>	Percentage
Caucasian	22	88
African-American	0	0
American Indian	2	8
Hispanic	1	4
Total	25	100

Table 4 shows the summary of years the educators have taught. The range was from less than one year to greater than 20 years. Interesting to note is that $n = 5$ for up to five years and $n = 8$ for 16 or more years. However, the largest representation was $n = 11$ (50%) for teaching 11 – 20 years.

Table 4

Response Summary by Years Taught

Education	<i>n</i>	Percentage
<1	2	8
1-5	3	12
6-10	5	12
11-15	7	20
16-20	4	16
>20	4	16
Total	25	100

Instrument Reliability

The researchers conducted an exhaustive database search to locate a reliable and valid instrument that could be used to measure driver perceptions with regards to texting while driving. Because an instrument already in use could not be located, the researchers developed an 18 item instrument using a Likert scale format. The instrument was used to collect data on participants change in perception of texting while driving pre, post and four-weeks after the educational intervention. Identical instruments were used for the pretest, posttest and four-week intervals. Since the instrument questions produced ordinal level data, the researchers were unable to test for reliability. Therefore, no Cronbach's Alpha was conducted.

Analysis of Hypothesis

This study was developed and carried out to explore if driver perceptions about texting while driving could be changed by using an educational intervention. Data were gathered and analyzed from a Likert questionnaire (see Appendix 1) to establish if driver perception with regards to texting while driving could be significantly influenced by an education intervention.

Once the data were entered into IBM SPSS® 20, a Kruskal-Wallis test, Wilcoxon rank test as well as a descriptive analysis was conducted. The data were then analyzed generating H scores as well as level of significance ($p < .05$) from data gathered in the pre, post and four-week

questionnaires. The participant responses were explored by comparing the mean ranks of their pre, post and four week questionnaires. This comparison would allow the researchers to identify any significant differences between the participant responses immediately post education intervention as well as during a four week follow up. Although all questions were analyzed, questions 2, 3, 5, 8, 13, 14 and 16 specifically identify participant perceptions regarding texting while driving. Questions 13 and 16 investigate participant perceptual changes regarding their intent to send or read a text message while driving. These two particular questions provide the researchers important insight into the participant's willingness to assimilate the information provided in the educational intervention. Exposing participants to the risks of texting and driving did change their perception regarding texting while driving. Therefore, the hypothesis was accepted, perceptions were improved.

Research Question 2

Figure 1, uses a bar chart analysis to illustrate participant responses on the pre, post and four week questionnaires for question 2 "How often do you text while driving?" A Kruskal-Wallis test revealed no statistically significant change in participant perceptions regarding how often they would text and drive post educational intervention across all three questionnaires (Pre, $n = 25$, Post, $n = 25$, 4 week, $n = 14$), $H(2, n = 64) = 1.68, p = .44$. However, the post-test and four week test scores did reflect a higher median score ($Md = 35.84$ and $Md = 32.29$) respectively compared to the pre-test median score of ($Md = 29.28$) thus indicating a positive perception change although not statistically significant.

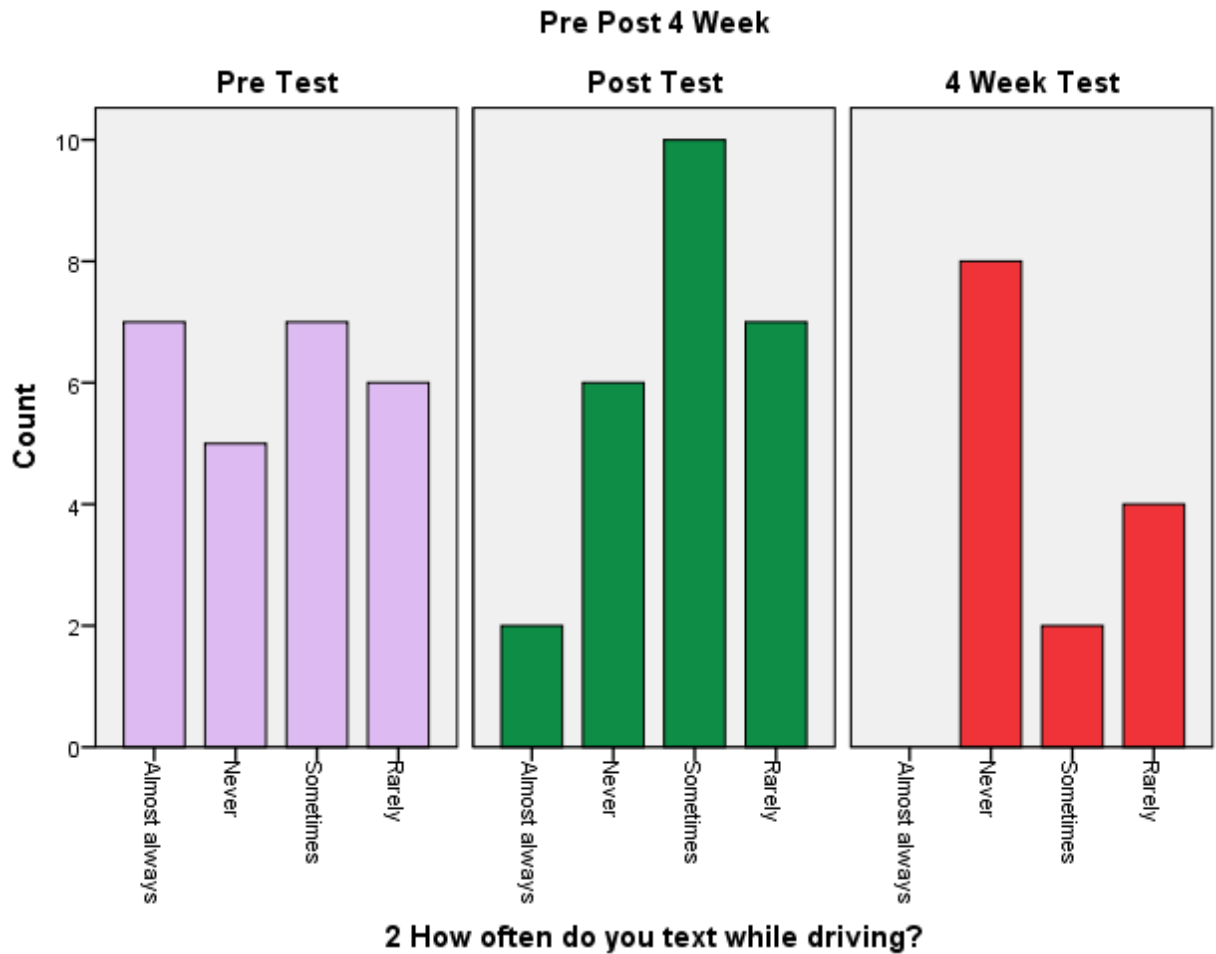


Figure 1 Question 2

Research Question 3

Figure 2, uses a bar chart analysis to illustrate participant responses on the pre, post and four week questionnaires to question 3 “Do you think texting while driving is dangerous?” A Kruskal-Wallis test revealed no statistically significant change in participant perceptions regarding texting and driving being dangerous, (Pre, $n = 25$, Post, $n = 25$, 4 week, $n = 14$), $H(2, n = 64) = 2.61, p = .27$. The post and four week questionnaire median scores ($Md = 30.54$, $Md = 30$) respectively are lower than the pre questionnaire median score ($Md = 35.86$) which suggest that participants had a stronger perception that texting while driving was dangerous.

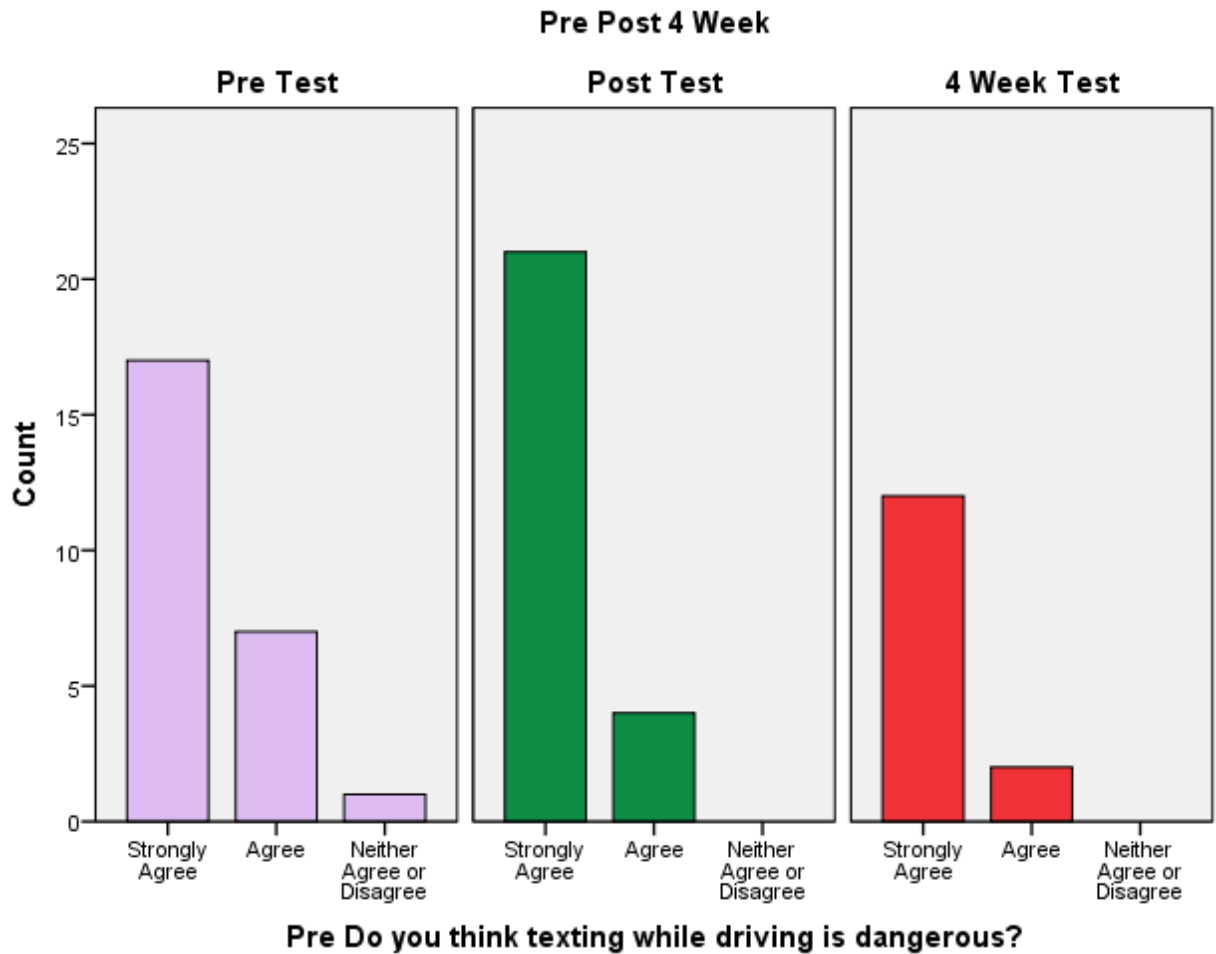


Figure 2 Question 3

Research Question 5

Figures 3, uses a bar chart analysis to illustrate participant responses on the pre, post and four week questionnaires to question 5 “Would you text while driving in an emergency situation?” A Kruskal-Wallis test revealed a statistically significant change in participant perceptions regarding texting in an emergency situation, (Pre, $n = 25$, Post, $n = 25$, 4 week, $n = 14$), $H(2, n = 64) = 8.02, p = .016$. The post and four week questionnaire median scores ($Md = 37.08$, $Md = 38.50$) respectively are higher than the pre questionnaire median score ($Md = 24.56$) which suggest that participants had a significant positive perception change.

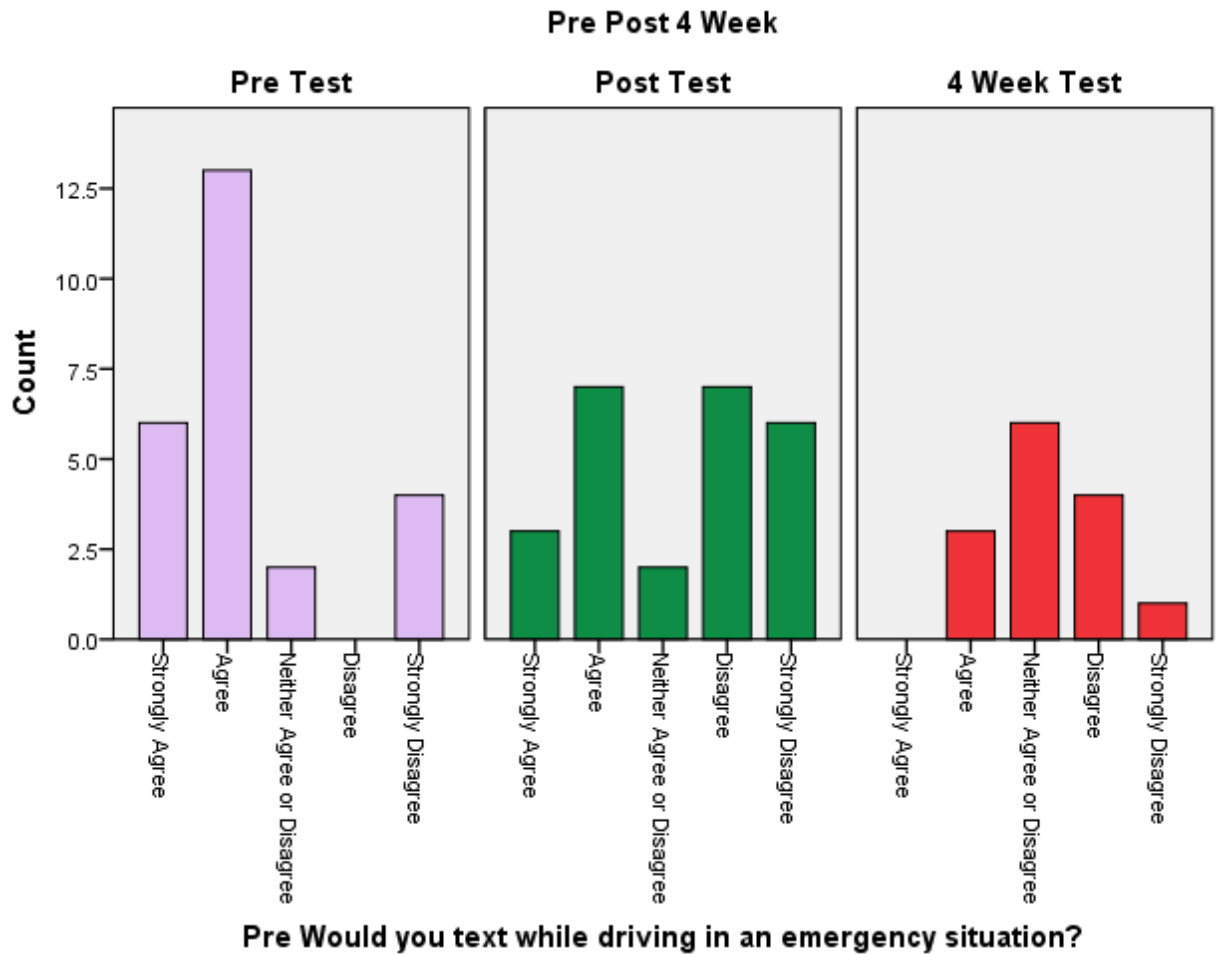


Figure 3 Question 5

Research Question 8

Figure 4, uses a bar chart analysis to illustrate participant responses on the pre, post and four week questionnaires to question 8 “How often do you text to communicate?” A Kruskal-Wallis test revealed no statistically significant change in participant perceptions regarding how often they text to communicate, (Pre, $n = 25$, Post, $n = 25$, 4 week, $n = 14$), $H(2, n = 64) = .623$, $p = .75$. The post and four week questionnaire median scores ($Md = 34.62$, $Md = 31.18$) respectively are higher than the pre questionnaire median score ($Md = 31.12$) which suggest that participants had a change in perception about how often they texted to communicate.

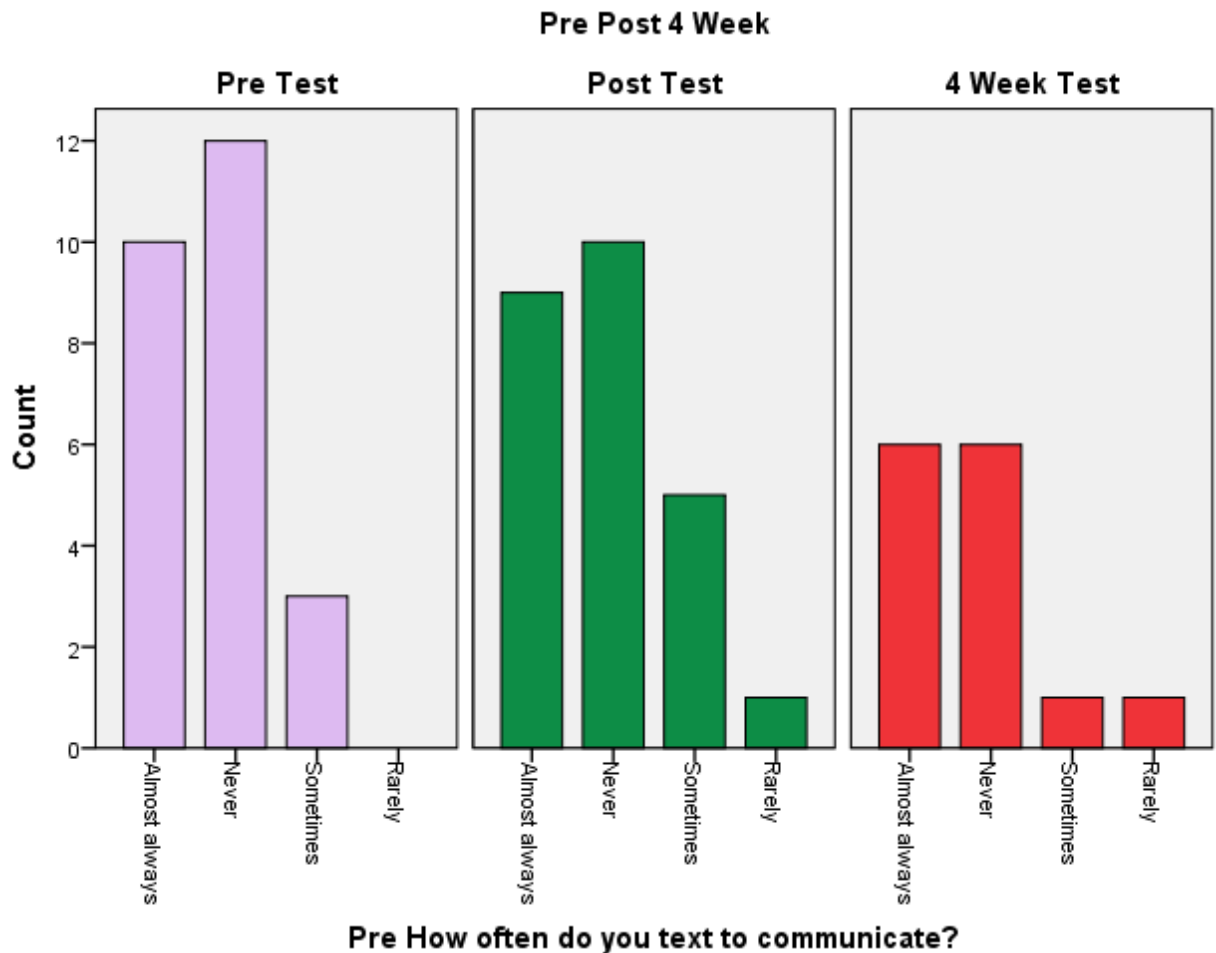


Figure 4 Question 8

Research Question 13

Figure 5, uses a bar chart analysis to illustrate participant responses on the pre, post and four week questionnaires to question 13 “Do you read text while driving?” A Kruskal-Wallis test revealed a statistically significant change in participant perceptions regarding reading a text while driving, (Pre, $n = 25$, Post, $n = 25$, 4 week, $n = 14$), $H(2, n = 64) = 14.95$ $p = .000$. The post and four week questionnaire median scores ($Md = 33.10$, $Md = 46.86$) respectively are higher than the pre questionnaire median score ($Md = 23.86$) which suggest that participants had

a significant positive perception change and would decrease how much they read text while driving.

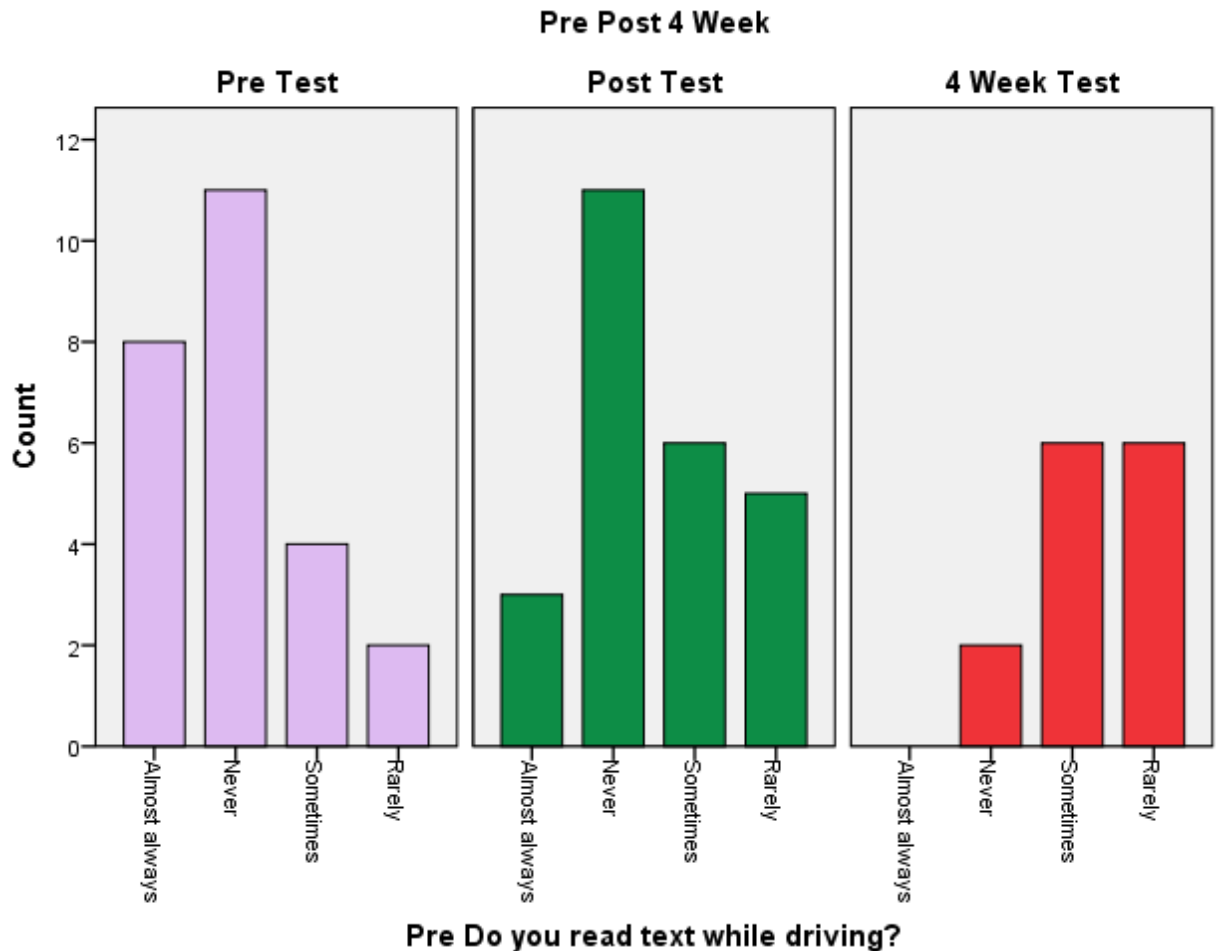


Figure 5 Question 13

Research Question 14

Figure 6, uses a bar chart analysis to illustrate participant responses on the pre, post and four week questionnaires to question 14 “Do you feel you are aware of your surroundings when texting while driving?” A Kruskal-Wallis test revealed a statistically significant change in regarding participant perceptions of being aware of their surroundings when texting while driving, (Pre, $n = 25$, Post, $n = 25$, 4 week, $n = 14$), $H(2, n = 64) = 7.59$ $p = .021$. The post and

four week questionnaire median scores (Md = 32.34, Md = 43.18) respectively are higher than the pre questionnaire median score (Md = 26.68) which suggest that participants had a significant perception change indicating that they were not as aware of their surroundings when texting and driving.

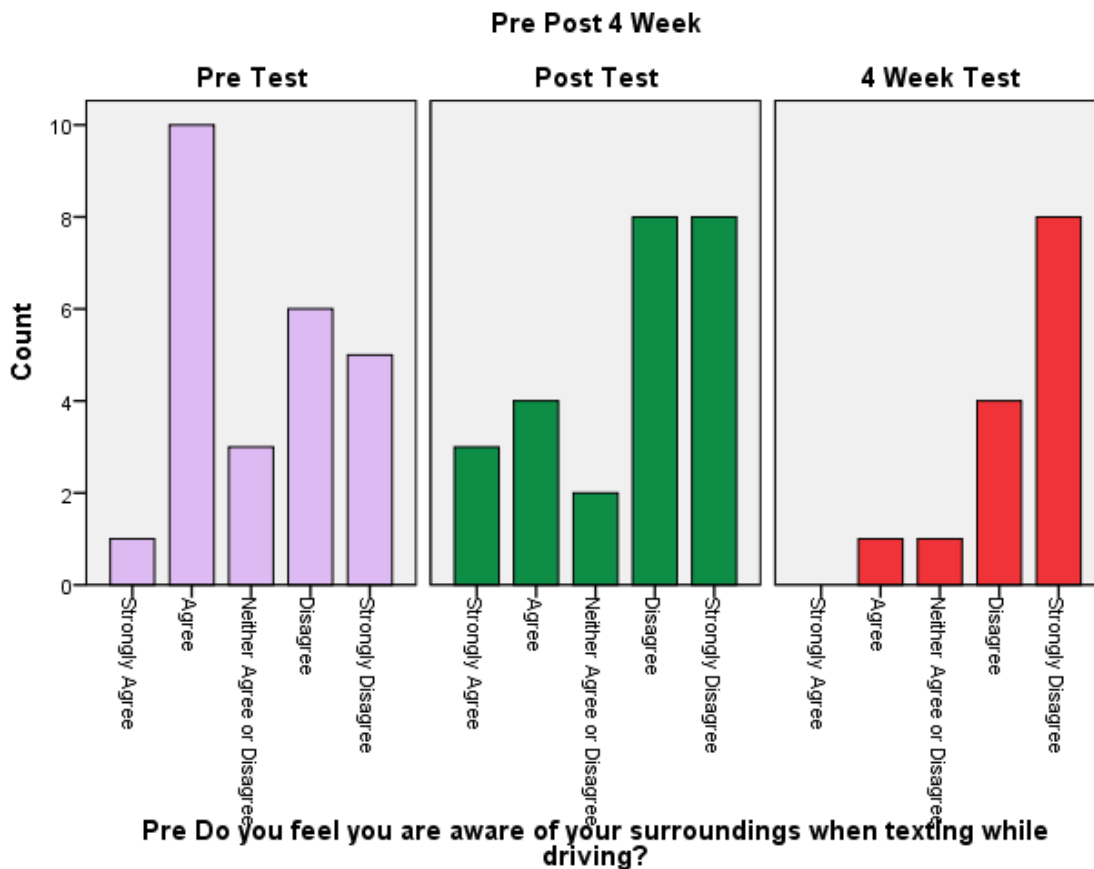


Figure 6 Question 14

Research Question 16

Figure 7, uses a bar chart analysis to illustrate participant responses on the pre, post and four week questionnaires to question 16 “Do you text and drive?” A Kruskal-Wallis test revealed a statistically significant change in participant perceptions regarding reading a text while driving, (Pre, n = 25, Post, n = 25, 4 week, n = 14), $H(2, n = 64) = 12.28 p = .001$. The post and four week questionnaire median scores (Md = 35.62, Md = 43.00) respectively are

higher than the pre questionnaire median score (Md = 23.50) which suggest that participants had a significant perception change and would decrease how much they text while driving.

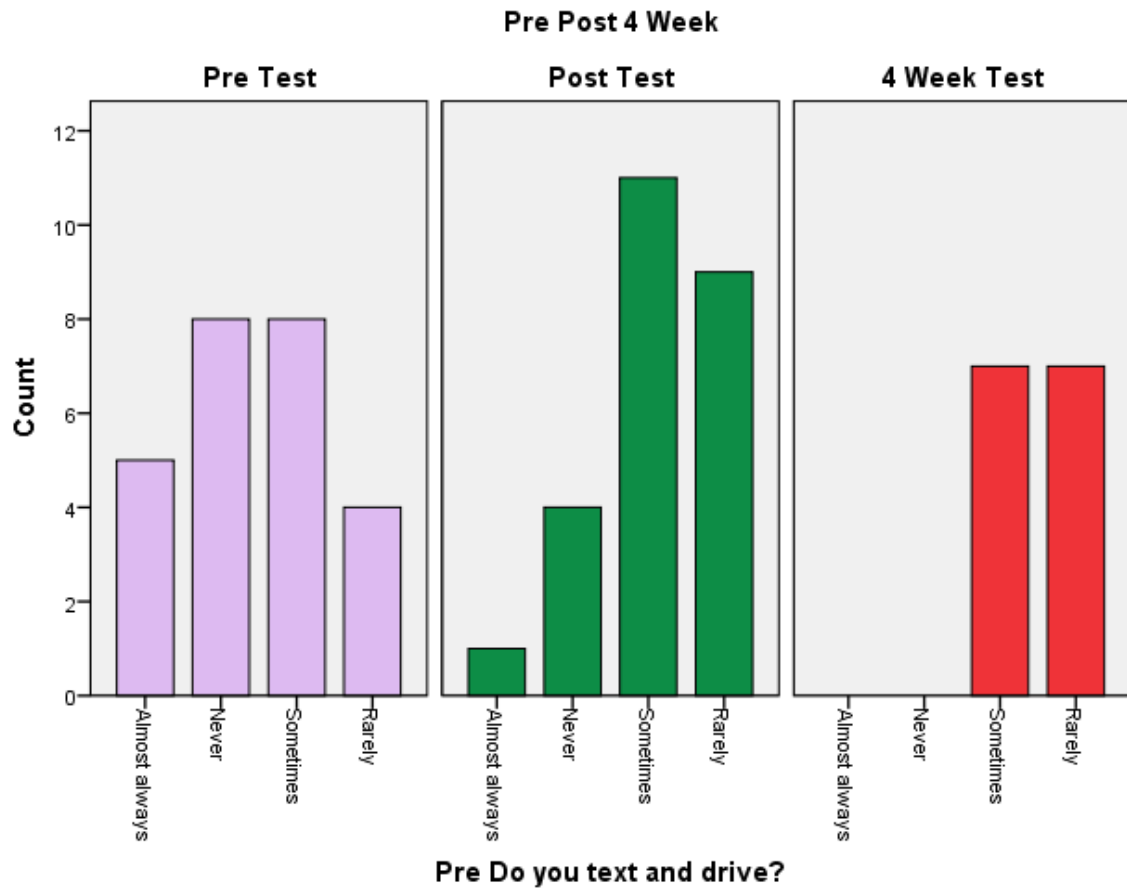


Figure 7 Question 16

Additional Findings

Additional analysis of the research data revealed that there were important differences with respect to gender. Due to the majority of participants being female and Caucasian, a Wilcoxon rank test was performed using only females and only males. The results of the pre questionnaire compared to the post and four week questionnaires for males did not reveal any statistical significance, $p < .05$ on any item of the questionnaire. Although the males did not achieve significance, it can be noted that they did express positive perception changes concerning texting while driving. Therefore, it can be stated perception change in this study was

significantly affected by gender. With regards to ethnicity, a statistical test was not conducted due to the lack of ethnic variation. This was a short coming of the sample and could not be controlled by the researches.

Summary of findings

After thorough analysis this study's findings discovered that the hypothesis, that there is a positive effect on drivers perceptions regarding texting while driving after an educational intervention could be accepted. The data identified more favorable perceptions related to the risk of texting while driving on the post and four week questionnaire as compared to the pre questionnaire. The research study does indicate the educational intervention affected the perceptions of drivers with regards to texting while driving immediately after the participants were exposed to the intervention and up to four weeks post intervention. The data also reveal that gender had a pronounced impact on study results. The effect ethnicity would have had on the study could not be assessed due to the lack of ethnic variation. Caucasians were the bulk of the sample n=22.

Chapter Five

Discussion

Introduction

Texting while driving is a form of distracted driving that can lead to deadly consequences. As a public safety concern, it has been addressed by the Department of Health and Human Services in the Healthy People 2020. According to the World Health Organization (2009), over 3000 motor vehicle related deaths occur daily. Some of these deaths can be directly attributed to driving while distracted. Because of the recent explosion in electronic development, the cell phone that at one time was only available to a few has been opened to the masses. These devices afford person to person connectivity in any environment and at any time regardless of the safety of that environment. Many choose to engage in texting while driving regardless of the situation or potential consequences of such act. This research study explored participant perceptions regarding texting while driving in hopes of developing an educational intervention that could be instituted in the educational system curriculum.

Discussion of Results

This study was conducted to explore the effect an educational intervention would have on middle school educators with regard to texting while driving. During recent years, there has been an increase in public service announcements to highlight the dangers of distracted driving. However, the research regarding the effects public service announcements as well as other educational materials have had on distracted driving is minimal. The present study was able to examine the direct effects an educational intervention had on participant perceptions via pre, post and four week questionnaires.

The data collected via these questionnaires were analyzed and a significant perceptual change was discovered with regard to items 5, 13, 14 and 16. Of further interest, is that all 18 items on the post and four week questionnaires revealed that participants had a shift in their perceptions from more safe to less safe with regard to texting while driving. The magnitude of change was found to be greater on the post questionnaire as compared to the four week questionnaire. The researchers postulate that the greater change in perception was due to the close proximity of the post questionnaire to the educational intervention as well as the formal classroom setting where the participants' may have felt pressure to provide a response one would expect post educational intervention rather than a response that reflected their true feelings.

Two questions (13 & 16) best answer the hypothesized question; does a driver safety education class, focused on the hazards of texting and driving, improve distracted driving perceptions in middle school educators in Bradley County, Tennessee? Question 13 asked; do you read text while driving? Participant response on the pre-test showed 32% answered almost always which dropped to 12% following the educational intervention. More evidence that the educational intervention had positive impact on driver perceptions was seen in the four-week questionnaire, where 0% answered almost always. Similarly, 44% of participants answered never to question 13 on the pre/post-test, but at four weeks it dropped to 14%. This indicates the educational intervention had lasting effects that could be measured four weeks post-intervention.

Question 16 asked; do you text and drive? Once again, 20% of participants answered almost always on the pre-test which dropped to 16% on the post-test. The four-week questionnaire fell to 0%. Likewise, 32% of participants answered never on the pre-test to question 16, which dropped to 16% on the post-test. However, 0% answered never on the four-week questionnaire.

The four-week questionnaire exposed a much lower change in participant perception than that of the post-test. The researchers speculate that the smaller perception change at the four-week mark indicate a better picture of the participants actual response to the educational intervention. Because the test results did continue to show a positive perceptual change, the researchers contend that the test results indicate the educational intervention did have a long lasting effect on some participants in the study. However, with only 14 participants returning their questionnaires it is difficult to assume a direct correlation between the educational intervention and the continued positive perception change of texting while driving. Other factors the researchers considered for this change rather than the educational intervention were; participants were exposed to public service announcements involving texting or they could have read a newspaper or magazine column regarding texting while driving.

The results from this study support the findings of Robins (2010) and Hosking, et al. (2006), where they conducted simulator based studies measuring the effects sending and receiving text messages had on driver awareness. Hosking, et al. (2006) reported 95% of study participants acknowledged a decline in their driving performance when receiving a text and 100% reported a decline in their driving performance when sending a text. Robins (2010) also showed drivers perceived awareness of hazards decreased by 70% when sending a text message and by 62% when receiving a text message. Drivers also noted a significant decrease in their general performance when texting while driving (Robins, 2010).

Notwithstanding the findings from this study, the researchers assert the makeup and size of the sample did not have a pronounced impact on the results but reflected the convenience sample group instead of nationwide middle school educators. The sample which was composed mainly of Caucasian women could reflect this subset in the general population with regards to

the findings of this study. Of particular note, is that no significant difference was found among the male participants in the study when the Wilcoxon test was performed. Although they did have a positive change in perception, the change did not approach significance on either the post or four week questionnaires. The researchers speculated that men inherently view risk-taking behavior differently than women. This is consistent with previous research from Cross, Copping, and Campbell (2011) which state that “97% of dangerous driving offenses are committed by men” (p.97).

Strengths and Limitations

Because a reliable instrument was not available for the researchers to use in measuring participant perceptions change, the researchers were forced to develop the Likert style format questionnaires to capture data to be used for analysis. The Likert questionnaires are very useful to show the strength of a person's feelings toward texting and driving. The scales are easy to analyze and can be collected quickly on a large population set. This initial questionnaire can easily serve as the pilot. The researchers believe even though many of the questions lacked specificity and direction with regards to measuring perception, this instrument could be further refined and used by future researchers.

Inherent with the use of any Likert scale is the respondents' tendency to select answers based on a pattern rather than specifically reading each question and corresponding answer on the scale. For example, question one had answers of; almost always, never, sometimes and rarely but, question 3 had answers of strongly agree, agree, neither agree or disagree, strongly disagree and disagree. Participants may assume all following questions will use this answer pattern of question one and incorrectly score the remainder of the questions thus skewing the

final results of the study. To overcome this phenomenon, the researchers provided explicit instructions that not all questions used the same sequence of answers.

The research sample used in this study was small. Although the researchers extended an invitation to the 77 potential participants via e-mail and flyer distribution within the school, only $N = 25$ participated in the study. A much larger study sample would have allowed the researchers more detailed information regarding individual questionnaire questions as well as statistical effect overall. If the researchers were allowed to repeat this study they would have extended the invitation to participate in the study to all schools in Bradley County, Tennessee.

Another limitation with a small study sample is the reduction in population variation. For example, in this study, most of the participants were female and Caucasian which do not reflect the cultural and gender differences across the United States. Therefore, the results obtained from the study call into question the representativeness of the sample and the generalizability of the findings. However, this is the only study that the researchers could locate which explores the direct effect an educational intervention has on participant perceptions. This increases the value and importance of the present study regardless of sample size.

Conclusions

This study is among the first that the researchers could locate that directly explores a change in driver perceptions after being exposed to an educational intervention. It further describes these changes immediately post intervention as well as four weeks post intervention establishing some evidence that longer term effects exist.

The study documents how robust participant perceptions are regarding texting while driving with regard to gender allowing some generalizability to male and female population

subsets. Within the ethnic domain, the results of this study may also have some generalizability for Caucasians because the sample consisted of 88% of the total sample.

Finally, this study does provide insight regarding participant perceptions about texting and driving which can be further incorporated into future educational and public service announcement campaigns.

Implications for Nursing

New technology offers new conveniences, making life easier. However, with new technology comes new responsibility. Increasingly more people are being involved in motor vehicle crashes as a result of distracted driving. Nurses are in a unique position. Most often, a nurse is involved with a patient's journey through the health care process. Nurses deliver care and serve as a patient advocate. Collectively nurses seek to make a difference in the lives of the individuals in the community at large. Through the years, nursing theorist has emerged to support this idea. Nola J. Pender developed the health promotion model theory which is described as behavior inspired by the aspiration to improve well-being and ultimately reaching the human health potential (Pender, Murdaugh, & Parsons, 2006). Her theory provided a model for nurses to inspire and help guide their patients through lifestyle change to reach their human health potential. Bonnie Rogers (2003) developed the health promotion program model, initially for occupational health nurses to improve the health of employees in work facilities. This model focuses on assessment, planning, implementation and evaluation. Nevertheless, this model can be applied to the community at large. Bandura's model for social learning can be applied to health care through promoting the three concepts of Bandura's (1977) model; self-efficacy, social modeling, and symbolic modeling. For example, nurses interacting with patients should encourage them to recognize and accept personal responsibility when driving; encourage

behavioral changes and thus promoting a healthier lifestyle for the community at large. This is especially true when dealing with young drivers. The advanced practice nurse can incorporate this into their education when discussing safety concerns.

Professional nurses work in a wide array of settings. This program seeks to improve the health of drivers, especially young drivers, through prevention and education. Accidents are one of the leading causes of death in people younger than 25, particularly car accidents. This is an area where just a little education can make a huge impact. From a financial perspective, with health care expenditures making up 17.9% of our GDP, preventative programs are a necessity for lowering health care costs (Kellis & Rumberger, 2010). From a humanistic perspective, shielding a life is a worthwhile venture.

Recommendations for Future Research

This research study obtained feedback by utilizing closed ended questions, limiting feedback from open dialogue. Further research could include qualitative interviews or focus groups allowing more detailed and descriptive feedback. This would allow researchers to emphasize areas that worked and improve areas that did not have an impact. Because this was a convenience sample, there were meaningful differences within the group with regard to gender and race that could have skewed the test results. The study sample of N=25 was primarily Caucasian (n=19) and female (n=22). The sample size was small considering the number of potential educators that could have attended the class. While this sample size gave good information it may not be representative of middle school educators and more importantly drivers of all ages across the country. Future research should target a broader more diverse sample population in order to substantiate and expand the findings of this study.

Further research on this topic can provide information that can be used as a model for future programs that can be instituted in schools, clinics and public venues across the country. Future research should employ resources from multiple disciplines to include nursing, psychology, sociology and education.

Appendix A

Pre-test, Post-test, Four week test

Date _____ Research # _____

Instructions: Please circle the answer that best reflects your personal opinion to the questions below. There is no right or wrong answers. Your responses are completely anonymous and confidential.

<p>1. How often do you talk on the phone while driving?</p> <p>a. Almost always b. Never c. Sometimes d. Rarely</p> <p>2. How often do you text while driving?</p> <p>a. Almost always b. Never c. Sometimes d. Rarely</p> <p>3. Do you think texting while driving is dangerous?</p> <p>a. Strongly agree b. Agree c. Neither agree or disagree d. Strongly disagree e. Disagree</p> <p>4. Should texting while driving be illegal?</p> <p>a. Strongly agree b. Agree c. Neither agree nor disagree d. Strongly disagree e. Disagree</p> <p>5. Would you text while driving in an emergency situation?</p> <p>a. Strongly agree b. Agree c. Neither agree nor disagree d. Strongly disagree e. Disagree</p> <p>6. Have you ever had a near miss while texting and driving?</p> <p>a. Strongly agree b. Agree c. Neither agree nor disagree d. Strongly disagree e. Disagree</p> <p>7. Are the penalties associated with texting while driving too harsh?</p> <p>a. Strongly agree b. Agree c. Neither agree nor disagree d. Strongly disagree e. Disagree</p> <p>8. How often do you text to communicate?</p> <p>a. Almost always b. Sometimes c. Rarely d. Never</p> <p>9. How often do you feel teens/young adults text while driving?</p> <p>a. Almost always b. Sometimes c. Rarely d. Never</p>	<p>10. Do you feel you are aware of your surroundings while driving?</p> <p>a. Strongly agree b. Agree c. Neither agree nor disagree d. Strongly disagree e. Disagree</p> <p>11. How safe do you feel young adults 20 – 30 years old are when texting while driving?</p> <p>a. Almost always b. Sometimes c. Rarely d. Never</p> <p>12. How often do you feel adults 30 and older text while driving?</p> <p>a. Almost always b. Sometimes c. Rarely d. Never</p> <p>13. Do you read text while driving?</p> <p>a. Almost always b. Sometimes c. Rarely d. Never</p> <p>14. Do you feel you are aware of your surroundings when texting while driving?</p> <p>a. Strongly agree b. Agree c. Neither agree nor disagree d. Strongly disagree e. Disagree</p> <p>15. How safe do you feel adults 30 – 50 years old are when texting while driving?</p> <p>a. Always b. Sometimes c. Rarely d. Never</p> <p>16. Do you text and drive?</p> <p>a. Always b. Sometimes c. Rarely d. Never</p> <p>17. How safe do you feel teens 16 – 20 years old are when texting and driving?</p> <p>a. Almost always b. Sometimes c. Rarely d. Never</p> <p>18. Do you feel texting while driving is a public health/safety concern?</p> <p>a. Strongly agree b. Agree c. Neither agree nor disagree d. Strongly disagree e. Disagree</p>
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Appendix B

Informed Consent for Participation in Research
Southern Adventist University

Project Title: Does driver safety education have an impact on texting and driving?

Researchers: Kelli Noble, BSN, RN, Graduate Student, Department of Nursing
Duane Young, BSN, RN, Graduate Student, Department of Nursing

Dear Participant,

Mobile devices are becoming more readily available and popular. Because they are so widely used and accepted texting and driving is becoming one of the leading safety concerns for the United States. The National Highway Traffic Safety Administration (2010) reported there were 5,474 deaths in 2009 on U. S. highways resulting from distracted driving. Among those fatal crashes 18 percent reported use of a cell phone as the reason for their distraction.

The purpose of this qualitative study is to promote safe driving habits and provide Tennessee educators with an educational tool that may be implemented in the classroom. A driver safety education class, focused on the hazards of texting and driving, will be presented to middle school teachers. The goal is to encourage personal responsibility while driving, thus promoting a healthier lifestyle for the community at large.

We are requesting your participation in a driver safety education program. Your participation is voluntary. You may withdraw your participation at any time during the program without any consequences. Any information gathered from you will be completely anonymous and confidential. You will be asked to complete a demographic form, take a pre-test, post-test, and four week survey. For completing and returning the four week survey your name will be entered for a \$100 American Express gift card drawing.

Having read the above and having had an opportunity to ask any questions, you indicate your willingness to participate in this research project by signing this consent form. You may omit any question you do not wish to answer. You also understand your participation is voluntary and may be withdrawn at any time. If you have any concerns during your involvement in this program you may contact Kelli Noble at kellinoble@southern.edu , Duane Young at youngm@southern.edu or our committee chair person, Ronda Christman, at rchristman@southern.edu.

Thank for your participation.

Kelli Noble, BSN, RN Date

Participant Date

Duane Young, BSN, RN Date

Appendix C

Demographic Tool

Research Identification Number _____

Please Check All That Apply

Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female	How Many Years Have You Taught	<input type="checkbox"/> < 1 year <input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years <input type="checkbox"/> 1-15 years <input type="checkbox"/> 16-20 years <input type="checkbox"/> > 20 years
Age	<input type="checkbox"/> 20-25 <input type="checkbox"/> 26-30 <input type="checkbox"/> 31-35 <input type="checkbox"/> 36-40 <input type="checkbox"/> 41-45 <input type="checkbox"/> 46-50 <input type="checkbox"/> 51-55 <input type="checkbox"/> 56 & older		
Ethnicity	<input type="checkbox"/> African-American <input type="checkbox"/> American Indian/ Alaskan Native <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Caucasian <input type="checkbox"/> Hispanic <input type="checkbox"/> Other		

What Grade Do You Teach

<input type="checkbox"/> 6	<input type="checkbox"/> 10
<input type="checkbox"/> 7	<input type="checkbox"/> 11
<input type="checkbox"/> 8	<input type="checkbox"/> 12
<input type="checkbox"/> 9	

What is Your Highest Level of Education

<input type="checkbox"/> 4 years of college
<input type="checkbox"/> Graduate school (did you graduate Y / N)
<input type="checkbox"/> Other

**** All responses in this document will be kept anonymous and confidential****

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