2015

Risks of Driving While Talking on Mobile Devices: Soccer Parents' Perceptions

Tonisha Dawn Joyner-Bagby
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Tonisha Joyner-Bagby

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Review Committee
Dr. Gema Hernandez, Committee Chairperson,
Public Policy and Administration Faculty

Dr. Lori Demeter, Committee Member,
Public Policy and Administration Faculty

Dr. Linda Day, University Reviewer,
Public Policy and Administration Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
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Abstract

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MS, Hampton University, 2007

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

The number of motor vehicle accidents that occur as a result of driving while talking on mobile devices increases each year. Distracted driving is dangerous; however, policy researchers have not focused on adults who talk on mobile devices as they drive children to and from daily events. This study focused on the experiences of soccer parents, an important focus because of soccer's year-long duration that requires a large amount of driving in addition to the other daily tasks of parenting. The purpose of this phenomenological study was to investigate the perceptions of parents of child soccer players regarding the motivations for and risks of talking on mobile devices while driving. The theoretical framework for this phenomenological study was the self-determination theory. Data were collected by electronic surveys using a convenience sample of 10 couples and 4 single parents of children who play soccer for a team in a southern state. Data were analyzed using the constant comparative method in which patterns were identified and coded into themes. The key findings were that the parents had different perceptions of the risks and motivations for talking on mobile devices while driving. There were participants who viewed talking on mobile devices as risky while others did not perceive talking on mobile devices while driving as a risk. Recommendations include conducting further research on parents who drive children to and from soccer practices, while talking on mobile devices, in order to gain better understanding of what motivates people to choose to talk on mobile devices while driving. The implications for positive social change include informing policy makers about the importance of increasing awareness and educating the public about the risks of talking on mobile devices while driving.

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Dedication

I would like to dedicate this dissertation to several people who have supported me as I worked towards earning my PhD. I would first like to thank my husband Gerrod Bagby. Your love and support gave me the motivation, time, and encouragement that were needed to stay focused as I completed my research. I would also like to dedicate this study to my children Roddy, Tyler, Brittany, and Brooke. You have watched me work towards my PhD over the last few years and I hope this has been an inspiration as you continue to advance through school and life. I love you all and you are the reasons that I work so hard to set examples for the importance of education. Always strive for the best in all aspects of your lives and you will succeed. I am proud of each of you. I would like to give a special dedication to my mother, Irma Davis, for helping with the kids, meals, among other things as needed throughout the years to allow me to have time to focus on my research. This is also dedicated to the rest of my family, including my dad, siblings, aunts, uncle, and cousins for cheering me on, as well as their continued encouragement as I worked towards completing my doctorate. I am grateful, thankful, appreciate, and love each and every one of you.

Acknowledgments

This research study and doctorate degree was completed with the support of my family, instructors, and research committee. I would like to thank Dr. Gema Hernandez for her interest in distracted driving and her willingness to serve as my committee chairperson. I would also like to thank my committee methods member, Dr. Lori Demeter, and my committee URR, Dr. Linda Day, for agreeing to serve as my committee members. The guidance and feedback that they provided helped me to become a better writer and researcher. Without them, this research would not have been possible. This experience will never be forgotten. I am truly thankful!

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Chapter 1: Introduction to the Study

In this chapter, I discuss the risks of driving while talking on mobile devices and the need for further research. In particular, I show the need to understand and explore the risks of these distractions for parents of children who play soccer. The chapter is divided into three sections. The first section provides a breakdown of information on the various dangers of distracted driving in the State of Virginia, as well as in the rest of the United States. In the second section, I present an outline of the study. In the final section, I offer an overview of the study's significance, including assumptions or limitations.

Background

People have had varying opinions of driver distraction. The National Highway Traffic Safety Administration (NHTSA, 2009) has defined distraction as inattention caused by drivers who divert their attention to other activities instead of focusing on the task at hand. The NHTSA determined that people less than 20 years of age are more at risk for driving distracted and stated that 16% of automobile accidents caused by this age group occurred because of driver distractions. The NHTSA also estimated that those aged 30 to 39 had the largest numbers of distractions. Identifying these ages was helpful in determining that people of older ages were also likely to drive distracted.

Driving distracted has caused an increased number of automobile accidents each year. According to Smith, Benden, and Lee (2012), more than 5,400 people were killed in automobile accidents in 2009 that were caused by people who were driving distracted. Smith et al. also identified that more than 448,000 people suffered injuries because of distracted drivers. Close to 1,000 of those killed and 24,000 of the injuries were caused by people who were distracted by cellular phones (Smith et al., 2012). Smith et al.

determined that there was a 7% increase in the numbers of individuals who drove distracted between 2005 and 2009. In the United States, 25% of drivers admitted to driving while distracted, of whom 40% was between 18 and 29 years of age (Smith et al., 2012). These numbers have continued to increase each year as the numbers of drivers increase.

The data from the NHTSA (2009) were slightly different compared to the Center for Disease Control and Preventions' (CDC). The CDC (2009) estimated that in 2009, driver distraction was the cause of 5,870 deaths and 515,000 injuries. According to the CDC (2009), of all of the crashes that involved fatalities during that year, distracted drivers caused 21%, and 995 of the fatalities were caused by the use of cell phones. Twenty percent of the reported injuries were caused by driver distraction (NHTSA, 2009). Of all groups, teen drivers were found to be at the greatest risk of driver distractions and also at the highest risk of being in the vehicle with another driver who was distracted (NHTSA, 2009). The National Safety Council (2010) estimated that using cell phones was the primary cause of motor vehicle accidents. This has caused an increase in the numbers of deaths caused by the use of cell phones each year.

Cell phones are becoming more popular as new versions become available. Nikolaeva, Robbins, and Jacobson (2010) found that more than three times as many people owned cellular phones in 2008 compared to 2000. Nikolaeva et al. believed that this surge in cell phone ownership caused an increase in accidents. Loeb and Clarke (2009) believed that the numbers of lives taken as a result of using cell phones while driving has increased over the years. The reason for this is that cell phone technology is convenient for those who need to accomplish tasks while driving.

Cell phones are becoming as distracting as turning away from the road while driving. Ranney (2008) found that people spent 30% of their time behind the wheel engaged in distracting behaviors. Ranney also learned that 70% of motor vehicle accidents involved only either one vehicle or rear-end collisions. Ranney indicated that using cell phones while driving slowed the response time of drivers, placing them at greater risk for accidents.

Many people believe that they are multitaskers. According to American Automobile Association Spell Out Phrase (AAA, 2009), greater than half of a driver's time was spent using distractions. Both the AAA and the World Health Organization (2011) estimated that using cellular phones while driving quadrupled the risk of crashing. According to NHTSA (2009), 32% of people who talked on their phones had initiated the calls by dialing the telephone numbers while driving; only 10% of those studied claimed that they did not make calls while they drove. Many people have been reluctant to admit using their phones while driving because of fear that they might have broken a law. Surveys have been completed in order to evaluate distracted driving. The NHTSA (2009) created the National Occupant Protection Use Survey. This is the only observational survey that is based on the probability to test distracted driving. The survey was based on actual information on people driving while using cell phones, as well as other electronic equipment, and was gathered at highway intersections. The surveys were based only on drivers and passengers who were stopped at red lights. The NHTSA categorized driver distraction into the following four types: visual, auditory, physical, and cognitive. Visual distractions required drivers to take their eyes off of the road while they drove. Auditory distractions caused drivers to be distracted while they listened to the person(s) with

whom they were conversing. Physical distractions caused drivers to take their hands off of the steering wheels while they drove. Cognitive distractions caused the thinking of drivers to be distracted. Each of these behaviors occurred when drivers talked on cell phones while driving.

The times when accidents were more likely to occur because of driver distraction was studied. Between 2005 and 2009, the Virginia Department of Motor Vehicles (as cited in The Virginia Department of Health at vahealth.org. 2011) reported that 143,193 motor vehicle accidents occurred in Virginia and were caused by people who were driving distracted; 77,617 injuries and 608 fatalities resulted from these distractions. These fatality rates were 1.23 times higher in 2009 than in 2005, and the largest numbers of injuries were caused between 3:00 p.m. and 5:59 p.m. (vahealth.org, 2011). The Virginia Department of Motor Vehicles (VADMV, 2012) reported that there were 28,619 crashes, 136 people who lost their lives, and 16,128 injuries from distracted drivers in the State of Virginia. The VADMV also determined that most of the accidents caused by distracted drivers happened on Thursdays, Fridays, or Saturdays between the hours of 12 p.m. and 6 p.m. Weekends were a busy time for drivers.

Laws are being developed and enforced to decrease the risks involved in distracted driving. Nikolaeva et al. (2010) discussed efforts that have been made by legislators to restrict the use of hand-held cellular phone use while driving. By 2008, only six states, Washington, DC, and the Virgin Islands had enacted laws that banned the use of hand-held cellular phones while driving. Ibrahim, Anderson, Burris, and Wagenaar (2011) used a Westlaw and Lexis-Nexis method to study the laws across the 50 states regarding the use of cell phones while driving. Thirty nine states and Washington, DC

had at least one restriction on mobile communication use while driving, although they each had different rules and punishments. No state had completely banned the use of mobile devices.

Automobile makers have added devices to vehicles in order to make driver distraction less risky. Jacobson and Gostin (2010) studied electronic devices that are being placed into vehicles and marketed as safe. Jacobson and Gostin determined that using these devices is dangerous, and that more laws and regulations need to be in place to prevent the accidents such devices cause. Orlowske and Luyben (2009) compared the rates of cell phone use for people who were within 1½ miles from a police station to those of people in rural areas. Orlowske and Luyben concluded that there were not many differences in the numbers of people who drove while using cell phones close to police stations and those who were in rural areas. Becic, Dell, Bock, Garnsey, Kubose, and Kramer (2010) claimed that comprehension, language production, and the ability to encode products of comprehension into memory, were less accurate when a person was driving.

The Governors Highway Safety Association (2012) reported that 14 states plus The Virgin Islands, Guam, and the District of Columbia have primary enforcement laws that prohibit the use of all hand-held cellular phones while driving. However, these state laws only pertain to certain drivers, including school bus drivers and drivers under the age of 18. These states include Arizona, Arkansas, California, Connecticut, Delaware, Washington, DC, Guam, Maryland, Nevada, New Jersey, New York, Oregon, The Virgin Islands, Washington, and West Virginia. At the time of this study, no state prohibited the cell phone use of all drivers.

In addition to Washington, DC, and Guam, 38 states currently ban text messaging while driving. States that do not ban texting and driving are Arizona, Arkansas, Florida, Hawaii, Mississippi, Missouri, Montana, New Mexico, Ohio, Oklahoma, South Carolina, South Dakota, and Texas. Virginia, the state in which this study took place, also had a ban on all mobile phone use for bus drivers and drivers under the age of 18 (NHTSA, 2009). There were no data available for the number of accidents caused by soccer parents who were driving while talking on their mobile devices.

Many people started to use wireless ear pieces while using cell phones while driving. McCartt, Hellinga, Strouse, and Farmer (2010) stated that hand-held use of cell phones decreased after various jurisdictions placed bans on them. McCartt et al. also stated, however, that this decrease might be related to the increase in the use of hands-free cell phones. Researchers have studied hands-free cell phones to determine if they are safer. Many people have had beliefs that younger aged drivers were more at risk for automobile accidents. Lee (2007) stated that young drivers were more at risk of distracted driving because they are often the first people to use the newer technologies. Lee compared technology when it is used in the vehicle of an under-aged driver. Neyens and Boyle (2007) found that the intensity of injuries caused by teenaged drivers was worse for both the drivers and passengers. Young drivers have been more distracted by others in the car.

The costs of accidents caused by driver distractions have increased each year. The Harvard Center for Risk Analysis (as cited in National Safety Council, 2014) indicated that accidents caused by cellular phone use has cost $43 billion and averaged more than $3.58 billion each month. The National Safety Council (2010) determined that

approximately 1.3 million crashes have been caused by cell phones each year. Horrey, Lesch, and Garabet (2009) found that automobile accidents caused by distractions incurred huge costs for employers regardless of whether they occurred on the job. Horrey et al. explained that this finding was because of the injuries, the disabilities, and any losses in the abilities of productive workers.Healthcare costs have also increased.

Education and laws about cell phone use while driving is important. Sperber, Shiell, and Fyie (2010) argued that laws that ban cell phones would be cost effective for society as a whole—although the precise impact would also depend on how many people complied with the bans. White, Hyde, Walsh, and Watson (2010) argued that campaigns were needed to raise awareness about the risks of driving distracted. Their belief was that such a campaign would decrease the belief that using these technologies while driving was a benefit.

Soccer was selected for this study because it is a year-round sport that requires a lot of multitasking for so-called soccer parents. Parents of children who play soccer often travel a lot in order to transport their children to soccer activities, including practices, games, and tournaments. Many soccer parents take turns car-pooling, which places more demands on them. In this study, I wished to determine whether these demands placed soccer parents at risk of talking on their cell phones while driving. Some of the variables used to determine the target population for this study were age, gender, and parents of kids who participated in soccer. Understanding these variables would make a large contribution to the field of public administration. Gaining more knowledge about this phenomenon could have an impact on distracted driving laws. Further, Berhau et al. (2011) has discussed the demands being placed on parents of children who participated in

leisure activities like soccer and football. Twelve families from random financial backgrounds were observed in this study during sports activities to determine whether those from the lower, middle, or upper class were more likely to participate in sports, and whether most of the parents were male or female. More of the families were found to be middle class, and more women than men participated in the labor-demanding activities.

Many parents have had to multitask in order to transport children, work jobs, and take care of their homes. Berhau et al. (2011) argued that parents are becoming increasingly involved in the extracurricular activities of their children, which has forced them to decide how to handle their day-to-day family activities between work, home, school, while figuring out how to schedule time to drive children to their leisure activities like soccer and basketball using cell phones to coordinate these activities. The use in cell phones while driving in these parents has increased.

Problem Statement

Distracted driving is a societal problem. Despite laws that prohibit the use of cell phones while driving, this behavior still occurs. The degree of this problem is most pronounced in the statistics about people who have been injured and killed by people who have driven distracted. A possible cause of this problem is that many people believe they are able to handle more than one task at a time. Perhaps a study that investigates distracted driving by gaining the perspectives of those who are at risk of driving distracted could provide vital information to lawmakers.

Automobile accidents are one of the leading causes of injuries and fatalities in the United States. Several researchers have focused on people driving while distracted— and

the cognitive effects of it—but little research has been conducted to determine what people's perceptions are about the dangers of driving while distracted by cell phones. Philbrook and Frank-Wilson (2009) posited that emotional communication campaigns that teach about distracted driving would be the best way to help eliminate the problem. Philbrook and Frank-Wilson added that these campaigns must be supported by the enforcement of laws. To address distracted driving, lawmakers must know more about the perceptions of those who might be at risk of driving distracted. A study that uses these perceptions can help to open the door to future research.

Purpose of the Study

Driver distraction is dangerous. All driver distractions carry a risk of causing automobile accidents. Accidents happen too often because of these distractions. Too many lives are lost each year because of them. People engage in these distractions while children are in their vehicles, placing them, other passengers, and any pedestrians outside of the vehicle at risk. The purpose of the study was to explore the perceptions of soccer parents with regard to talking on mobile devices while driving. In particular, I focused on soccer parents' perspectives concerning the motivation to talk on mobile devices while driving and the risks of talking on mobile devices while driving.

Research Questions

The research questions for this dissertation were based on gaps discovered in the literature. There was one overarching research question and two subquestions:

Overarching research question: What are the perceptions of soccer parents with regard to talking on mobile devices while driving?

Research Question 1: What are soccer parents' understandings of the dangers of talking on mobile devices while driving?

Research Question 2: What are soccer parents' actions when they make and receive calls on their mobile devices while driving?

Conceptual Framework

The self-determination theory was used to build the framework for this research study. In this study, I focused on the motivations people had for talking on their mobile devices while driving. This theory included aspects for both internal and external motivation for behaviors. According to Ryan and Deci (2000), behaviors are often motivated by internal feelings along with pressures from external sources—an insight that helped me to explore the reasons that soccer parents were motivated to talk on mobile devices while driving. This theory helped to further address the research questions regarding the motivations of soccer parents with regard to talking on mobile devices while driving. This framework is further broken down in Chapter 2.

Nature of the Study

This qualitative study involved using a phenomenology method to gather the perspectives of soccer parents on the motivations and risks of driving while talking on mobile devices. This information was obtained through survey questionnaires e-mailed to each research participant. The participants included 14 adult drivers with an average age of 30–45. The geographical area for the study was Suffolk, Virginia. Soccer parents were selected because they drive frequently between soccer practices and games while also often transporting other teammates. Many of them also have regular jobs and families that they also have to take care of between soccer practices and games. This study was

used to determine whether having busy schedules motivates this group to be at risk for making and answering calls while they drive.

Research Methodologies

There are three types of research methodologies: quantitative, qualitative, and mixed-methods. There are many differences among these methodologies. Quantitative research is used to quantify the gathered data. With such methods, a large number of research participants are normally selected. Statistical data are collected using structured methods such as surveys. The research findings in quantitative research typically are used to recommend a final course of action. Mixed-methods researchers use both qualitative and quantitative data to gather and use the data.

The qualitative research methodology was appropriate for this research study. Gwyther and Holland (2014) used this type of research to develop better understandings of research based on people's vulnerabilities. In this study, I used the perceptions of soccer parents to gain insight into what areas need to be focused on in future research about distracted driving. According to the guidelines of Gwyther and Holland, a qualitative research method was appropriate because it would help focus on the information regarding the lived experiences of soccer parents who have talked on cell phones while driving. Qualitative research allows researchers to learn any important factors about driving while talking on cell phones as they relate to parents of children who participate in sports. Gathering multiple perspectives from different people who have experienced driving while talking on cell phones helped to provide better understanding of why people use these behaviors.

I spoke with parents from a local soccer team in Suffolk, Virginia to determine who was interested in participating in the research study. The study was explained to each of the parents. The surveys consisted of 25 questions that were e-mailed to each research participant. I sought insight into whether transporting kids to soccer games and practices while handling other tasks like work and home caused these parents to be more at risk for using these behaviors. The information also helped me to gain understanding about whether the people who talked on cell phones while driving believed that these behaviors were dangerous.

There are several research designs: case studies, ethnography, narrative, grounded theories, and phenomenology. According to Koch, Niesz, and McCarthy (2014), grounded theory is used to aid in developing theory, case studies require a lot of information in order to develop the case, and phenomenology uses people's experiences to formulate analysis for what is being studied. The phenomenology approach is based on the lived experiences of people. This approach was employed—along with the heuristic research method—to allow the research participants to draw upon their lived experiences to develop understandings of why people chose to drive distracted.

The significance of this study in relation to public administration is that it might help open the doors to further research. Findings might be helpful to the Department of Transportation and lawmakers as they work to create and enforce laws that will decrease or even eliminate the use of mobile devices while driving. More research-based legislation could also help to potentially decrease the numbers of automobile accidents that occur each year.

Operational Definition and Terms

Auditory distractions: Auditory distractions are defined as sounds that take the driver's focus off of the road. An example would be listening to other passengers and listening to loud music (National Safety Council, 2014).

Cellular telephones: The terms used to describe cellular telephones are different throughout the United States. Some of the terms used are mobile phones, cell phones, hand-held cell phones, and hands-free cell phones. The definition for cell phone used in this study was taken from the Penalty for Using a Cellular Telephone While Operating a Motor Vehicle Act (2011): "A cellular, analog, wireless or digital telephone capable of sending or receiving telephone communications without an access line for service" (Section 1, Subsection a, 1).

Cognitive distraction: NHTSA (2009) stated, "Tasks that are defined as the mental workload associated with a task that involves thinking about something other than the driving task" (p. 4).

Distracted driving: Some researchers believe that there are differences between distracted driving and inattentive driving; other researchers believe that inattentive driving *causes* distracted driving. The NHTSA (2009) defined 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. 3).

Hands-free cell phone: Hands-free cell phone is defined as the use of an additional or internal attachment that allows a person to make or receive a phone call without the use of either hand (National Safety Council, 2014).

Hands-held cell phone: Hands-held cell phone is defined as use of a person's hand to make or receive a phone call (National Safety Council, 2014).

Manual distraction: NHTSA (2010) defined manual distractions as anything that requires the driver to remove his or her hands from the steering wheel. An example would be taking a person's hands off of the steering wheel to reach for a cell phone.

Visual distraction: NHTSA (2010) defined visual distraction as any task that takes the driver's visual attention off the road. Turning to look at an animal on the side of the street would be an example; looking down to see who is calling is another example.

Texting while driving: Texting while driving is the act of typing information into cell phones in order to communicate with others while driving (National Safety Council, 2014).

Assumptions

This study was based on several assumptions. One assumption was that parents were going to be honest when they answered the research questions about distracted driving. The goal was to ensure parents that any information they provided would remain confidential, as such assurance would increase the possibly of more truthful answers.

A second assumption was that the parents were going to provide accurate descriptions of their beliefs regarding driving while talking on cell phones. Ensuring that the parents' information would remain confidential—and that no one would be judged based on his or her answers—increased the accuracy of their descriptions.

A third assumption was that parents of children who participated in sports were more at risk for driving while talking on cell phones. Researchers have not focused on this group of people to determine the accuracy of this assumption.

A final assumption was that soccer parents believed they were better at multitasking because they spent so much time on the road between work, home, and transporting kids to soccer practice and games; again, there was not enough research to prove this assumption.

Scope and Delimitations

The perspectives of soccer parents were the focus for this research study. These perspectives were further broken down into what the motivations were for talking on mobile devices while driving. Soccer is a year-round sport, which added to the availability of participation. Each participant was selected from a local team, which added to the convenience of gathering data.

Limitations

One possible limitation to this study was that the information was only gathered from one group of people. The group being studied in this research consisted of soccer parents from one area in the community. It was possible that this group of people had similar socioeconomic backgrounds, as well as being from similar neighborhoods, which could produce biased results. Information might have been more accurate if a comparison of several groups was conducted from different areas.

A second possible limitation was that the research would be limited to one average age group. The parents being interviewed had average age ranges of 33 to 55, which tended to be the average age range for parents of local teenaged soccer players. Parents of older and younger ages were also considered for participation, as were grandparents and guardians.

Another potential limitation for this study was having a small sample size. Having a larger sample size might have increased the accuracy of the information. Obtaining information from people from a larger population could have increased the accuracy. Gathering statistical information would also have helped to alleviate this problem.

Significance of the Study

This study was significant because it generated data that provided insight into soccer parents' motivation for talking on mobile devices while driving and their perspective of the risk of doing so. These data can be used as aids to identify areas that need to be focused on in larger future studies and to implement strategies that deter talking on mobile devices while driving.

The significance of this study was to provide insight about educational needs, as well as the impact that further research would have on helping to eliminate the risks involved in driving while talking on mobile devices. Opening the doors to future research that could help to eliminate these behaviors would make a huge contribution to the Department of Transportation as new laws are established and as people have better understandings on how serious distracted driving is. It would also be helpful to driving schools as they educate students on driving safety. While researchers continue to invest in educational programs that teach drivers about the dangers of driving while distracted, it remains important to determine if the information is making a difference in drivers' behaviors. Such data would be a large contribution to public administration.

Summary

In this chapter, I discussed the risks involved in driver distractions over the course of several years. These risks included injuries and deaths that occurred as a result of

driver distractions. Statistical outcomes were also described in this chapter, including a summary of cases in which people drove distracted. The purpose of the study was to explore the perceptions of soccer parents with regard to talking on mobile devices while driving. Five research questions were discussed in this chapter. The public health approach was used to build the framework for the study. Assumptions, limitations, and delimitations were also discussed. An assumption that could also have limited the ability to obtain accurate data was the expectation that each of the research participants would be honest.

Important terms used throughout the study were defined in this chapter. These include distracted driving, cellular telephones, using/use, hands-held cell phone, hands-free cell phone, mobile electronic device, visual distraction, manual distraction, cognitive distraction, auditory distraction, texting while driving, and conversations with passengers. The significance of this study is to help the Department of Transportation understand why people chose to drive while talking on cell phones.

In the second chapter, I discuss the extant research on distracted drivers. The information in this chapter was gathered from peer-reviewed articles regarding driver distractions. The chapter is broken down into the different types of driver distractions, as well as the people who drive distracted, and various methods used in previous research

Chapter 2: Literature Review

There has been a lot of research on distracted driving; however, there has not been any research on the perceptions of soccer parents that would support whether they are able to drive while talking on cell phones without negative consequences. Although several sports could be studied, soccer is a year-round sport, and many soccer parents have to transport their kids and other teammates between school, soccer practices, and soccer games. It is a sport that can be studied at any time throughout the year. Chapter 1 provided an overview of past research on distracted driving, as well as the importance of focusing on the perspectives of different groups like soccer parents, which is the aim of this study.

In Chapter 2, I review literature from journals, books, search engines, and government reports. Several gaps were found in the literature review. One gap regarded information on the use of cell phones while driving by parents of children who participated in sports. Another research gap was on whether drivers believed that the risks of talking on cell phones while driving affected them.

Researchers have discussed the risks of several types of distractions, including talking on cell phones, texting, and multitasking while driving. This information was used as a basis for narrowing the focus to cell phone use while driving from the perceptions of soccer parents. In thirty eight articles, scholars discussed the dangers of driving while talking on cellular phones; however, few scholars have discussed the perceptions of persons driving distracted with cell phones.

Literature Search Strategy

Information for the review was retrieved from websites, including scholarly journals from the Walden University Library, Google Scholar, government reports, EBSCO, and ProQuest. Searching websites like the Center for Disease Control (http://www.cdc.gov), the local Public Health Departments, and the National Highway Traffic Safety Administration (http://www.nhtsa.dot.gov) helped me to locate statistical information on the local and national populations for distracted driving. These websites served to gather information on the morbidity and mortality rates at the local and national levels. Several keywords and terms were identified to help obtain information on prior research regarding distracted driving. They were as follows: *distracted driving, driving while distracted, cell phones while driving, driving while talking, multi-tasking behind the wheel,* and *distracted driving risks*.

This literature review includes 65 peer-reviewed articles. Several reports were also used. These reports were obtained from AT&T, the CDC, The Nation Survey Report, The Governor's Highway and Safety Administration, The Harvard Center for Research Analysis, The Transportation Research Board, The National Center for Statistics and Analysis, The U.S. Department of National Transportation, The Highway Traffic Safety Board, The Connecticut General Assembly, The Traffic Safety Coalition, The U.S. Department of Labor, The University of Minnesota, and The World Health Organization.

Literature Review Steps

This literature review starts by defining the problem of automobile accidents related to driving while distracted, including the morbidity and mortality of those

involved. This literature review includes those whom these risks applied to, as well as what risks were involved. I then explain what other researchers have already identified about distracted driving. This effort helped me to determine what gaps needed to be addressed. It also helped me to assess whether specific groups had been previously studied. The key factor for this research study was to identify whether soccer parents believed they could be distracted while talking on the phone, and whether they considered it a risk factor. I then identify what risk factors are involved in driver distractions. This includes a breakdown of the types of risks factors as well as of people who chose to take these risks. Research variables and methods are also discussed, as well as prior research regarding these issues.

Literature Pertaining to the Study Variables

Several types of variables are involved in driver distraction. Each of the variables is covered in this section. This section also includes a discussion of prior research that was completed for each of these variables.

Driver Distractions

People have different opinions of driver distraction. Hancock, Mouloua, and Senders (2008) argued that there are two types of driver hazards. Hancock et al. identified the first type as "driver distraction," which occurs when other things caused the driver's attention to be displaced, such as turning around to tend to a crying baby. The second type of hazard was "distracted drivers," which is when drivers allowed inappropriate things to take their focus off of the road like, cell phones. Williamson (2009) discussed that fatigue was known as both an internal driver distraction and the cause of drivers being vulnerable to driving distracted. Each type of distraction is dangerous.

Taking focus from the road is a large cause of accidents. Ledesma, Montes, and Pooa (2010) identified that drivers who failed to pay attention have been a large cause of automobile accidents. Ledesma et al. used an Attention-Related Driving Errors Scale (ARDES) to study the psychological aspects of driving distracted. Neider, McCarley, Crowell, Kaczmarski, and Kramer (2010) agreed that cell phone use was also dangerous to those outside of vehicles. Walkers often are struck by vehicles that are driven by distracted drivers.

Many people have had beliefs that they were able to multitask. Schweizer, Kan, Hung, Tam, Naglie, and Graham (2013) determined that for the brain to be able to cognitively perform secondary tasks, the posterior brain is unable to allow resources that distract from alertness. Sinsky and Beasley (2013) explained that being able to undertake activities such as problem solving and observation could be affected by multitasking.

Education would provide better understandings of how the brain responds to multitasking. Regan, Hallet, and Gordon (2011) felt that there was a difference between *driver inattention* and *driver distraction* and that the differences needed to be researched so that the risks could be better understood. Regan et al. argued that there was a lack of proper understanding of these issues. Nikolaev et al. (2010) noted that the number of people who drove while using hand-held mobile devices was rising, causing a decrease in safety on the roads.

People lose their lives as a result of driving distracted each year. According to Loeb and Clarke (2009), mobile devices have a significant impact on the numbers of lives lost in motor vehicle accidents. Stavrinos, Byington, and Schwebel (2011) agreed that such distractions place drivers safety at risk. Becic et al. (2010) found that driving and talking

on cellular phones at the same time would affect drivers' memories. Drivers would be able to tell fully accurate stories while driving and that the drivers who were not on the phone treated their driving as the priority over talking. Huisingh, Griffin, and McGwin (2013) posited that using mobile devices while driving was one of the most common types of distractions. Weller, Shackleford, Dieckmann, and Slovic (2013) agreed that the more functions mobile devices have, the more the use of these while driving would occur.

Theoretical Framework

Sheridan (2004) developed a theoretical framework that used a "control theory" to develop a description of driver distraction. He based it on different qualitative disturbances to different control functions associated with driving (i.e., sensing and responding). Sheridan (2004) argued that this framework created a foundation for interpreting experimental and epidemiological investigations involving driver distraction.

Sheridan (2004) argued that driving distracted was dangerous. He made the decision to study this phenomenon to determine why drivers make the choice to drive distracted. Although he used the "control theory" to determine why drivers chose to drive distracted, he did not use it to determine what the perceptions were of the individuals being studied.

Distractions Involving Cell Phones while Driving

Hands-held cell phones while driving. A great deal of research has addressed using hands-held phones while driving. Braitman and McCartt (2010) found that the rates of cell phone use were higher in males (49%) and those ages 30–59. This finding was based on telephone surveys completed by 1,219 drivers spread out across 48 states, including Washington, DC. Nikolaeva et al. (2010) argued that not enough evidence had

been obtained to determine that hand-held cell phone use while driving increased the risk of automobile accidents and that prior research had been based on surveys and not actual historical data.

Dula, Martin, Fox, and Leonard (2011) believed that the more emotional a person was when talking on the phone, the more risky his or her driving behaviors were. Their findings were that people drove faster and more dangerously when they were involved in emotional telephone conversations while driving.

Roney, Violano, Klaus, Lofthouse, and Dziura (2013) found that many adults used hand-held mobile devices even with children in their vehicles. They found this behavior to be an un-recognized crisis affecting public health and that parents need to be better educated. Neider, McCarley, Crowell, Kaczmarski, and Kramer (2010) argued for more research on the dangers of driver distractions highlighting other ways of being able to complete daily tasks safely.

Hands-held versus hands-free cell phones while driving. Backer-Grondahl and Sagberg (2009) argued that hands-free cell phones were just as likely to cause driving impairments as hands-held cellular phones; 4,307 people were studied. Each of these people had been involved in motor vehicle accidents caused by people who had used both wired and wireless mobile devices. When the data were compared, the risk estimates were the same. Ishigami and Klein (2009) agreed that hands-free phones were just as dangerous as hands-held phones. Metz, Landau, and Just (2014) argued that using hand-held mobile devices was more critical.

White et al. (2010) administered a cross-sectional survey that studied how many people would admit to making and answering calls, as well as sending and receiving text messages while driving; 63.9% of those studied owned wired mobile devices.

Bellinger, Budde, Machida, Richardson, and Berg (2009) studied response times when using cell phones compared to response times when using radios. The results determined that the response time was decreased when the drivers used cell phones. The findings were also that using radios had no effect on the response times of drivers. Also verified was that drivers tried to compensate for the slowed response time when they used cell phones by pressing on the brake pedals more rapidly. Klauer, Guo, Simons-Morton, Ouimet, Lee, and Dingus (2013) determined that anything that caused drivers to turn their eyes away from the street while driving placed them at a higher risk for crashes.

Ferdinand and Menachemi (2014) studied the effects of secondary tasks, such as using mobile devices, on the safety of the driving. Sinsky and Beasley (2013) believed that attempting to multi-task could cause difficulties in being able to properly communicate and observe.

Braitman and McCartt (2010) found that drivers who lived in states where hands-held cell phones were banned were 44% less likely to use cell phones while driving. It was determined that people were less encouraged to use cell phones when they had laws banning it. These states also had the highest number of people who used hands-free devices (22%).

Stavrinos, Byintgon, and Schwebel (2011) argued that cell phone use increased risks of accidents inside as well as outside of vehicles. Their study showed that the number of accidents that affected pedestrians was also on the rise. The study concluded

that there was a lack of research that studied the effects on pedestrians and that educational campaigns were needed in order to decrease these distractions from occurring.

Ishigami and Klein (2009) did not believe the risks would be lowered when driving while using hands-held phones compared to driving using hands-free phones. The argument was that research did not support decisions to continue to allow people to use hands-free cellular phones when they drive. The contention of Ishigami and Klein (2009) was that drivers took more risks when they used hands-free phones because they took more things for granted compared to those who used hand-held phones.

Texting while driving. The U.S. Department of Transportation (2009) estimated that drivers who texted took their eyes off of the road for approximately 4.6 seconds. This amount of time was compared to driving 371 feet (the length of a football field) at 55 mph without looking up at the road.

Wilson and Stimpson (2010) believed that the increases in text messaging caused an increase in the numbers of accidents. Wilson and Stimpson (2010) argued that law enforcement and legislation needed to be put in place to cut down on the numbers of people who texted while driving. For their part, Owens, McLaughlin, and Sudweeks (2010) believed that text messaging while driving had a huge affect visually on drivers. These researchers also agreed that there was an effect on the mental demands on the drivers, which increased risks of accidents. Backer-Grondahl and Sagberg (2009) agreed that driving while distracted affected drivers cognitively and that the cognitive effects were stronger than the physical demands.

Atchley, Atwood, and Boulton (2011) found that people were more likely to send and respond to text messages when they perceived that the conditions on the roads were safer. These researchers also argued that people's perceptions of risks were weak in being able to predict what their actual behaviors would be.

Owens et al. (2010) used an in-vehicle OEM system to support text messages through the use of Bluetooth to study the performance of drivers while they sent text messages on cellular phones. The findings were that the mental demands were higher, and the texts messages required their focus to be taken away from the road for longer periods.

Drews, Yazdani, Godfrey, Cooper, and Strayer (2009) used simulators to study drivers being distracted by cell phones. They concluded that when simulators were used the drivers were more distracted when they sent text messages compared to talking on their cell phones.

Chaudhary, Cosgrove, and Tison (2011) found that two out of every 10 drivers they studied (18%) admitted to sending text messages while driving. The study also found that the highest number of people who reported cell phone use had incomes greater than $100,000 per year.

Atchley et al. (2011) found that of 348 younger drivers, only 2% claimed that they never texted while driving. The majority of those studies admitted to sending and reading text messages while driving. The drivers that were studied had a higher belief that if they initiated the text messages, they were less at risk of accidents than they would have been had they responded to text messages.

Falk (2010) found that if people were questioned about their risky driving behaviors, they would think twice before engaging in these behaviors in the future. He felt that these conversations would decrease the numbers of drivers who drove distracted.

Visual and auditory effects on driving. Chand, Fisher, Knodler, Pollatsek, and Pradhan (2010) posited that novice drivers would be more likely to take their eyes off of the road for longer periods of time. Mohebbi (2009) used simulators, which helped to determine that people were quicker to respond when they received tactile warnings compared to auditory warnings. Indicator lights at the ends of the vehicles were an example. People were less likely to back into things when tactile warnings were issued. Brooks et al. (2010) were not able to carry out simulator tests in their study due to some of the research participants developing motion sickness.

Cooper, Vladisavljevic, Medeiros-Ward, Martin, and Stayer (2009) argued that researchers did not normally allow research participants to change lanes when their driving behaviors were studied. The conclusion was that the risk of accidents was greater than initially expected when drivers were allowed to change lanes.

Collet and Guillot (2010) believed that the time it took drivers to process what was going on behind the wheel while talking on cell phones was important. The beliefs were that what was going on behind the wheel had an effect on response to actions like changing lanes, responding to things in front of the vehicle, and how fast they drove. The argument was that the way drivers compensated for the extra tasks they were trying to accomplish was important.

Conversations with passengers. Stavrinos et al. (2013) found that people who talked on mobile devices while driving took longer to switch lanes. Stavrinos et al. (2013)

also believed that this population drove slower, negatively affecting the flow of traffic. Wang, Chen, and Lin (2014) found that if these distractions were identified and monitored, they could be used to warn drivers to focus more on the roads in order to decrease the risks of motor vehicle accidents.

Becic et al. (2010) said that when comprehension and language was studied in drivers while they held conversations with passengers in the car, they maintained a higher focus on the roads. This caused their linguistic ability to be hindered. Hoff et al. (2013) argued that public education should cover all types of distracted driving. They believed that each type was as dangerous as the other.

Literature on Variables

Collet, Guillot, and Petit (2010) determined that the conditions surrounding being distracted by cell phones determined the risks. Several variables were studied, including: legislation, whether the mobile devices were wired or wireless, age, gender, amount experience with driving, type of conversations, and type of roads being driven on. The findings were that the way that these variables interacted determined how dangerous they would be. Bellinger et al. (2009) agreed and found that as many as half of all motor vehicle crashes were caused by driver distractions.

Collet and Guillot (2010) believed that the age of the drivers, whether they were male or female, and whether they were using wired or wireless phones determined the risk of being involved in automobile accidents while driving. Chapon, Clarion, Colleta, and Petit (2009) argued that heart rates, the time it took for drivers to react, and electrodermal activities determined the risks. An example of activities would be the

severity of sweating caused by distracted driving arousals. These researchers believed that these variables were the same when they were tested in people who drove distracted.

Kass et al. (2010) surveyed 36 drivers to compare people's personal reports of why they drove distracted to the risks involved. A high number of people surveyed said that they were bored while driving, which increased their chances of driving while distracted. Cognitive failures and attention deficit were listed as other causes of driving distracted. The findings were that these individuals changed lanes more while driving, had slower reaction times, and drove faster.

Psychological Factors

Shahar (2009) believed that worry and anxiety had an effect on the driving behaviors of drivers. The argument was that these behaviors caused an increase of each of the variables, which increased the risks involved in driving distracted. Ledesma et al. (2010) created the Attention-Related Driving Errors Scale (ARDES) to show a comparison of driving errors that were the result of driving without paying full attention because of distractions. Ledesma et al. (2010) also studied psychological variables that could have caused drivers to drive distracted.

Dula et al. (2011) believed that a person's emotions when they decided to use cell phones while driving put them at a greater risk for driving dangerously. The research participants were divided into different groups. One group received calls that were argumentative, and the other group received calls that were emotional. The findings were that the people who were in the emotional call group practiced more dangerous driving behaviors. Although arguments are emotional, the researchers wanted to determine whether a range of other emotions combined would be more distracting than just the one

emotion. Young and Salmon (2011) argued that the number of errors and a driver's ability to recover from these errors determined the outcomes of the distractions.

Collet, Guillot, and Petit (2010) studied the effects of secondary tasks on driving performance. They determined that these tasks—when added to driving—changed the arousal of drivers, causing them to have a slowed focus on the road, thus placing them at a greater risk of accidents. Overton, Rives, Hecht, Shafi, and Gandhi (2013) asserted that drivers chose to use their mobile devices while driving because they underestimated the risks. They observed that people were aware of the dangers of these behaviors but did not believe they applied to them.

Kass et al. (2010) studied the effects of distractibility by mental distractions, such as being bored and cognitive disorders. They also studied participants who were diagnosed with attention deficit disorder. The aim was to find out whether these distractions put people at a greater risk of driving distracted. They determined that each of these things increased risky driving behaviors. Shahar (2009) took it a step further by studying the effects of anxiety on males making the choice to drive distracted. The results were that increased anxiety levels caused drivers to make risker choices while driving.

Collet, Guillot, and Petit (2010) argued that independent variables like how old the drivers were, weather conditions, conditions on the roadways, how much experience each driver had, and the laws were the most important factors in the risks involved in driving distracted.

Who Drives Distracted

Philbrook and Frank-Wilson (2009) studied motor vehicle accidents that took place in Minnesota during the year 2007. They found that 48 children who were between

15 and 19 years of age were killed in motor vehicle accidents. They also found that only 42.8% of the children who were killed had been wearing seat belts. Philbrook and Frank-Wilson (2009) also determined that another 4,780 had been injured in accidents. They believed that campaigns that used strong and emotional messages, and enforcing laws would help to eliminate these behaviors.

Lee (2007) found that young people were most at risk of driving distracted. He felt that these people were usually the first to use technology like cell phones, MP3 players, and other electronic devices; however, they were not yet mentally equipped to handle the dual tasks of using these devices while driving. Lee (2007) argued that industries needed to work together to help to decrease these risks. Philbrook and Frank-Wilson (2009) wrote that teenaged drivers needed to be exposed to things like the Drive Smart Challenge, which allowed them to learn from organizations like Mothers Against Drunk Driving, in order to gain a better understanding of why they needed to decrease any risky driving behaviors.

Al-Sammak, Rios, and Riquelme (2010) found that 80% of driver's aged 18–34 used cell phones while driving. Boyle and Westlake (2012) argued that not all young drivers engaged in distracted driving behaviors. They felt that interventions for distracted driving must be planned according to need.

Falk's (2010) study considered the opinions of males between 18 and 20 years of age. They were trying to determine whether the opinions of these individuals would change after completing questionnaires about risky driving behaviors. Falk (2010) selected males for the study because of the public's belief that this group was more at risk of practicing risky driving behaviors. Falk (2010) found that those studied were

concerned about inflicting injuries on others, as well as causing motor vehicle accidents. Falk (2010) did not express concern about the possible injuries that could occur.

Education About Distracted Driving

Hoff et al. (2013) posited that education is key to the prevention of injuries caused by driver distractions. They stated that the primary focus for education should be on ages 18 to 34. Weller et al. (2013) argued that to develop better interventions to eliminate distracted driving, a better understanding of what influences people to make these decisions is vital.

Young and Salmon (2012) argued that the numbers of errors drivers made while distracted needed to be studied. Young and Salmon (2012) also felt that how well these drivers recovered from the errors was important as was determining ways to eliminate these distractions. Young and Salmon (2012) also asserted the importance of studying how driving distracted and using mobile devices while driving distracted affected by one another. They felt that studying the ways in which distractions effect drivers and whether the drivers are able to regain focus on the road in order to recover from these distractions were important in determining how to decrease the risks.

White et al. (2010) found that several people who had wireless mobile device kits did not use them. These researchers stated that better education was needed that would determine the perceptions of people who drove distracted in order to decrease the behaviors. Philbrook and Frank-Wilson (2009) also suggested that providing messages in schools about driving safely would be valuable.

AT&T (2013) created a mobile app that would decrease the risk of texting while driving. When using this app, automatic text messages go out notifying anyone who has

attempted to text the driver that the driver is unable to respond. This was also created to help drivers to remember not to text while they drive. Coben and Zhu (2013) agreed that hand-held mobile devices should be programmed so they will not work when a vehicle is in operation.

Laws

Cohen and Zhu (2013) believed that methods to detect anyone using mobile devices while driving needed to be put in place in order for law enforcement officials to apprehend anyone who violates legislation. They argued that, by itself, education would not be effective. Hoff et al. (2013) agreed that the current processes were not decreasing the rates of mortality and morbidity.

Ibrahim et al. (2011) explained that states across the country have been creating laws that prohibit the use of mobile devices while driving. These researchers believed that public health departments needed to get involved in getting people to follow these laws.

Cohen and Zhu (2013) did not believe that laws that ban mobile devices while driving would be enough. Sperber et al. (2010) agreed that making laws that would ban the use of mobile devices while driving would be assuming that drivers would think rationally and comply with the laws. Ranney (2008) believed that laws that enforced driver distraction would not make a difference, arguing that people made choices to drive using these behaviors because of societal norms and lifestyle choices, which would not change based on laws or sanctions.

Shabeer and Wahidabanu (2012) explained that installing antennas over driver's seats that would notify police when mobile devices are being used would help to decrease

distracted driving. Owens et al. (2011) believed that using in-vehicle systems when driving would decrease the risk of accidents; however, they did not think they would cut the risk down enough because talking still required more demand mentally while driving, distracting drivers from their main focus.

Braitman and McCartt (2010) found that enforcing laws that ban the use of talking on cell phones while driving have helped decrease the numbers of drivers who practice this behavior. McCartt et al. (2011) argued that more research was needed in order to determine whether laws that banned cell phone use would help to decrease the number of drivers who used them while driving. Orlowske and Luyben (2009) studied whether the rates of cell phone usage while driving would be higher in areas farther away from police stations. The assumption was that this would be the case but results showed that they were almost the same.

Al-Sammak et al. (2010) argued that social marketing would have difficulty changing these behaviors because driver distractions have become an acceptable behavior among many individuals. Sperber et al. (2010) believed that banning the use of mobile devices while driving would decrease the amount of funds being used for motor vehicle accidents, as well as healthcare bills associated with these accidents. The researchers also agreed that it would be difficult to get accurate numbers for the costs of banning these devices in areas without a lot of available information. Atchley and Nelson (2009) postulated that if people perceived their calls as being important, they believed it was acceptable to answer the call while driving. The argued that such perceptions would make it more difficult for legislators to enforce laws.

Perceptions about Driver Distraction

Backer-Grondahl and Sagberg (2009) found that drivers who were involved in accidents while using hand-held mobile devices perceived the accidents as being caused by the mobile device use. The research determined that drivers who were in accidents while using hands-free mobile devices placed the blame of the accidents on other causes. This research is different because it is being used to study the perceptions of people who have read the literature on distracted driving as opposed to people who have been in accidents caused by driver distraction.

Conceptual Framework

Benavides, Segura, and Ruiz-Corte (2010) defined conceptual framework as a way to provide an understanding of various terms used in the literature, thus helping readers gain a better vision of what it is that is being studied.

Ryan and Deci (2000) have used self-determination theory to study human motivations, concluding that pressure from external sources has a considerable impact on what motivates people's internal behaviors.

Key definitions in the framework include *motivation, intrinsic motivation,* and *self-regulation of extrinsic motivation*. Ryan and Deci (2000) defined motivation as involving energy, what direction people choose to go toward, and how persistent they are. They described intrinsic motivation as the way people choose to learn, look for challenges, and act within their own capacity. The authors described self-regulation of extrinsic motivation as the way that people develop their motivations, as well as how they decide to act out these motivations.

The self-determination theory has been used in prior research by helping researchers ascertain both what motivates people to choose to use specific behaviors and

why they act on these motivations. This theory has also been used to build the framework for this study. The benefit of using the self-determination theory for this research is that it will gather the perspectives of what motivates drivers to drive distracted.

Literature of Research Methods

Direct Observational Surveys

Vivoda et al. (2008) used "direct observational surveys" to determine the rates at which people used hand-held phones while they drove at night. The argument was that along with the high numbers of young drivers using risky driving behaviors, hand-held phones increased the risks of automobile accidents.

Risk Perception Model for This Study

Titchenera and Wong (2010) used the Risk Perception Model to study the ways people perceived driving while distracted. They felt that it was important to determine what factors caused them to engage in distracted driving behaviors.

The Risk Perception Model was appropriate for this study in order to identify people's perceptions of the risks of talking on cell phones while they drive. Questionnaires completed through e-mail were answered by each of the research participants and would be based on subjective information. The information gathered from this study would aid in the development of much-needed future studies on distracted driving.

Gaps in the Literature

As shown in this literature review, several studies have been conducted that have concluded that younger drivers are at the highest risk of driving while distracted by cell phones. There has also been a lot of research on the different types of driver distractions,

as well as behavioral and cognitive factors. There is a gap in the literature on particular groups that engage in multi-tasking behaviors while driving. A large gap is on parents of children who participate in sports. One could assume that this group is at a higher risk of talking on cell phones while driving, but there is no literature to prove whether this theory is accurate. The researcher made this assumption because soccer parents often have busy schedules that require them to handle several tasks at the same time—such as traveling to games and practices and carpooling with other parents while also working full-time jobs and taking care of their homes and families. Horrey et al. (2009) argued that several studies have focused on distracted driving but that they believed these studies had not researched the awareness of the drivers who use these distractions.

Titchenera and Wonga (2010) maintained that there was a huge gap in the literature about people's perceptions of driver distraction. They argue that the focus of extant research has been on the actual driver distraction activities, not on people's beliefs about this topic. Titchenera and Wong (2010) felt that studying this issue would help prevent people from using these behaviors. Weller et al. (2012) argued that research involving people's perceptions of their cell phones is urgent. They based this assertion on prior research showing that people develop bonds with different objects.

This chapter provided an overview on the types of driver distraction and the risks involved. There has not been enough research on the perceptions of what motivates people to drive distracted or research specifically focusing on the driving of sport team parents.

The literature in this review showed a definite correlation between driving while talking on mobile devices and automobile accidents. It provided a comprehensive

overview of prior studies, and evinced any gaps in previous literature. What it did not provide was a lot of information on people's perceptions about motivations as they related to driver distraction. It also did not provide evidence that soccer parents were more at risk for driving while distracted compared to other people. This literature review established the framework for the rest of this study. The aim of this study was to begin to open the doors to new and improved research regarding distracted driving. Obtaining survey questionnaires from the research participants using the risk assessment model was very helpful in completing this research study. This would be of great benefit to the development of future research studies regarding distracted driving.

Conclusion

The literature review identified several gaps in prior research about driver distractions. This study can be used as an aid in developing future research that will help decrease and perhaps even eliminate the numbers of drivers who choose to use these distractions. The results will also be helpful in supporting further studies that focus on specific groups, like the soccer parents that will be used for this study. The next chapter breaks down the methods used to determine the perceptions of soccer parents who might be at risk for driving distracted. It articulates the research design, approach to methods, and statistical information.

Chapter 3: Methods

The purpose of this qualitative study was to explore the perceptions of soccer parents with regard to talking on mobile devices while driving. In particular, I focused on soccer parents' perspectives with regard to their motivation for talking on mobile devices while driving and the risks of talking on mobile devices while driving. The study was conducted using a phenomenology approach in order to evaluate perspectives of actual soccer parents.

There were several characteristics for participation criteria for the individuals selected for participation in this study; these included being parents or guardians of soccer players, age, whether the mobile devices they used were hands held or hands free, multitasking, reaction times, and busyness of schedules. Information was collected from participants in the form of online questionnaires, which were e-mailed to them. In this chapter, I discussthe questions, the research design, the population used for the study, the sampling strategy, collection of data, and analysis for this research study. I also discuss data and risks of automobile accidents related to people who use mobile devices while driving, as well as research that has been completed on people who were more prone to multitasking. Research that would address the motivations that place people at risk of accidents by specific groups needed to be carried out. This research was helpful in determining if specific groups are more at risk of engaging in these behaviors.

This topic was selected in order to determine the need for more research in regards to the risks of automobile accidents for soccer parents. Members of this group was chosen because they often have busy schedules that require them to do several things at one time; these include working, taking care of family and home, and transporting

often several kids to and from practices. I assumed was that this lifestyle would place them at a greater risk of talking on their mobile devices while driving in order to help them with these tasks. This research study helped to identify these motivations.

Research Questions

Overarching research question: What are the perceptions of soccer parents with regard to talking on mobile devices while driving?

Research Question 1: What are soccer parents' understandings of the dangers of talking on mobile devices while driving?

Research Question 2: What are soccer parents' actions when they receive calls on their mobile devices while driving?

A description of all of the information gathered is provided in order to show the overall perceptions of what motivates drivers to talk on mobile devices while driving. The goal of this research was to collect data for future researchers to decrease and, eventually, help people to stop using these dangerous behaviors. Obtaining this information will help researchers and lawmakers better understand the beliefs behind this behavior.

Research Methodologies

There are several types of research methodologies. Research may be conducted using quantitative, qualitative, or mixed-methods. The next few paragraphs offer more information on each of the research methods.

Quantitative Research Methodology

Creswell (2012) has defined quantitative research as

Research that tests objective theories by completing an examination on the

> relationships between variables. Statistical procedures are analyzed using various research instruments in order to measure these variables. Assumptions are made prior to testing these theories that also allow for alternate explanations. (p. 19)

Mixed-Methods Research Methodology

Palinkas Aarons, Horwitz, Chamberlain, Hurlburt, and Landsverk (2010) described mixed methods research as "Research that uses qualitative methods to measure interventions and qualitative methods to provide information on experiences. They believed that using the two together would help to implement the outcomes" (p. 48). Palinkas et al. (2010) posited that mixed methods provide the best results.

Qualitative Research Methodology

> Maxwell (2010) defined qualitative research as
>
> Research that is intended to help you better understand the meanings and the perspectives of the people you study, seeing the world from their point of view rather than simply from your own. 2. How these perspectives are shaped by, and shape their personal, social, and cultural contexts. 3. The specific processes that are involved in maintaining or altering these phenomena and relationships. Maxwell believed that these qualitative aspects contrast with quantitative research. (p. viii)

The qualitative research methodology was appropriate for this research study. According to Maxwell (2010), this type of research helps to develop better understandings of research based on people's perceptions. In this study, I used the perceptions of soccer parents to gain insight about what areas need to be focused on in future research about distracted driving. Moreover, qualitative research was appropriate

because I gathered information based on the lived experiences of soccer parents who have talked on cell phones while driving. Qualitative research allowed me to ascertain any important factors about driving while talking on cell phones as these acts relate to parents of children who participate in sports. It also helped me to identify areas that need to be studied in future research about distracted driving. Quantitative and mixed-methodologies would each be appropriate for future research as it relates to soccer parents driving while talking on cell phones.

Research Designs

Several different designs fall under each research approach. Quantitative designs include experimental and nonexperimental. McKenzie, Gibson, and Stillman (2010) argued that experimental designs help determine whether specific things will cause what outcome any experiment might have. An example would be testing a medication by having one group take the medication and another group use a placebo. Such assessment would help to identify whether each group will have the same results. Surveys are examples of nonexperimental designs.

Researchers use several designs when conducting studies. According to Ostlund, Kidd, Wengstro, and Row-Dewar (2011), using mixed methods helps researchers strengthen qualitative and quantitative research methods. Ostlund et al. described mixed-method research designs, which include explanatory sequential, exploratory sequential, convergent, and transformative, embedded, or multi-phase. The explanatory design uses results from quantitative studies to explain information obtained in qualitative studies. According to Ostlund et al., qualitative results are used to formulate qualitative research studies. Ostlund et al. identified convergent designs as a mixture of qualitative and

quantitative research that is used jointly to analyze what is being studied. Transformative design is used to determine whether to use qualitative or quantitative research based on theories.

Several approaches are used for research. According to Bloomberg and Volpe (2012), qualitative research designs include phenomenology, case studies, ethnography, narrative, and grounded theory approaches. The phenomenology design includes the lived experiences from research participants about the problem being studied. Case studies are obtained over a certain timeframe from at least one person. They are used to study different activities and processes of these individuals. In the ethnography design, the researcher uses behavior patterns that are similar between and among individuals over a certain period of time. The narrative approach is used to study actual things that people have experienced. The grounded theory approach uses an abstract theory that is grounded from those who are being studied.

Phenomenology Research

Understanding the reasons that people make decisions would be helpful in identifying ways to decrease the risks of distracted driving. According to Tuohy et al. (2013), phenomenology research was first theorized by the philosopher Husserl in order to describe phenomena as they appear to whomever is being studied, based on their own experiences. Tuohy et al. divided phenomenology research into *descriptive* and *interpretative research*. Tuohy et al. defined descriptive as an explanation of other factors like religious and cultural beliefs that influence how a person interprets his or her actual experiences. Interpretative was broken down as a way of understanding the way others interpret their experiences.

The phenomenology approach was used to conduct this research. This methodology was selected because it helped to identify similarities among the perspectives of soccer parents regarding talking on cell phones while driving. This methodology helped me to identify areas that need to be focused on in future research regarding distracted driving.

I did not select case studies or ethnography approaches because they are used to study people, programs, and/or behaviors over time, which was not be appropriate for this study. The narrative approach is used to study stories about people's lives, whereas grounded theory is used to study abstract theories about research participants, which would also not be appropriate. According to Cooney (2012), phenomenology research can be conducted by using several different approaches. The descriptive approach was used for this research study, which allowed the research participants to complete the questionnaires based on their own beliefs about being distracted. I stopped reviewing here due to time constraints. Please go through the rest of your chapter and look for the patterns I pointed out to you. I will now look at Chapter 4.

The Researcher's Role

My role as the researcher in this study was to identify an important issue that needed to be addressed in order to promote future research that can improve or even eliminate the issue. The issue addressed in this research study was the risk of driving while talking on mobile devices. I conducted this project by formulating appropriate research questions, research methods, and a plan to carry out the research, without allowing any research biases.

Research Plan

This qualitative research study was developed in order to explore the motivations for talking on cell phones from the perspectives of parents of children who play soccer. Maxwell (2010) broke down the design of research into the following: goals, research questions, conceptual framework, methods, and validity—each of which was an important factor in developing this research. The next sections describe the methods and procedures that were used for the collection and analysis of data.

Research Methods

Qualitative research was appropriate for this study because it focused on information gathered from the perspectives of people with experience talking on mobile devices. The research design included using qualitative methods to answer the research questions. The methodology involved obtaining the perspectives of soccer parents' motivations for driving while talking on mobile devices. The perspectives were important because they allowed the researcher to better determine important factors about driving while talking on mobile devices as they related to parents of children who play sports.

The data were collected through the use of questionnaires from each of the parents of a local soccer team. These perspectives were important in determining what motivated these parents to talk on mobile devices while driving their kids to and from soccer practices and games in order to handle other important tasks. The data were also used to determine whether they believed this behavior was dangerous. Those who were interested were provided with a date and time for the interviews to take place.

Participation criteria were that participants must have (a) been a soccer child's parent, grandparent, or legal guardian; (b) been from soccer teams in the Suffolk, VA

area; (c) owned a mobile device; (d) a current valid driver's license; (e) several years of experience driving kids to soccer practices; and (f) agreed to participate in the study.

Selection of Research Participants

Parents of school-aged children who played soccer were the population targeted for this study. Grandparents and other legal guardians were also allowed to participate, if needed. They each had at least one child who played soccer, and their child(ren) ranged from preteens to teens. Chances were that, by this age, children had participated in soccer in previous years with their parents having several years of experience in transporting children to and from practices and games. This helped to gather better information regarding what motivated them to talk on mobile devices while driving.

The parents from one soccer team in Suffolk, Virginia, were selected to participate. One soccer team from this area was selected because parents of one team were likely to be more homogenous, as compared to choosing parents from a range of soccer teams. This team's selection was based on the location of the soccer league in which it participated. The selection of one team was appropriate because it allowed the researcher to identify areas that needed to be focused on based on the perspectives of parents from this team. Should any problems with obtaining enough people willing to participate have arisen, a second soccer team from the same league would have been considered for participation.

One advantage of this population was that many of its members had more than one child who participated in sports and was likely to have better perspectives of what motivated them to talk on mobile devices while driving if they indeed practiced this behavior—especially if they believed that they were multitaskers. Another advantage was

that the perspectives of both men and women were obtained, which provided insight on whether there were any differences in their individual perspectives.

Fourteen male and female soccer parents, grandparents, or legal guardians were interviewed in person to determine their willingness to participate. A meeting was set up with the selected team's parents at the soccer field after a soccer practice. They were each provided with a written description of the research study along with an oral and written explanation of the reasons for the study. They were also given sample study questions. Each of the parents had the opportunity to ask questions at that time. They had the opportunity to have one-on-one sessions if they preferred to ask questions in private.

Each person who agreed, and was eligible, to participate and was provided a consent form at that time. Every page was explained to the participants by the researcher. The consent form stated that participation was voluntary and that any information that was provided would remain confidential at all times. It also stated that the researcher would remain nonbiased throughout and at the conclusion of the study. The consent form also explained that each of the participants could change his or her mind and decide to no longer participate at any time. The interviewees had a second opportunity to ask questions. Once each party was in agreement with participation in the study, the consent forms were signed by both the researcher and the research participants. Email addresses were obtained from each of the participants once the consent forms were signed. The soccer parents were provided an identification number at that time and were advised that this would remain their number until the conclusion of the study. The researcher explained that their names and any other personal information would never be given to

anyone by the researcher for this study. Their personal ID numbers would be used if needed for the results of the study.

Sampling Procedures

According to Acharya et al. (2013), taking samples would decrease the amount of funding needed. He also explained that using these samples would decrease the number of people needed and the amount of time the study would take. The two types of sampling methods are probability and nonprobability, and each is broken down into subcategories.

There are several types of probability sampling methods. According to Acharya (2013), these methods include single random sampling, systematic random sampling, stratified random sampling, cluster sampling, multi-phase sampling, and multi-stage sampling. There are also several types of nonprobability sampling methods. Archaya (2013) broke these down into convenience/purposive sampling, quota sampling, and snowball sampling.

According to Acharya (2013), one sampling type is convenience/purposive sampling. In convenience/purposive sampling, individuals were previously selected based on specific data; an example would be a group of people who have Cirrhosis of the liver.

This research study used the nonprobability method convenience/purposive sampling. According to Acharya (2013), this method involves lower costs, and the elements of the population are not needed. Participants were chosen based on preselected criteria such as having at least one child who played soccer on a preselected team. Acharya (2013) also listed disadvantages to using this method. One disadvantage of this sampling method is that researchers are not able to measure bias or variability. Another

disadvantage of this method is that the generalization of results was not possible. This sampling method was appropriate for this research study because the data that were being collected came from the perspectives of the research participants.

Confidentiality, Bias, and Participation

As stated earlier in this chapter, each of the research participants was advised that all of the information that was gathered would remain strictly confidential at all times. The researcher also explained the importance of this information remaining nonbiased and without judgment. They understood that participation was completely voluntary and that they were able to change their minds about participation at any time. Each of the research participants was provided a user number, which was used to identify them. Names and other personal identifying information were not included in the study. Each of the research participants signed an informed consent that was approved by the Institutional Review Board (IRB) and addressed all of the above information prior to participation. The participants also consented to completing the surveys via e-mail. If any of the research participants had chosen not to use e-mail, the survey questionnaires would have been conducted in person at the convenience of the research participants.

Data Collection

Information was collected from soccer parents in the form of online questionnaires, which were e-mailed to them. The questionnaires were analyzed after the research was completed. The researcher analyzed the information to find similarities in the answers in order to determine the overall likelihood of soccer parents talking on mobile devices while driving. The questions were aimed at assessing whether parents and guardians of soccer children were at risk of driving while talking on mobile devices.

They were also used to determine whether they, in fact, believed that they were at risk for motor vehicle accidents when they talked on mobile devices while driving. Each of the questions was based on the perspectives of each research participant.

Instrumentation

Individually self-administered questionnaires were designed by the researcher in order to obtain information on driving while talking on cell phones from a soccer parent's perspective. The questionnaire included 15 multiple-choice questions and 10 open-ended questions. These helped to gather data regarding what the research participants believed were the motivations for talking on mobile devices and whether they believed this behavior placed them at risk for automobile accidents. The options for the multiple-choice questions were 1 (*strongly agree*), 2 (*agree*), 3 (*neither agree nor disagree*), 4 (*disagree*), and 5 (*strongly disagree*). The questions were validated by first conducting a pilot study. (The survey instrument can be found in Appendix A.)

Data Analysis

Several methods can be used in phenomenology research; these include interviews, observations, surveys, documents, and focus groups. Any of these methods could have been used for this research study. This research study started with direct interviews with each of the potential research participants. Once the participants were selected, the actual research was conducted via email.

According to Flood (2010), phenomenology research involves obtaining subjective information from the research participants based on their inner beliefs. This information is also based on their own experiences. Flood (2010) has argued that answers are based on people's perceptions.

Data analysis is one the most important steps for qualitative research. The data for this study was analyzed by grouping the participant statements into specific categories. The researcher developed a list of codes under which each category fell. The researcher then conducted a review and a breakdown of each line of the questionnaires, which helped to determine the appropriate code to list them under. This step also helped to identify patterns in the answers.

Leech and Onwuegbuzie (2011) described several types of analytic tools, as stated below. One analytic tool was constant comparison, described as the use of specific words to separate data that are then listed under these word categories. Another analytic tool was key words in context. Researchers decide the ways that each person will utilize these words. A third type was word count. Researchers determine how many times certain words are used, with the assumption that those used most are the most important to the participants. Another analytic tool is classical content analysis. In classical content analysis, codes are counted to determine how many times each one was used by the participants. Domains are uncovered with semantic relationships. Taxonomic analysis can be used as another step after domain analysis. With componential analysis, researchers can identify any relationships that might exist between words.

The analytic tools used for this research study were constant comparisons and word counts. These tools improved the likelihood of developing appropriate codes for the study and assisted with gaining a better understanding of the phenomenon. The codes were not be predefined; instead, they were generated from the data that were gathered. The codes were used to establish themes. One example of an appropriate code that could have been used for the belief that busy schedules make talking on cell phones while

driving necessary would be multi-tasking. Using a computer-based software program such as NVIVO aided the research in developing themes.

According to Edwards-Jones (2014), the main function of NVIVO is coding. He also stated that NVIVO helps to plan, store, manage, analyze, and present data for the research. NVIVO was used in this study to conduct each of these things. This software organized all of the gathered data.

Once the questionnaires were reviewed, themes were established, and codes were created; the final step was to create a table that listed each of the themes, as well as any subthemes. Visual aids such as graphs and tables were used to represent the data. These helped to summarize the information and to describe the results.

Credibility, Variability, Dependability, Reliability, and Trust

To establish credibility in this research, some of the multiple-choice questions were the same as the open-ended questions, although they were worded differently. Gathering the same information from different questions helped to ensure that the information was more credible and reliable. Obtaining questionnaires from several soccer parents, instead of only receiving this information from one person, helped to establish variability. Another important step was for the researcher to keep accurate notes of each portion of the research being conducted and received.

Dependability and trust are valuable factors in research. Gaining trust by explaining each phase of the study and maintaining confidentiality at all times helped this researcher with these factors. Remaining nonbiased throughout the study was also important. Maintaining in-depth notes, continuously checking all data for accuracy, and protecting records at all times was vital for data analysis.

The information being gathered from the research participants was based on their perceptions of talking on cell phones while driving. They completed questionnaires that were e-mailed to them. Once the questionnaires were completed, each participant had the opportunity to review his or her questionnaires for any possible errors. This step helped to ensure the reliability of the information they provided.

To establish credibility and trust in this research, each of the research participants answered 25 questions. Ten of the questions were open-ended questions, and the other 15 were multiple choice. Some of the multiple-choice questions were the same as the open-ended questions, although they were worded differently. Gathering the same information from different questions increased the credibility of the information. This research helped to identify areas that warrant more focus in future research. It will build upon future quantitative research that will study larger groups of people, which will in turn allow for better reliability and credibility.

Conclusion

This chapter provided a breakdown of the qualitative method used for this study. Qualitative research was an appropriate method for this study because it focused on information gathered from the perspectives of people with experience talking on cell phones. There was also a breakdown of the reasons that other methods were not used. The research questions were further discussed in this chapter.

The role of the researcher was to identify an important issue that needed to be addressed in order to encourage future research that can improve or even eliminate the issue. The selected research design was the phenomenology approach. This methodology helped the researcher to identify similarities in the perspectives of soccer parents

regarding talking on cell phones while driving. Parents of school-aged children who play soccer were the population targeted for this study. The next chapter presents the results for the study, including descriptions of the answers obtained from the questionnaires and identifying any specific patterns.

Chapter 4: Presentation and Analysis of Data

Introduction

The objectives of this chapter are to prepare, organize, and describe the data that were collected. A pilot study was conducted to test the reliability of the questions. The development and validation of the data are also shown in this chapter, as well as an interpretation of the research findings. Data were collected using questionnaires in order to study the risks of driving while talking on mobile devices from a soccer parent's perspective. Questions also addressed the need for new legislation about distracted driving.

The results of the study are presented in this chapter to show the risks of driving distracted from the perceptions of soccer parents. The study was conducted using the qualitative research approach. The study took place in Suffolk, Virginia, which was the location of the soccer parents. The population for the study included parents or guardians of children from a local soccer team. Each participant was required to be a current driver with a valid Virginia driver's license. The average age of the participants was 33 to 55. The research participants completed questionnaires.

Distracted driving continues to cause problems despite people being injured and killed as a result of these actions. This study was used to gather the perspectives of people who are at risk of driving distracted. Prior researchers have studied distracted driving; however, no scholars have considered the risks based on the perceptions of soccer parents. The goal was to provide information to future researchers to open the doors to future research regarding this topic as more laws are being developed.

The research questions addressed the following:

Overarching research question: What are the perceptions of soccer parents with regard to talking on mobile devices while driving?

Research Question 1: What are soccer parents' understandings of the dangers of talking on mobile devices while driving?

Research Question 2: What are soccer parents' actions when they make and receive calls on their mobile devices while driving?

A nonprobability convenience/purposive sampling method was used to conduct the research for this study. This method was appropriate because the participants were invited to take part based on preselected criteria, such as having at least one child who played soccer on the preselected team. Lower costs are involved with this method. A 25-question questionnaire was developed for this research study (see Appendix A). The survey included both multiple choice and open-ended questions.

This chapter is broken down into several sections. These include the introduction, the pilot study, the setting, demographics, data collection, data analysis, and research questions. It is then further broken down into the results from the research findings, evidence of trustworthiness, and the summary of the chapter.

Pilot Study

Completion of a pilot study helped to validate the questions included in the questionnaire. The qualifications for participation in the pilot study were the same as they were for the main study. These people were not part of the actual research study. Requirements for participation included having a valid Virginia driver's license and at least one child that he or she transported to sports events. I explained to each person that

there were no risks for agreeing to complete the questionnaires. Several random soccer parents were selected to test the questionnaire until saturation was reached.

The pilot study started by testing each of the questions. Each of the research participants was first asked to read the questions to ensure that they were easy to understand, in the proper format, and would appropriately answer the research questions. Opinions helped to determine whether the questions effectively helped to capture the topic. Each person then completed the questionnaires. This process and the data gathered from the pilot study helped to validate the questions. No personal information was obtained from those completing the questionnaires. This precaution helped to ensure confidentiality. Data gathering or the pilot study continued until saturation was obtained. Saturation was met when the data started to become repetitive. No new data at that point would provide further information about the study.

The themes from the data gathered from the answers to the questions confirmed that this would help with the validity of the research evidence. Responses from those who completed the questionnaires were that the questions were appropriate and easy to follow. Another opinion was that the number of questions and the format for the questions were suitable for a research study. I was able to determine, based on the answers, that the questionnaires would address each of the research questions. No changes were made to the survey at the conclusion of the pilot study.

Setting

The setting for recruitment took place at a soccer field in Suffolk, Virginia. The soccer field was open to the public for various practices and games. I spoke with the

parents following a soccer practice to determine their interest in participation. The area and soccer field were selected because it is a public field with year-round soccer games.

Demographics

Each of the research participants was a parent of at least one child who participated on a local soccer team in Suffolk, Virginia. Each was required to be a current driver with a valid driver's licenses in the State of Virginia. A total of 14 parents participated in the research study: nine females and five males. Their ages ranged from 33-51. Table 1 provides the ages for each of the research participants.

Each of the research participants understood that all information they provided would remain confidential at all times. The consent forms also included this information and were signed prior to beginning the research. I explained that the questionnaires were being sent and returned via e-mail. I explained that only I would have access to all information provided. Identification codes were provided to protect the identity of the participants. These numerical codes ranged from 141 through 154. They were created by me and were assigned in order as people agreed to participate in the study. I also explained that the main spreadsheet with names associated with each code would be kept on a password-protected computer, which allowed easy access to important information in case anyone decided he or she wished to discontinue participation.

I explained to each research participant that participation was strictly voluntary and that he or she could decide to discontinue participation at any time. Participants were advised that this information needed to be provided via e-mail. I also explained that the participants would not be breaking any laws by participating in the study. There are no current laws in the state of Virginia that prohibit talking on mobile devices while driving.

All of the information was being gathered for data purposes only and not to single out anyone based on how he or she answered the questions.

Table 1

Research Participants' Ages

Identification Code	Age
141	35
142	33
143	35
144	38
145	44
146	55
147	38
148	37
149	38
150	45
151	51
152	43
153	43
154	43

Data Collection

Recruitment and data collection took place after approval from Walden University's Institutional Review Board (IRB) was obtained. The approval number granted by the IRB was 03-04-15-0154873. All of the ethical procedures as required by Walden University were followed throughout the study. Consent forms were signed prior to the start of data collection. The recruitment, consent process, and data collection are explained further below. Recruitment for the research study took place in March 2015 following a soccer practice. The researcher spoke individually with the parents of the children who were playing soccer to explain the study and to determine whether they would be interested in participation. The researcher then attended a second soccer

practice at the same location later in the same week to review the consent forms with each of the interested participants. One week was allowed to review the consent forms. Consent forms included the researcher's personal cellular phone number in case participants had any questions during this time. A third date was agreed upon for the researcher to return to collect the consent forms. One set of parents was not present at the second soccer practice. The researcher attended a third soccer practice to review the consent form with those parents. The consent forms were signed by the participants after they were examined. All parents received copies of their signed consent forms at the next soccer practice.

A personal identification number was provided to each participant to use throughout the study. The remainder of the study was conducted via e-mail. The researcher explained to all of the participants that any information they provided, including, names, email addresses, and telephone numbers, would remain confidential at all times. All provided information for the study would remain on file in the researcher's personal password-protected computer for five years.

Each research participant was given one week to e-mail the questionnaires back to the researcher. Three of the surveys were completed and e-mailed back to the researcher on the same day. One survey was returned the next day. Four were submitted on day five, and three on day seven. The final two were returned on day seven. The last two that were submitted was after the one-week turn-around time; however, the questionnaires were accepted without negative impact on the study. The data were recorded once each of the questionnaires was returned to the researcher. There were 25 questions on each questionnaire, and all of the answers were broken down into distinct categories. The first

15 questions were multiple choice and the last 10 were open-ended questions. NVIVO10 for MAC software was used to develop the codes for all of the data that was collected. Use of this software helped to identify similarities in the answers.

As stated above, data were collected via email after the consent forms were signed. There were no variations in the data collection. Each of the participants agreed that email would be the most convenient method for receiving and returning the questionnaires. The only unusual circumstance was attending the third soccer practice to explain and obtain consent from the two parents, as stated above—but it did not have any adverse impact on the study.

Data Analysis

Data from each of the research participants were put together based on specific codes and themes with the assistance of NVIVO software. Inductive coding was used to put the data into themes. Thomas (2006) has stated that coding allows themes to be teased out from raw data. He listed a five-step process for inductive coding including. These steps included developing files for raw data, reviewing text until familiarity is gained with the content, developing categories for the data, changing or uncoding text if needed, and refining categories and creating subcategories as needed. The themes for this research were changed several times.

Research Questions

This study consisted of three research questions. This section provides an overview of how the survey questions provide information to answer the research questions. Each research question is further broken down in Chapter Five. Collected data answered these questions.

The first research question asked about the perceptions of soccer parents with regard to talking on mobile devices while driving. They survey helped to answer this question. They addressed questions regarding driver distractions. Responses addressed included safety, risks of accidents, being able to multi-task, abilities to drive distracted, and accidents caused by driving distracted.

The second research question asked about soccer parents' understandings of the dangers of talking on mobile devices while driving. Responses regarding beliefs that talking on mobile devices while driving was dangerous and the risks involved were supported by this question. The questions regarding new laws being created and enforced also helped to answer this question.

The third research question asked what soccer parents' actions were when they made and received calls on their mobile devices while driving. Questions such as whether they used their phones while driving and how to cut down on the risks of accidents helped to answer this question. The below tables and themes shown under the research findings contributed to the interpretation of the data.

Evidence of Trustworthiness

Credibility

This research study touched on the issue of credibility throughout. Credibility was maintained by ensuring that the information gathered from the questions was in more than one format. The questions were posed through the use of multiple-choice questions, followed by open-ended questions. This double step ensured better accuracy of information. The researcher also developed notes and themes to maintain credibility. The researcher remained nonbiased throughout the entire study.

Confirmability

Providing full descriptions of the data insured confirmability. The answers were used verbatim based on what was provided by each research participant. Themes were highlighted as they developed. Each theme is broken down further below later in this chapter.

Dependability

Dependability was maintained by putting the data into different formats, as well as by using the NVIVO software to help establish codes and themes for the provided answers. All of the information was reviewed several times for accuracy. Each topic was changed as needed until it was appropriate for the data that were collected.

Results

This section discusses the findings from this research. It is broken down by the research questions. The answers are then further broken down into themes. The researcher developed each theme without any bias. The data for the multiple-choice questions were coded based on whether the participants (a) strongly agreed, (b) agreed, (c) neither agreed or disagreed, (d) disagreed, or (e) strongly disagreed. The following is a breakdown of the results from the multiple-choice questions. The data for the open-ended questions were also prioritized based on these research questions and themes. The items with the highest number of responses were given priority.

Research Question 1

What are the perceptions of soccer parents with regard to talking on mobile devices while driving? Eight questions were answered by the research participants

regarding their perceptions of talking on mobile devices while driving. These questions focused on beliefs about multi-tasking.

Theme 1: Talking on Mobile Devices is Necessary for Sports Parents

Seven disagreed about whether talking on mobile devices was helpful for parents of children who played sports. An equal amount of the research participants agreed and disagreed that talking on mobile devices helped people to work on more than one task at one time. They also agreed that mobile devices are a must for parents of children who participated in sports.

Theme 2: Accomplishing Tasks Without Cell Phones

When asked how the research participants would perform tasks while driving if cell phones did not exist, a larger number of people expressed that they would take care of things when they were not driving. Some participants said t they would become more organized by using logbooks or calendars to better handle their tasks. One person expressed that not being able to use her cell phone would cause her to go "nuts."

Theme 3: Multi-tasking

Each of the research participants answered questions regarding multi-tasking. Three people agreed, and three people disagreed that talking on mobile devices is easy for a multi-tasker. One person strongly agreed whereas two strongly disagreed. Five participants were uncertain about multi-tasking being easy. More people agreed when the question regarding the ability to drive while talking on mobile devices was rephrased. The majority agreed that using mobile devices helped them to coordinate several activities at the same time.

Theme 4: Use of Wireless Devices Decreases Risks

More people agreed that wearing earpieces would decrease the risk of distraction when driving. Of those who agreed, six heartily agreed. These people made assumptions that using hand-free devices would decrease any involved risks. Only a few either disagreed or strongly disagreed.

Research Question 2

What are soccer parents' understandings of the dangers of talking on mobile devices while driving? This section consisted of five questions. These questions addressed the perceptions of the risks of driving while talking on mobile devices. They also were used to gather information about perceptions regarding the necessity of making and enforcing new laws that would focus on driving while talking on mobile devices.

Theme 5: Dangers of Driving Distracted

Based on the multiple-choice answers, more people believed that talking on mobile devices while driving was both dangerous and distracting behaviors to practice. Only two more people agreed compared to those who disagreed that talking on mobile devices is as dangerous as texting while driving. More disagreed about talking on mobile devices not being a distraction while driving.

Theme 6: Laws About Driving Distracted

More people agreed that laws for driving while talking on mobile devices should be enforced. The number of individuals who admitted that these laws would stop them from using this behavior was almost equal. A few did not agree or disagree. The research participants also answered whether they had been involved in an accident that was caused by talking on mobile devices while driving.

Research Question 3

What are soccer parents' actions when they make and receive calls on their mobile devices while driving? This second consisted of two questions. These questions focused on the research participant's perceptions of whether he or she drove distracted. Participants were also to determine whether they believed that talking on mobile devices was a must while handling other significant tasks.

Theme 7: Focus on the Road

A larger number of people disagreed about their focus being completely on the road when they talked on mobile devices while driving. A higher number, however, claimed that they could hold conversations while focusing on the road. Only three admitted to not being able to concentrate on the road while talking on their mobile devices.

The questionnaires also consisted of 10 open-ended questions. Themes were established based on the answers. The data gathered from these questions based on the research questions and themes are shown below.

Research Question 1

What are the perceptions of soccer parents with regard to talking on mobile devices while driving? This section consisted of three questions. These questions were used to further determine the research participants' perceptions of driving while distracted. They were also used to gather information about the reasons for multi-tasking while driving and their beliefs of what is considered "being distracted" while driving.

Table 2

Research Participants' Answers to Reasons for Talking on Mobile Devices while Driving

Identification Codes	Reason
141, 142, & 144	"convenience"
143	"no choice other than to multi-task"
147	"not realizing the consequences"
148	"not sure"
149	"habit"
150	"technology generation"
151	"busy lives"
152	"too many things needed to accomplish"
154	"busy world"
155	"selfless/carelessness"

Table 3

Research Participants Answers to Definition of Distracted Driving

Identification Code	Reason
148, 149, & 152	"losing focus"
150	"talking, texting, or doing anything else while driving"
151	"applying make-up, eating, and talking on phones"
145 & 147	"not paying attention"
146	"smoking"

Theme 1: Driving is a Distraction

Most of the research participants answered that driving while talking on cell phones is a distraction. Two of the research participants were more specific and listed decreased focus as the cause. Two other participants answered that distractions are caused by not paying attention.

Theme 2: Multi-tasking

The majority of the research participants answered that they did not believe that they could better multi-task compared to other people. Only three thought that they were better able to multi-task when driving. No participants were able to determine the reasons for their answers.

Theme 3: Driver Distraction Reasons

A higher number of people believed that the number one reason that people drive distracted was because that had busy lives. Several people also listed convenience as the reason. Some people listed that being uncaring and not realizing the consequences were reasons that people drive distracted.

Theme 4: Driver Distraction Definition

The majority of the research participants felt that driver distraction would be anything that takes focus from the road. Several examples were listed, such as eating, applying make-up, using electronics, and smoking. Texting while driving was also listed.

Research Question 2

What are soccer parents' understandings of the dangers of talking on mobile devices while driving? This section consisted of four questions. These questions were created to identify whether visual aids of motor vehicle accidents would alter the choice of driving distracted. They were also used to obtain data on any accidents that the research participants might have been in due to the use of mobile devices while driving, as well as ways to improve safety while driving.

Theme 5: Driver Distraction Accidents

Twelve of the research participants answered that they had never been involved in an accident caused by the use of cell phones while driving. Two of the participants admitted to being involved in accidents. Of those two, one said that she did not believe that new laws needed to be enforced. She said that she did believe, however, that new legislation would cause her to change her behaviors. The other person thought that new legislation should be enforced, but he did not believe that they would change his habits.

He answered that he still believed that his driving while talking on mobile devices was safe since his automobile accident was the other driver's fault.

Theme 6: Pictures of Accidents

A larger number of people expressed that they did not believe that viewing images of accidents caused by driver distraction would cause them to change their behaviors. Several, however, answered that viewing pictures might instill enough fear to cause them to change their habits. One person did not believe that this undertaking applied to her because she expressed that she never talked on cell phones while driving.

Table 4

Research Participants' Answers Regarding Visual Aids Changing Their Minds

Identification Code	Answers
141	"Only if accidents were caused by talking while driving."
142	"Yes, because it would instill fear."
143	"No, because I have already seen pictures."
145	"Yes, already been in an accident"
148	"No, because I don't drive while talking on cell phones."
151	"Yes. It would drive it home for me not to do that."
154	"Yes. It would enforce it more."
149	"Not really."

Theme 7: Safety

The majority of the research participants believed that keeping their eyes on the road would make their driving experiences safer. Some listed wearing seat belts as a way to increase safety while driving. One person believed that staying off of the phone would be the best way to make driving safer.

Research Question 3

What were soccer parents' actions when they make and receive calls on their mobile devices while driving? This section consisted of three questions. These questions were developed to gather data about the use of mobile devices by each of the research participants. It was also used to determine how often and the reasons for use when transporting kids to and from soccer games and practices.

Table 5

Research Participants Answers Regarding Time on Phones While Driving

Identification Code	Answers
141 & 145	"50% of the time"
142	"I try only to use my cell phone in cases of emergencies"
144 & 152	"occasionally"
143, 153, & 154	"20% of the time"
147 & 151	"twice per week"
146 & 150	"seldom"
148	"not at all"
149	"often"

Theme 8: Cell Phone Use While Driving to Soccer Practices

One research participant admitted that she never used her cell phone while driving her child to practice. A large number of the participants answered that they used their cell phones on at least a weekly basis. Two people replied that they used their cell phones every time they drove their children to soccer practice.

Theme 9: Using Cell Phones While Driving

The number of research participants who answered that they used their cell phones often while driving was equal to the number who said that they did not. Two

participants replied that they used their phones at least 50% of the time. One person maintained that she never used her cell phone while driving.

Several themes showed similarities in the data; these included the perceptions of driving distracted, the dangers of driving distracted, and the necessity of driving distracted. Several questions had varying answers. Several responses changed when the questions were asked a second time in a different format; these included laws regarding driver distractions needing to be enforced and being able to multi-task while driving.

Summary

This chapter provided a discussion of all of the data for this study. A discussion of the data was also included. The purpose of this study was to determine the risks of driving while talking on mobile devices from a soccer parent's perspective.

Data were gathered by questionnaires completed by 14 parents of children who played soccer. The data supported that parents used mobile devices while driving children to soccer practices and games because of habit and convenience. Only half of those studied agreed that laws should be created and enforced to decrease the risks of automobile accidents caused by distracted drivers. These people also admitted that these laws would not convince them to change these behaviors. These topics are further discussed in Chapter Five.

Chapter 5: Discussions, Conclusion, and Recommendations

Introduction

The purpose of this study was to determine the risks of driving while talking on mobile devices from a soccer parent's perspective. Prior researchers have established that distracted driving, as a whole, is dangerous. As shown in Chapter 2's literature review, motor vehicle accidents are continuing to rise because of people who drive distracted. In this study, I focused specifically on talking on mobile devices while driving to determine whether parents who transported children to soccer practices and games believed that this behavior placed themselves and other people at risk of automobile accidents. I determined whether these parents felt that the formation and enforcement of new laws would decrease or eliminate these behaviors. Understanding how people perceive driver distraction is vital for the development of future research that would contribute to reducing any risks involved. This information would also serve to close the gap in research about the dangers of individual distraction of talking on mobile devices while driving.

The following research questions were the basis for this study:

Research Question 1: What are the perceptions of soccer parents with regard to talking on mobile devices while driving?

Research Question 2: What are soccer parents' understandings of the dangers of talking on mobile devices while driving?

Research Question 3: What are soccer parents' actions when they make and receive calls on their mobile devices while driving?

The phenomenology approach was used to answer these questions. According to Tuohy (2013), phenomenology research was developed by Husserl to describe phenomena as they appear to whomever are being studied based on their experiences. This study had 14 soccer parents who completed questionnaires and returned them via e-mail. NVIVO10 for MAC was used to manage the data that were then stored on a password-protected computer. Edwards-Jones (2014) concluded that the primary function of NVIVO is coding to help to plan, store, manage, analyze, and present data for research. This was helpful for organizing data.

Constant comparisons and word counts were used to develop codes. This step helped me to develop better understandings for the phenomenon. Leech and Onwuegbuzie (2011) described constant comparison as using particular words to separate data and then listing it under certain words. The collected data were used to develop codes. They were then broken down into themes to answer the research questions.

An interpretation of the themes from Chapter 4 is completed in this chapter. The conceptual framework for this research study was used to develop the findings. Study limitations, recommendations for future research, and implications are also discussed.

Interpretation of Findings

Information that was collected was broken down into themes that helped to validate the data obtained from each of the research participants. Data were gathered from multiple choice questions. Open-ended questions were then used to develop themes. Below are the interpretations of the findings from each theme.

Talking on Mobile Devices is Necessary for Sports Parents A large number of the research participants answered that they did not believe that talking on mobile devices

was necessary when driving. They thought that they could handle other duties that required the use of phones when they were no longer driving. The participants did, however, find that mobile devices were vital for parents of soccer children. The number of people who thought that mobile devices were helpful in accomplishing more than one task at a time was equal to those who did not. Roney et al. (2013) found that many adults used hand-held mobile devices even with children in their vehicles. These adults believed that they were able to multitask.

Accomplishing Tasks Without Cell Phones

Several people explained that they handled tasks when they were not driving. They answered that they would keep logs or calendars to assist them in remembering these tasks. They believed that these records would help them to keep track of things that they needed to accomplish. One research participant said she would go "nuts" if she were not able to use her cell phone while driving. Stavrinos et al. (2011) believed that mobile phones increased risks of accidents inside as well as outside of vehicles. The dangers outside of vehicles apply to pedestrians who have been hit by distracted drivers.

Multitasking

An equal number of people agreed and disagreed about using mobile devices being easy for multitaskers. They did, however, believe that using mobile devices while driving was easy. Many believed that using mobile devices was helpful in accomplishing several tasks at the same time. Five people were uncertain about whether multitasking was easy. Sinsky and Beasley (2013) believed that attempting to multitask could cause difficulties in being able to adequately communicate and observe. Many people use wireless devices in order to accomplish tasks while driving.

Use of Wireless Devices

The majority of research participants felt that safety would be increased if they wore earpieces while talking on mobile devices while driving. Almost 50% of the people strongly agreed. Those who strongly agreed believed that they were no longer driving distracted if hands-free devices were being used. Only a few people did not agree. Ishigami and Klein (2009) felt that the risks were the same when using hands-held and hands-free phones. Many believed that they were able to multitask better if they wore wireless devices.

Dangers of Driving Distracted

More people expressed that driving while talking on mobile devices was dangerous. These people also believed that speaking on mobile devices while driving was distracting. Most people, however, felt that talking on mobile devices while driving was not as dangerous as texting. Bellinger et al. (2009) studied the response times when using cell phones compared to the response time when using radios and found that the response time decreased when the drivers used cell phones. Texting and talking are both proven dangerous driving behaviors.

Laws about Driving Distracted

The majority of the people researched felt that new legislation would be vital in decreasing the risks of driving while talking on mobile devices. Only half of these people stated that these laws would make them discontinue talking on mobile devices while driving. A couple of individuals admitted to already being involved in automobile accidents that were caused by talking on mobile devices while driving. Cohen and Zhu

(2013) did not believe that laws that ban mobile devices while driving would be enough. Those who admitted to being in accidents had not learned their lessons.

Focus on the Road

Several of the research participants believed that their focus was always on the road when they talked on mobile devices while driving. An even greater number felt that they were able to hold conversations on mobile devices while they drove. Only three admitted that talking on mobile devices while driving took their focus off of the road. Ledesma et al. (2010) created the ARDES to show a comparison of driving errors that were the result of driving without paying full attention because of distractions. The participants did not understand that using mobile devices while driving was a form of multitasking.

Interpretations from Open-Ended Questions

Driving is a Distraction

Most of the research participants agreed that driving while talking on mobile devices was a distraction. Loss of focus was listed most frequently as the cause of the distraction. Two people believed that talking on mobile devices while driving caused the driver not to pay attention. According to Loeb and Clarke (2009), mobile devices have a significant impact on the numbers of lives lost in motor vehicle accidents.

Multi-tasking

Only three research participants said that they believed that they were better multi-taskers compared to others. The majority of the other participants answered that they did not feel that they were better multi-taskers than others. No research participants

were able to provide reasons why they felt the way that they did about multi-tasking. Some said that they had never though about it.

Driver Distraction Reasons

"Busy lives" was listed by the largest number of people as the reason that people drive while talking on mobile devices. Several believed that being able to speak on these devices while driving was convenient for those who have busy lifestyles. Some felt that people talk on these devices while they drive because they do not realize the consequences of the dangers involved. Overton et al. (2013) believed that drivers used mobile devices while driving because they underestimated the risks of accidents.

Driver Distraction Definition

Taking focus off the road was cited by the largest number of people when asked about their definition of distracted driving. Many provided examples of their beliefs of distracted driving. Some examples were using electronics, putting on make-up, smoking, and texting while driving. Hancock et al. (2008) stated that "driver distraction" occurred when other things caused the driver's attention to be displaced such as turning around to tend to a crying baby. Regan et al. (2011) felt that there was a difference in driver inattention and driver distraction. They explained that the risks would be better understood if the differences were researched.

Driver Distraction Accidents

Two of the research participants answered that they were involved in automobile accidents that were caused by driving while talking on mobile devices. Each stated that the drivers of the other vehicles, who were talking on their mobile devices at the time, were at fault for the accidents. The remaining participants answered no to this question.

Ledesma et al. (2010) identified that drivers who failed to pay attention have been a large cause of automobile accidents.

Pictures of Accidents

Research participants answered questions about whether viewing pictures of accidents caused by driving while talking on mobile devices would make them change their minds about driving distracted. A higher number of people answered that this exposure would not change this behavior. Several replied that this would instill enough fear to cause them to make different choices. Only one person explained that this activity would not apply to her because she never talked on her mobile device while driving. Falk (2010) believed that if people were asked about their risky driving behaviors, they would think twice before using these practices in the future.

Safety

Most of the research participants believed that driving would be safer if they kept their eyes on the road. Seat belt safety was critical to some of the participants. Only one person listed that staying off of the phone would increase safety while driving. Weller et al. (2013) believed that to develop better interventions that would eliminate distracted driving, a better understanding of what influences people to make these decisions would be vital.

Cell phone Use While Driving to Soccer Practices

The majority of the research participants answered that they talked on mobile devices at least once per week when they drove their children to soccer practices or games. One participant said that he/she never did this. A couple of participants admitted that they talked on their mobile devices every time they drove their kids to soccer

practices and games. Neider et al. (2010) determined a need for more research on the dangers of driver distractions that highlights other ways of being able to complete daily tasks safely.

Using Cell Phones while Driving

An equal amount of people answered that they used their mobile devices often while driving. Two people admitted that they talked on their mobile devices at least 50% of the time. One participant maintained that she never talked on her mobile device while driving. Backer-Grondahl and Sagberg (2009) found that drivers who were involved in accidents while using hand-held mobile devices perceived the accidents as being caused by the mobile device use.

Limitations of the Study

The limitations of the study included the small sample size, data gathered from only one geographical location, data collection limited to emailed responses, and the potential for bias. The sample size consisted of 14 soccer parents. The limited sample may not adequately represent the perceptions of soccer parents from other areas. Each of the research participants lived in the city where the research took place. The perceptions of soccer parents who lived in larger geographical areas or from traveling soccer teams that consisted of children from more than one city might have been better represented. Questionnaires were used to gather data. Misrepresentation and bias were possible because face-to-face interviews were not conducted. Face-to-face interviews would allow researchers to ask more questions as needed to have a better understanding of the answers provided by the research participants. Weller et al. (2013) believed that it would be vital to have better understanding of what influences people to make the decisions to drive

distracted in order to develop successful interventions. Decreasing these limitations would allow researchers to incorporate more accurate information that would help to create these interventions.

Recommendations

This study allowed a look into the risks of driving while talking on mobile devices from the perspectives of soccer parents. One recommendation is for more research in the form of case studies that reviews distracted driving from the views of soccer parents within a larger geographical area. Case studies would allow future researchers to gather more in depth information from research participants that would be helpful to policy makers. Soccer is a year-round sport, and for this reason, more research that studies talking on mobile devices is vital for these parents. This would help to provide better education on the risks involved. This study revealed that many soccer parents do not believe that this behavior is risky. Further research with larger samples of soccer parents from bigger geographical areas would help to gather more vital information. This research should also include face-to-face interviews. This would allow researchers to gather more in depth information from the research participants.

Another recommendation is for future researchers to conduct quantitative studies that would help to obtain more data on mobile devices while driving. This would also provide better information on motor vehicle accidents caused by driver distraction among soccer parents. This study proved that some people view driving while talking on mobile devices as risky. However, many people did not think that they were at risk when they talked on mobile devices while driving. Many soccer parents believed they could multi-task. Soccer parents often transport children to and from sports practices and events. A

study that would obtain more information from a larger population of soccer parents, in regards to their person experience of automobile accidents while talking on mobile devices, would help to develop better educational and research opportunities. This would allow researchers to provide vital information to law makers as new laws are created for distracted driving. Having research tracked by the NHSTA would allow future researchers and lawmakers to track any updated statistics regarding the risks involved in the use of mobile devices while driving by parents of children who play soccer.

Implications

The findings from this study have the potential to assist with creating future positive changes throughout society. This research was not conducted to improve driver distraction. The research was collected to provide vital information to future researchers regarding driver distraction. These findings can add to existing research about distracted driving. The findings can be used to understand whether the risks are greater for those who drive distracted by providing information about the risks for parents who have children that participate in soccer. The findings can also enhance awareness about driving while talking on mobile devices when transporting kids to soccer practices and games.

The information gained from this research study can compel other cities and states to examine the risks involved when parents transport children to soccer, as well as to other sports events. Current legislation in several states prohibits texting while driving; however, states need to look into the risks involved in talking on mobile devices while driving to create legislation that would decrease these risks. Further research would provide important information that researchers could provide to lawmakers as new legislation is created.

Social change is vital to decreasing or eliminating the risks involved in driving while talking on mobile devices. Understanding what causes people to choose to use these behaviors is important. This would be helpful in developing education that would help the public, and specifically, parents of children who play soccer to understand that this places them at risk for automobile accidents. Education is the key in helping people to make better choices while driving. This would also help people to better transition into following any future legislation as it continues to be developed for driver distraction. This is vital for the future of driving safely, especially when transporting children.

Researcher's Experience

My experience in conducting this research was positive. The change that I would make for future qualitative research studies would be to also hold face-to-face interviews to further decrease the risks of misrepresentation of data and bias. These issues did not occur in this research; however, the potential was there. Having face-to-face interviews would also allow me the opportunity to ask more in-depth questions. I was unable to ask questions or clarify information by only using emailed questionnaires.

I used bracketing to reduce my bias by ensuring that I had a better understanding of the phenomenon being studied. Reducing bias was important because there are often a lot of opinions regarding distracted driving, as well as multitasking. I was able to keep my opinions from interfering by understanding that people perceive things differently. I was able to do so based on the understanding that the study was not being conducted to stop driver distraction. The study was undertaken to learn the perceptions of soccer parents to open the doors to better future research.

Conclusion

Based on the data analysis, I was able to determine the perceptions of soccer parents concerning talking on mobile devices while driving. The data proved that soccer parents have basic understandings of the risks; however, many do not feel that the risks apply to them. Some believed that they were competent at handling several tasks at one time, whereas others believed that they practiced safety measures when talking on mobile devices while driving.

The second research question explored soccer parents' understanding of the dangers of talking on mobile devices while driving. I learned that some of the research participants had already been involved in motor vehicle accidents that were caused by driving while talking on mobile devices. I discovered that many felt that new legislation was vital whereas others did not feel that they should not be allowed to talk on their mobile devices while driving. Viewing images of automobile accidents would have an overall impact on a greater percentage of people in causing them to change their minds about talking on their mobile devices while they drove.

The third research question looked into the actions of soccer parents when they made and received calls while driving. Although many people admitted that these actions were distracting from the road, others stated that they never talk on their mobile devices while driving. Some believed that safety was more important than taking the risk of answering or making a call while driving.

The self-determination theory was used to build the framework for this research study. This theory included the aspects of both internal and external motivation for

behaviors. This approach helped to explore the reasons that soccer parents were motivated to talk on mobile devices while driving.

Chapter Five discussed the research findings, recommendations for future studies, implications for change, limitations of this research study, and the researcher's experience. The findings from this study contribute to the knowledge that soccer parents currently have regarding talking on mobile devices while driving. The results also explored the reasons that soccer parents made the decisions to drive while talking on mobile devices.

The findings can be used to increase awareness about the risks of talking on mobile devices while driving to and from soccer games and practices. Sending information from the data gathered to local traffic schools is one way that I plan to increase awareness. The results from future research can be used to support local, state, and federal legislation for driving while talking on mobile devices. It can also be used to educate and continue to increase awareness for parents of children who play soccer. Education is the key to better behavior practices.

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Appendix A

Multiple-Choice: Please underline the correct answer.

1. Driving while talking on cell phones is a dangerous behavior.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

2. Driving while talking on cell phones is a distraction.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

3. Driving while talking on cell phones is an easy task for a multi-tasker.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

4. Driving while talking on cell phones is as dangerous as driving while texting.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

5. Driving while talking on cell phones is helpful for parents of children who participate in sports.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

6. Driving while talking on cell phones is necessary for parents of children who participate in sports.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

7. Driving while talking on cell phones helps to work on several tasks at the same time.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

8. Wearing earpieces decreases the risks of automobile accidents when driving while talking on cell phones.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

9. Laws against driving while talking on cell phones would help me to stop practicing this behavior.

   1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

10. Laws against driving while talking on cell phones should be enforced.

    1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

11. My focus is completely on the road when I drive while talking on cell phones.

    1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

12. I can focus on a telephone conversation at the same time as focusing on the road when I am driving.

    1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

13. Talking on cell phones is not a distraction while driving.

1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

14. Cell phones help me to coordinate work, home, and transporting my kids to soccer practices.

    1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

15. Cell phones are a must for people who spend a lot of time behind the wheel while transporting kids to extracurricular activities.

    1 = *strongly agree*, 2 = *agree*, 3 = *neither agree or disagree*, 4 = *disagree*, and 5 = *strongly disagree*

Open-Ended Questions

1. In what ways does talking on cell phones while driving increase the risks of automobile accidents?
2. Is your perception that you are better able to multi-task while driving when compared to other drivers? If so, how?
3. Would viewing pictures of the consequences of automobile accidents that were caused by distracted drivers change your opinion about distracted driving? If so, how?
4. Why do people choose to drive distracted?
5. What do you consider distracted driving?
6. How would you accomplish tasks involving work, home, and soccer practices if cell phones did not exist?
7. What do you do to make your driving experience safer?

8. How often do you talk on a cell phone while driving your kids to soccer practice?
9. How often do you talk on a cell phone while driving?
10. Have you been involved in an accident that was caused by the use of a cell phone?