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Walden University

College of Social and Behavioral Sciences

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Karen Versuk

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Walden University
2016

Abstract

The Influence of Public Policy Interventions on

Millennial Distracted Driving Behavior

by

Karen A. Versuk

MBA, Eastern University, 2008

BA, West Chester University of Pennsylvania, 1984

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy & Administration

Walden University

March 2016

Abstract

Despite recent public policy initiatives limiting or banning forms of distracted driving resultant from cellular phone use, crashes remain on the rise. Individuals from the millennial generation, ages 16 to 35, appear to be most susceptible to distracted driving. Understanding the behaviors, attitudes, and habits of millennials is critical to developing effective policy for behavior change. A dual task ethnographic study framed by Skinner's theory of behavior modification and Maslow's hierarchy of needs motivational model, was used to investigate to what extent millennials feel public policy has influenced their driving, and if additional policy initiatives are required to deter distracted driving behavior. Two phases of inquiry, first, naturalistic observation, and then focus group were conducted at a commuter university. Distracted driving behaviors including hand held cellular phone use, eating, drinking, and passenger interaction of 100 drivers entering or exiting campus were observed, tracked, and analyzed using a researcher-developed tracking form. Eighty-four percent exhibited at least one distracted driving behavior. After which, 12 enrolled and licensed students, aged 18-35, were recruited via social media for two focus group discussions. Focus group data were inductively coded and analyzed using semantical attribution analysis. The students revealed that millennial drivers felt distracted driving policy did not address behaviors they see as worthy of intervention, they did not perceive that cellular phone use while driving posed a significant threat, and they felt current law was difficult to enforce with penalties they regarded as non-prohibitive. Social change implications include improved distracted driving public policy, which may result in driving behavior changes and a potential reduction of death, injury, and property loss.

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Dedication

This is dedicated to my husband, Mike, my children Caitlin, Kerry, David, CJ, Michael, and Emma Grace, and my father, Thomas Gibbons, without whom the completion of my dissertation and doctorate would not have been possible. Each of you, in your own way, ‘drove’ me to completing this journey by providing inspiration, encouragement, support, and confidence that I could truly do this, when sometimes I did not have it in myself.

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Chapter 1: Introduction to the Study

Introduction

The Governors Highway Safety Association (2013) cites driving while distracted as a factor in 515,000 injury crashes and 5,870 fatalities (GHSA, 2013). While distracted driving is not a new phenomenon, with the growth of the driving population, technological advancements, and the advent of the cellular phone, distractions have taken a new and dangerous twist (Stimpson, Wilson, & Muelleman, 2013). A factor in 11% of all fatal crashes and 18% of all injury crashes involving a driver under the age of 20 in the United States, distracted driving is particularly virulent among millennial drivers for whom car crashes are the leading cause of death in the first three decades of life (see Figure 1; Bratsis, 2013; CDC, 2010).

This study examined the distracted driving behavior of millennials, the generation of people born between 1982 and 2004 (Howe, 2004). Howe (2000) defined a generation as a twenty-year span of people who share a similar age, historical, economic and social experiences, and beliefs and behaviors (Howe, 2000). For the purposes of this study, understanding unique millennial characteristics was key to observing and determining public policy interventions uniquely suited to successfully changing behavior as it relates to the public health and road safety threat of distracted driving.

According to Lynn (1986), the creation of effective public policy requires an understanding of the conditions and subtending behaviors to which public policymakers react. Coulson (2014) has emphasized the importance of understanding and working within cultural boundaries to elicit behavioral change over forcing change from outside

those boundaries. Forced change produces short-term results. However, if the goal of policy is to cause long-term behavioral change for communal benefit, then as Lynn and Coulson have noted, understanding cultural mores and behavior is essential to crafting policy to achieve the goal of social change.

A joint World Health Organization (WHO) and National Highway Traffic Safety Administration (NHTSA, 2011) report defined distracted driving as "the diversion of attention away from activities critical for safe driving towards a competing activity" (p. 5). Distracted driving is a significant road safety threat, and is the fastest growing traffic problem in the world. A report by the Centers for Disease Control and Prevention (2013) stated that while distracted driving is a global problem, in the United States it is three times that of any other nation. Not only are motorists and passengers at risk, but so too are pedestrians, bicyclists, and anyone or anything along public roadways (Stimpson et al., 2013).

Nothing has propelled the problem of distracted driving into the mainstream of public health and road safety like the introduction of the cellular phone (Sherzan, 2010). This trend is of such import that public outcry for legislation and public policy initiatives in 2010 resulted in the launching of a massive NHTSA-led campaign promoting legislation, enforcement, and education via its taxpayer funded distraction.gov website (U.S. Department of Transportation, 2010). Distracted driving persists despite these interventions, and driver performance and behavior continue to be both the greatest

challenges and greatest contributors to road safety (Oster Jr. & Strong, 2013).

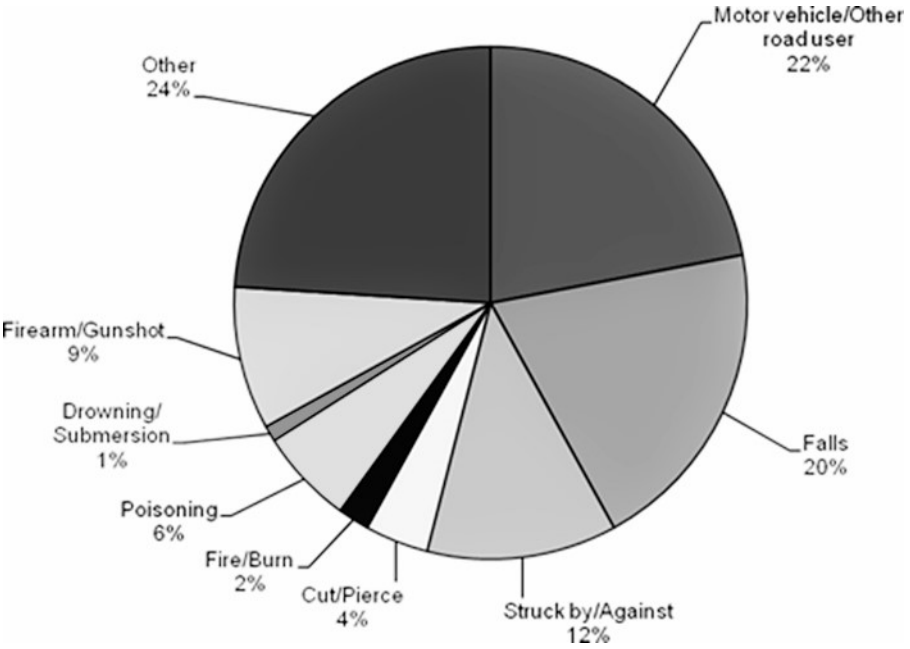

Figure 1. Leading causes of unintentional injury death in the United States. Adapted from the Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2010). Retrieved from www.cdc.gov/injury/wisqars

Background

NHTSA (2011) claims that a driver is 23 times more likely to crash when driving distracted. In 2001, estimates showed that a driver was 4 times more likely to crash while driving distracted, specifically if using a cellular phone (Redelmeier & Tibshirani, 2001). The growth of this grim statistic is due not only to an increase in the driving population, but also to the increased prevalence of driving distractions, particularly the use of the cellular phone in a vehicle (Bratsis, 2013). Wilson and Stimpson (2010) revealed a dramatic 28% increase in distracted driving crashes specifically involving cell phones

after 2005. Their conclusion was that distracted driving was the number one growing public safety concern in the United States. Because driving is an activity requiring the driver to perform multiple cognitive, manual, visual, and judgmental tasks while concurrently manipulating a 2,000-pound motor vehicle under a variety of driving conditions, maintaining focus is a key component of achieving safe passage (Stimpson et al., 2013).

Problem Statement

There is a distracted driving problem in the United States. Despite public policy interventions including public service messages and laws restricting or prohibiting the use of cellular phones while driving, crashes in which distracted driving is a factor are on the rise (Stimpson et al., 2013). Because millennials are the first generation for which cellular phones are pervasive, and because this generation has an increased attention to social connectedness and a willingness to take risks, distracted driving negatively impacts the millennial generation in a more profound way than previous generations (Bingham, 2014; CDC, 2014; Klauer et al., 2014). Studies validate this, as drivers under the age of 20 are 23 times more likely than older drivers to crash while driving distracted (NHTSA, 2012). Among this demographic, car crash is the leading cause of death (Clayton, Helms, & Simpson, 2006).

Distracted driving is not a new phenomenon, and concerns about it date back to the mesmerizing effect of windshield wipers in 1905 and to the appearance of the in-vehicle radio in the 1930s (Curry, 2002). Technology in general, and the use of the cellular phone in particular, takes this concern to a whole new level because it is a

possible cause for the recent increase in crashes and fatalities (Wilson & Stimpson, 2010).

In order to create effective public policy which addresses this growing public health and safety threat, it is necessary to understand the dynamics of distracted driving including the attitudes, responses, behaviors, and habits of those who engage in this behavior most frequently (Lynn, 1986). Policy legitimacy only exists when those toward whom that policy is intended believe it is appropriate, just, and will be enforced (May & Jochim, 2013). Additionally, strong and appropriate policy tends to benefit the newest drivers most because they have the least experience and are most likely to fall victim to driving while distracted (Bingham, 2014). Therefore, given the marked absence of research characterizing millennial driving behaviors and the wealth of information indicating that distracted driving remains a problem among millennials, it is necessary to know what influences and motivates them, what they consider distracted driving to be, their interpretation of public policy, and their resulting behavior (Jones & Healing, 2010).

A qualitative study observing and investigating the mores, attitudes, motivations, and behaviors of millennial drivers related to distracted driving could provide information to help remedy the situation. Research including observation and focus groups that use in-depth discussions may help to determine if education, refocused public policy efforts, enforcement, technology, or perhaps a combination of interventions can help to change behavior and reduce injuries and fatalities from distracted driving car crashes.

Purpose of the Study

The Center for Disease Control (CDC) classifies distracted driving as a "winnable battle" (Dellinger & Sleet, 2012, p. 280). This means that if evidence-based interventions are implemented, effective remediation for the problem is likely over time. In the United States, traditional public policy approaches to problems such as distracted driving have encompassed a three-pronged multi-modal approach. This strategy includes funding for states to pass legislation intended to discourage the use of cellular phones behind the wheel. Secondly, it includes funding for public education in the forms of public service announcements, slogans, and billboards. Finally, it includes funding for police to enforce the policy, cite offenders, and conduct traffic checkpoints (DOT Launches Faces of Distracted Driving Site, 2011). Yet, current research demonstrates that distracted driving is a normative social behavior which remains a significant public safety threat (Atchley et al., 2012; Klauer et al., 2014; Rowden, 2013).

Chriqui, O'Connor, and Chaloupka (2011) demonstrated that inclusion of evidence-based behavior modification theories is rare among public policy interventions with regard to laws. This is in stark contrast to the fact that the study of public policy making is the study of behavior and its consequences in order to design policy to elicit the desired response (Lynn, 1986). Observing and understanding those to whom policy interventions are directed is critical to changing social norms to reduce injuries and fatalities, make effective use of limited public funds, and craft effective, legitimate public policy which can stand the test of time.

Research Questions

The following research questions guided this study to determine the effectiveness of public policy interventions on millennial distracted driving behavior:

1. How do millennials respond to the laws governing distracted driving?
2. To what extent has the introduction of public policy regarding distracted driving influenced millennial attitudes and behavior toward distracted driving?
3. What, if any, interventions are needed to change distracted driving behavior among millennials?

Theoretical Framework

By definition, public policy strives to control, correct, direct, or shape behavior in accordance with political or societal goals (Lynn, 1986; Ritz, 2011; Tybur, 2012). As such, understanding behavior is a precursor to creating effective policy. As generations, technology, and culture change, so too must policymakers change strategies to continue to elicit desired behaviors from the populations they serve. Lynn (1986) has framed the gathering of psychological information regarding a policy-targeted group as the prudent method of predicting if and how policy initiatives will achieve policy goals.

Tybur (2012) advocated the use of evolutionary psychology in policy making and argued that behavior can be changed by better understanding the evolved psychological system which is producing the evidenced behavior. So, to understand distracted driving behavior using Tybur's logic, one must understand the psychology behind it. To adjust conditions to elicit desired behaviors one must first understand the motivations behind the behavior and the cultural evolution that informs it. In the context of my study, I sought to

understand millennials' motivations using psychological theories, as advocated by Lynn and Tybur, to specifically understand the millennial view of distracted driving in order curb it via policy initiatives.

Public policy is more than understanding a problem; it is understanding and predicting how the public will respond to that problem. Distracted driving is a problem because of its effect on the whole of society in terms of financial cost, risk, general public safety, and human toll. These effects are widely understood. What is less understood is why in the face of extant public policy, does the behavior continue? Lynn (1986) wrote that making well-considered decisions as to how to effectively approach a problem requires familiarity with not just the data on the problem, but also the aggregate behavior behind the data.

In the interest of achieving insights to create effective public policy, I developed a dual-theoretical framework for this study using both B.F. Skinner's theory of behavior modification and Maslow's hierarchy of needs motivational model. Current research regarding willingness to accept risk, prevalence of technology, conflicting messages regarding distractions, ineffectiveness of fear appeals, and the new millennial generation all demonstrate that public policymakers require an improved understanding of why distracted driving persists among millennials and what interventions would effectively curb or change this behavior.

Skinner's (1971) theory of operant conditioning holds that behaviorism relies upon rewarding good behavior and punishing bad actions. According to Skinner (1971), operant conditioning is dependent upon the rewarding of a particular stimulus-response

pattern. In other words, when the desired or undesired behavior occurs, either a positive or punitive measure reinforces or deters the behavior.

In a second theoretical consideration involving Maslow's theory (Maslow, 1943), physiological well-being and safety needs are lower-level basic needs while belongingness, esteem, and cognitive needs are higher-order needs. According to Maslow, when the lower level needs of physiological well-being and safety are "chronically gratified" as they are in modern society, they cease to exist as motivators or determinants of behavior. People are then motivated by their unsatisfied needs. To further this, Eckerman (1968) argues that people simply follow social norms, culture, which satisfy factors that have a greater pull than feeling safe or obeying the law. By examining millennial attitudes and compliance with current distracted driving policy in light of Skinner's operant conditioning and Maslow's hierarchy of needs, I hope to shed light on what motivates millennial behavior, and what interventions may foster behavioral change and in turn, significant social change.

Nature of the Study

In conducting this qualitative ethnographic study, I aimed to understand the behaviors and subsequent attitudes of millennials regarding distracted driving in light of the public policy seeking its elimination. This study was an effort to determine whether public policy interventions are changing distracted driving behavior, and what interventions, if any, could result in behavior modification among young drivers. This is an ethnographic study focused on millennial drivers who I understand to be a unique and new generation. These drivers are a cultural-sharing group possessing and exhibiting a

unique dynamic of shared behavior and attitudes. With this research, I attempted to explain their behavior and attitudes regarding distracted driving, a specific public safety and public health problem.

It was important to examine distracted driving in the context of an ethnographic study in order to not only observe behavior patterns of millennial drivers, but also to interview them regarding their behaviors and attitudes. My ultimate goal of this study was to determine of the effectiveness of current interventions such as publicly funded legislation, enforcement, and public education messages on distracted driving behavior and attitudes. To that end, I employed a naturalistic observation method with follow up focus group interviews of commuter university students in the state of Delaware. In order to understand and address the behavior, it was critically important to observe behavior and then address it with the observed population in order to assess motivation. Since researchers cannot see motivation, I used behavioral indicators in a focus group setting to better understand behavioral choices and patterns exhibited in the observation (Kretchmar, 2014).

This population was one of convenience. As a university, my study site has a large population of millennial students. As a commuter university, nearly all of its students drive to school. Observing the behind-the-wheel behaviors of the students at a central location was both feasible and desirable for collecting true behind-the-wheel behavior data as it occurred. The sample size was 100 motor vehicles. I observed drivers as they entered or exited the campus during peak commuter hours. Observed behaviors included:

cell phone use by talking, reading, or texting; passenger interaction; manipulation of in vehicle controls; eating; drinking; and other behaviors not required for the task of driving.

While my observation included students from Delaware, Maryland, New Jersey, and Pennsylvania because of the location of this university, some of the students were Delawareans who learned to drive in Delaware high schools. Delaware is one of only two states that include driver education in public and private high schools as part of the curriculum (Delaware Department of Motor Vehicles, 2014). As such, millennial drivers from Delaware have received a strong, concentrated, and concise messages regarding distracted driving behavior. Delaware was among the first to adopt a ban on hand held cell phone use and texting. Delaware was also a recipient of grant money to educate and enforce focused driving behavior (DOT Launches Faces of Distracted Driving Site as Part of Ongoing Awareness Campaign, 2011). This study is an examination of what happens when public policy, culture, and behavior collide.

Definitions

Drowsy driving: Driving while fatigued, medicated, alcohol-influenced, or sleep deprived. Considered by some experts to be an underreported form of driver distraction and a factor in 72,000 crashes, 44,000 serious injuries, and 800 deaths in 2013. Drowsy driving crashes tend to be at high speed, serious, and when the driver is alone and does not attempt to avoid the crash. They happen most frequently in late afternoon or at night, and affect shift workers and young males aged 16 to 29 with the greatest frequency. (NHTSA, 2015).

Distracted driving or driving while distracted: Engaging in any behavior other than driving while operating a motor vehicle. Distracted driving includes using technology such as global positioning systems (GPS), cellular phones (including texting or talking), computers, radios, tape players, MP3 players, and also includes behaviors such as eating, drinking, shaving, other personal grooming, interacting with passengers, securing or looking for objects in the vehicle, adjusting environmental controls, responding to other drivers, reading, turning around, "rubber necking," being tired or physically unfit to drive, being emotionally upset, being unprepared or focused on something other than driving. (GHSA, 2010; Ibrahim, Anderson, Burris, & Wagenaar, 2011; Klauer et al., 2014).

Millennials: The generation of people born between 1982 and 2004 (Howe, 2000).

Naturalistic study: An observational study of driving as it occurs. It takes into account all conditions, circumstances, and responses as they happen (NHTSA, 2014).

Near miss: An observational categorization to describe when a driver comes close to hitting an object, person, or vehicle because of inattention. Specific behaviors include stopping short, squealing tires, or veering to the right or left to avoid a collision (NSC, 2013).

Public policy: Action taken by legislative, executive, or judicial branches of government to enact codes of conduct among the electorate in concert with current customs or perceived need in order to protect the health, safety, and welfare of the public (Lynn, 1986).

Assumptions and Limitations

My most basic assumption was that millennials are a culture-sharing group of individuals who own and use cellular phones. As the first generation for which the cellular phone is an integral cultural item (Syed, 2011), it is appropriate to assume that millennial attitudes might be dramatically different from those of older drivers.

Given statistics and research, it is reasonable to assume that most drivers engage in distracted driving at some point (Atchley et al., 2012). Because observation of driving behavior is regarded as a valid method of data collection (Patton, 2002), my observations of the driving of students at a commuter university during peak commute hours yielded useful data for analysis. The observation portion of my research included all forms of visible distraction including cell phone use, talking, singing, eating or drinking, passenger interaction, and manipulation of vehicle controls. There may be other distractions, such as state of mind or body, which are not easily discernable via observation. It is noteworthy that this same limitation exists for law enforcement, complicating consistent enforcement of legislation regarding the behavioral and public safety issue of distracted driving (GHSA, 2014). I was at the same disadvantage as law enforcement, but this disadvantage was beneficial in terms of applied research, because it provided a firsthand frame of reference for discussing the need for improvement regarding enforcement of distracted driving policy.

An additional limitation to my study was that, at present, public policy addressing distracted driving can only feasibly limit the number of passengers driven by drivers who are under 18 and the use of cellular devices while driving. To date, no state bans all cell

phone use in vehicles (GHSA, 2013). Legislation is under consideration in New Jersey regarding implementing policy to address drowsiness, eating or drinking, and use of GPS devices while driving.

Several limitations resulted from the use of focus groups. Discussing personal behavior in a focus group setting may have had a negative effect on transparency among the students, discouraging candor regarding personal behavior. It may have fostered posturing, and student participants may not have fully realized the prevalence or frequency of their own conduct while driving. From a sample of drivers who commute during the observed times, I recruited two groups of 6 to 12 via social media.

Conversely, the purpose of the focus group was to gather data generated as a result of group interaction. Focus groups offer the advantage of a safe and supportive environment in which sharing may occur that may not happen in a one on one interview. Bagnoli and Clark (2010) maintain that when seeking collectivistic information such as normative social behaviors and attitudes regarding distracted driving, the use of a focus group offers many benefits over the use of interview. Those benefits include fostering the generation of new ideas and suggestions for improvement, the revelation of multiple points of view, and the empowering of the participants by giving them a forum in which to discuss, in depth, an issue relevant to their lives.

Significance

This study is significant in multiple ways. The millennial generation is the emergent generation of new drivers for whom technology use is socially, functionally, and fundamentally inherent. This cultural group is distinct from those who have gone

before them in part because of the prevalence of technology in their lives. It is a different generation with different motivations (Howe, 2000). As such, response to conventional forms of governance and policy making is likely different from that of previous generations. Examining and understanding those differences is an integral step to achieving policy-driven social change resulting in greater public safety.

This study revealed attitudinal and behavioral information regarding distracted driving among millennials, the least experienced driving group for whom the primary cause of death is car crash (Klauer, 2014). Examining attitudes, normative behaviors, learning styles, and social mores among this millennial generation may lead to targeted interventions and public policy changes which can save lives while more efficiently using public funds. This study revealed the critical importance of reevaluating how public policy is crafted, and will hopefully lead to the employment of strategies which incorporate goal setting and behavioral theory regarding motivation in order to achieve established goals and to stay abreast of technological strides and cultural mores as they relate to changing behavior (Lynn, 2007).

Lastly, this study is also an examination of the use of effective marketing techniques in effecting public policy. As Chiriquí et al. (2011) identified, "what gets measured, gets changed" (p. 21). Chiriquí et al. advocated that a systematic, thorough, and planned evaluation of laws and policies is critical to determining their effectiveness and to fostering appropriate and effective decision- and policy-making in the future. This is particularly applicable to public health laws and policies such as driving crashes and fatalities. Following their findings, I designed this study to measure the effectiveness of

distracted driving policy efforts by observing and discussing distracted driving behavior with millennial drivers.

Summary

This chapter introduced the study. Included in this chapter was a problem description, definitions, significance, background, purpose of the study, theoretical framework, and research questions. I offer a detailed discussion of my methodology of in chapter three.

Despite enhanced policy efforts to deter distracted driving, including legislation and public awareness campaigns, it continues as a significant public health and safety threat (NHTSA, 2011). The lack of qualitative research regarding the millennial generation and their distracted driving behaviors indicated a need for specific scholarly inquiry. Areas in which research was needed included an examination of cultural aspects of distracted driving, distracted driving in the context of risk perception, and an examination of distracted driving behavior among the target group (Weller et al., 2013; GHSA, 2014). My inquiry provided information necessary to reduce the prevalence of distracted driving as a contributing factor to car crash injury and death among millennials, and I may also assist policymakers in creating effective policy (Rowden & Watson, 2013; May & Jochim, 2013).

In Chapter 2, I offer a review of scholarly research, statistics, and studies to trace the evolution of distracted driving as a significant public road safety threat. I also included an examination of technological impacts on driving, the culture surrounding distracted driving, and public policy efforts to influence and change distracted driving

behavior. Chapter 3 examines the methodology I employed to research this problem and includes my justification for the use of focus groups in this study. I also offer details regarding the convenience sample population, location, observation, and focus group. Chapter 4 details the research results and analysis, while Chapter 5 offers my conclusions.

Chapter 2: Literature Review

Introduction

This study explored the influence of public policy, in the form of laws and public education intervention, on distracted driving behavior among millennial drivers. In this study, I focused on millennials because that generation represents both the age group at greatest risk for car crashes and the first generation for which technology use is pervasive both in and out of vehicles (Klauer et al., 2014; NHTSA, 2013). Research has clearly established that car crash is the primary killer of millennials (CDC, 2013) and that distracted driving remains a significant public safety and public health threat (GHSA, 2014). Studies have demonstrated that a strong correlation among factors such as driving experience, task saturation, and poor risk or hazard perception capabilities, coupled with the draw of distractions, result in unsafe and sometimes fatal conditions for millennials (Guo et al., 2013; Lee, Simons-Morton, Klauer, Ouimet, & Dingus, 2011; Shah, Gokhale, & Mehta, 2010). Epidemiological, risk-perception, observational, naturalistic, meta-analytic, simulator, and crash-based studies all indicate that fewer distractions and total focus on the driving task are the keys to a successful ride (Cooper & Strayer, 2008; Liu & Ou, 2011; Redelmeier & Tibshirani, 2001; Svenson & Patten, 2005; Wogalter & Mayhorn, 2005; Yager, Cooper, & Chrysler, 2012). Despite policy interventions, distracted driving remains a significant public safety threat (Oster Jr. & Strong, 2013).

Bingham (2014) noted that the perpetuation of distracted driving behavior in the millennial generation may be linked to three factors: prevalence of driving distractions including technology in the vehicle, inexperience which includes poor ability to

recognize and assess risk, and motivation or lack of motivation to avoid the practice of distracted driving. Bingham asserted that with the combination of elevated crash risk, propensity to distraction as a sensation-seeking activity, and the social and culture norms at play among millennials, improved awareness, policies, and enforcement are necessary because distracted driving will remain a threat for many years (p. 54). I investigated these factors from the perspective of the millennial population using observation and focus groups.

Presented here is an overview of the history of distracted driving as a public safety issue, including discussion of the varieties of distractions and their evolution. The use of technology as a driving distraction is of particular note, but this research included all forms of distracted driving. I reviewed literature examining millennial culture and behavior, and also literature on the effects of distracted driving with regard to road safety, public safety, and their cognitive, visual, manual, and psychosocial implications. I also reviewed literature on behavior modification, deterrence, and prevention efforts including the domains of public policy, public education, and technology. In what follows, I note several instances in which counter evidence shows that distractions can, at times, be valuable and efforts toward deterrence are not always well founded.

Literature Search Strategy

My search yielded research published after 2006, though some literature dated back further to provide a historical perspective regarding the evolution of technology and distracted driving as road safety and public health and policy issues. I used multiple disciplinary databases including Thoreau, EbscoHost, Academic Search Complete,

Google Scholar, SAGE, Science Direct, Policy and Administration, Political Science Complete, SocIndex, and ERIC to be certain that I accessing information from multiple psychological, educational, public administration, legal, medical, public safety, science, business, and technology databases. Key search terms and phrases included the following: *driving, distracted driving, enforcement of distracted driving laws, millennials, teens, teen driving, safe driving, distractions, driving behavior, car crashes, cell phones, technology, distracted driving and adolescents, teen or adolescent driving behavior, driving and public policy, driving and marketing, driving and technology, driving fatalities, driving and legal implications, distracted driving laws, driving laws, cognitive function, motivation, Skinner's theory, Maslow's theory,* and *learning*.

While extensive research exists on distracted driving, little exists that focuses on the evaluation of public policy efforts designed to influence distracted behavior from the perspective of those to whom these efforts are directed. In fact, it is only since 2011 that 47 states have adopted some form of public policy surrounding the use of technology while driving (New Approaches to End Texting While Driving, 2013).

Theoretical Foundation

The theoretical framework for this study was a dual theoretical model combining Skinner's (1970) theory of operant conditioning and Maslow's (1987) hierarchy of needs. Both theories work to explain human behavior and how to change or influence behavior using motivation as a tool. The research questions I posed in this study take three possible trajectories. One possible trajectory follows Skinner's theory (1970) to approach motivation in terms of fear or lack of fear of consequences stemming from driving while

distracted. Even though laws prohibiting certain forms of distracted driving exist in most states, it is not clear if the penalty or fear of a penalty is sufficient to deter the behavior. Another possible trajectory follows Maslow's theory (1987) to approach motivation from the perspective of whether the perceived threat of an action supersedes the driver's ability to cope and satisfy other needs. Does higher-order need fulfillment motivate millennials to drive while distracted? A third trajectory was that current millennial behavior is governed by a combination of the two factors, or perhaps, neither. By addressing distracted driving from the aspects of both operant conditioning and human motivation, I was able to consider how outside influences such as technology and cultural norms inform distracted driving behavior.

Cognitive theory predicated on Skinner's theory (1970), as well as others, is that reinforcements, positive or negative, influence behavior (Kretchmar, 2014). Expectations, beliefs, and experiential learning also influence behavior and that behavior changes as a result. Skinner, in his operant conditioning theory (1970), refers to the stimulus-response factor in which reinforcers play a critical role in influencing learned behavior. Skinner stated that the more deferred a negative response for a behavior, the more likely one is to continue it (p. 36). Situating Skinner's theory in the context of distracted driving, if there is low expectation of adverse consequences such as those imposed by law enforcement or a crash, the behavior is reinforced and perpetuated. No adverse consequences result in repeated behavior (Skinner, 1970).

Skinner (1989, p. 14) stated that "behavior is shaped and maintained by consequences. We do what we do because of what *has* happened, not because of what

will happen." This supports Skinner's earlier contention in his theory of operant conditioning (1970) that positive outcome encourages positive behavior and negative outcome deters it. The more one experiences positive outcomes, the more frequent positive behavior occur. Normative social behavior occurs because the outcome is acceptable or positive to the performer in some way. According to Skinner (1989), the only way to alter that behavior is to change the expected outcome. Understanding millennials' expectations regarding the potential for a negative outcome when driving distractedly is a key component of changing behavior.

In 1954, Maslow (1987) classified human needs into five categories from the most basic to the most complex as illustrated in Figure 2. The categories, from lowest to highest are: physiological, safety and security, belongingness, esteem to the highest, and self-actualization. According to Maslow's (1987) definition, safety needs include security from crime and fear, and protection of family and property. Maslow (1987, p.18) wrote that in American society, most adults are satisfied in their safety needs. Laws and government largely ensure the safe running of a chaos-free society. In regard to driving, the proliferation of safer vehicles, improved public safety laws and enforcement, and safety belt use satisfy that second tier of safety needs satisfaction. In a recent interpretation of Maslow's theory, Gorman (2010) reasons that a person cannot pursue higher order needs without having the lower level needs such as food, shelter, or safety fulfilled as a prerequisite. Under this assumption, distracted driving is either due to poor risk cognizance on the part of the driver or because the driver feels safe and is both motivated and able to pursue higher need satisfaction.

Figure 2. Maslow's hierarchy of needs. Adapted from "The application of Maslow's hierarchy of needs to the entrepreneur's motivation – the examply from region Pardubice," by P. Cizek, 2012, *Scientific Papers of the University of Pardubice, Series D,Faculty of Economics & Administration, 18*(24), p. 45. Reprinted with permission.

Maslow, in his theory (1987), emphasized the critical importance of culture in personal fulfillment. Safety needs are satisfied in great part by society's law and order approach to safety. Belongingness needs involve affiliation with a group and esteem needs require achievement or recognition. Without societal norms as a guide, people have a lack of direction in how to satisfy their needs. Culture provides the framework for personal definition, motivation, and achievement which is socially recognized (Gorman, 2010). Exploring cultural attitudes, values, and norms in light of distracted driving

illuminates what is valued by millennials and their level of needs satisfaction regarding safety, belongingness, and esteem, and ultimately leads to an improved understanding of the millennial culture.

To summarize, I used a dual theoretical framework to examine the cultural motivation of millennial drivers from the perspective of both operant conditioning and needs satisfaction. Federal crash statistics from the GHSA (2014) show that despite policy interventions, distracted driving remains a significant public threat endangering everyone on the roadways. According to Gorman (2010) culture plays a large part in dictating what behaviors are acceptable and desired. Understanding the cultural motivations to continue a dangerous behavior, particularly among the newest drivers, sheds light on new strategies to create more effective public policy for this growing and serious public safety threat, and may help to deter or remediate distracted driving behavior and ultimately save lives.

Literature Review Key Concepts

Driving is fundamental to life in many countries, but particularly in the United States where driving is essential to earning a living, going to school, being autonomous, becoming independent as a teen, staying independent in older years, and even vacationing (Lee, 2008). Earning the ability to drive is also a rite of passage in the United States for which pre-drivers of 14- or 15-years of age begin counting down to their 16th birthdays. Issues surrounding driving safety, traffic, and motor vehicles are topics on which nearly everyone can relate, complain, or opine. The fifth leading cause of death among all

Americans and the leading cause of death among those under 25 is motor vehicle crash (Chriqui et al., 2011).

Crash deaths among the young are both overrepresented in the population and particularly emotionally upsetting as the loss represents life snuffed out before its time (Lee, 2008). The prevalence as a cause of death among young people, termed millennials for this study, are due to a variety of factors including inexperience, impairment due to the use of alcohol or drugs or fatigue, and most recently, perception and attention deficits (Koestner, 2012). The latter are issues are particular to the 21st century as the prevalence of distractions grows. Among these are the cellular phone and other in-vehicle devices, which divert the attention of the driver from the cognitive, manual, and visual, auditory, and psychosocial demands of the driving task. With more vehicles on the road, focusing the attention on attention while driving is critical toward reducing injuries and fatalities.

The primary responsibility of the driver is the safe and legal maneuver of a vehicle and its passengers. The driver must consider the safety of other vehicles, motorists, pedestrians, bicyclists, and the like on the roadway concurrently (Svenson & Patten, 2005). Making decisions, observations, anticipations, and adaptations given road conditions are included as those primary tasks. Secondary and even, tertiary tasks, such as coping with a vehicle indicator light or malfunction, controlling the vehicle climate environment, programming the radio, coping with passengers, and using technology serve to distract the driver from that primary purpose and compete for the driver's limited cognitive, visual, manual, and psychosocial capacity (Svenson & Patten, 2005).

According to the Center for Disease Control (2010), there are three main types of distractions while driving. These are visual, which take the driver's eyes off the road, manual, which results in the removal of the driver's hands from the steering wheel and cognitive, which result in the driver's mind being focused on something besides driving. The World Health Organization (WHO, 2011) includes auditory distraction as a fourth category, when the driver responds to a ringing phone, the sound of a text arriving, an ambulance siren or the radio. For the purposes of this research, a fifth distraction category presents itself, particularly among millennial drivers, which is the psychosocial distraction (Scott-Parker, Watson, King, & Hyde, 2012). Psychosocial distraction includes the draw or addiction of the cellular phone, social media, and higher order social needs such as belongingness. Research shows it is important to include fourth and fifth categories of distraction, the auditory such as loud conversation or a siren, and the psychosocial distraction of an incoming text message particularly when focusing on the millennial driver (Scott-Parker et al., 2012; WHO, 2011).

Distracted driving impairs a driver's awareness in every regard from situational to performance, risk perception, to decision-making (Rowden, 2013). Estimates show that 80% of crashes occur within 3 seconds of the performance of some distracting task (Ibrahim et al., 2011). These statistics are merely estimates because underreporting of cellular phone involvement and absence of reporting of other driving distractions such as eating, drinking, and passenger distraction are not commonly tracked or reported (Elvik, 2011; Rowden, 2013). In the United States, crash investigation by local law enforcement is often limited by training and time to devote to investigation (Elvik, 2011; Oster Jr. &

Strong, 2013). Inconsistent enforcement due to the structuring of some laws toward a particular age group, the limiting of laws toward particular behavior such as talking or texting while driving, the adoption of exceptions such as use of a hands free device and the difficulty in detection of distracted behavior by law enforcement sends a mixed message to drivers (Sherzan, 2010). As a result, current research finds that controlling or eliminating distractions goes far beyond simply adopting legislation regarding the use of cellular phones or controlling the number of passengers, but rather looking at the root of the problem (Cowley, 2013).

Despite significant government intervention and public/private partnerships including insurance companies, car manufacturers, cellular phone companies, even NASCAR and the Professional Golfers' Association (PGA), which emphasize the devastating results of driving while distracted, new traffic data issued for 2012 continues to demonstrate that at any moment 660,000 drivers use electronic devices while driving . This number remains unchanged since 2010 (New Approaches to End Texting While Driving, 2013).

While 74% of drivers surveyed by NHTSA (2013) reported their support for limitations or all out bans on the use of electronic devices while driving, these respondents also reported occasionally continuing to use handheld cellular devices themselves. Among the 16 to 20 year age group, nearly half report answering or placing a call on most trips (NHTSA, 2013, p. 16). This data is both relevant and concerning because in 2010, NHTSA launched its distraction.gov website and funded millions of dollars' worth of taxpayer dollars aimed at curbing distracted driving behavior in the

United States using legislation, enforcement and education (Tison, Chaudry, & Cosgrove, 2011).

Millennials

Millennials are a unique historical group also called the Net Generation or Digital Natives (Jones & Healing, 2010). Representing a marked deviation from the previous Baby Boomer and Generation X of their parents, millennials are about information, explanation, and connectedness, not "sex, drugs, and rock and roll" (Howe, 2000, p. 25). The millennial generation also characterizes itself with the amount of pressure under which they perceive themselves. Pressure to excel in school or sports, pressure to get into college, and pressure that everything they want in life is dependent upon their own successes or failures. Studies show millennials feel overwhelmed and stressed, sometimes depressed because of this, and compensate by behaviors such as multi-tasking, risk taking, and binge drinking (Howe, 2000).

The single greatest difference among the generations is technology. In a survey conducted by Jones et al. (2010), millennials identified themselves as having greater confidence, skill level, and facility with technology. As a result, millennials have not only an increased capacity to use and adapt to new technology, but they also require it. Combined with the pressure for success, technology affords millennials with a completely new host of opportunities and issues, including distracted driving, as they multi-task their way to success. As such, teaching and influencing millennials requires a complete shift in philosophy (Young, 2012). Details and constant tweeting, texting, and Facebooking are among the cultural connectedness changes with which today's educators

must cope (p. 12). This shift may also extend to behavior modification efforts at the public policy level.

According to Howe and Strauss (2000), millennials will outnumber previous generations dramatically topping 100 million (p. 316). It is the most ethnically and racially diverse generation in history. Given the vast numbers of the millennial generation, their facility with, expectation and demand for new technology in all things, and their demand for success and connectedness, understanding them and evaluating them in the context of distracted driving behavior and the interventions regarding it is necessary.

Millennials are most susceptible to distracted driving as they are the first generation of drivers for which technology in the vehicle, specifically cellular phones, is indigenous. Previous generations recall a time when there were no cellular phones or global positioning devices in the vehicle. Atchley (2012) contends that distracted driving among millennials is particularly difficult to overcome because of the prevalence of driving distractions, the social reward factor of the cellular phone social connectedness, and the relative laxity of enforcement.

Dellinger and Sleet (2012) suggest that the perpetuation of distracted driving despite bans is because drivers do not consider distracted driving as dangerous as drunk driving. They advocate evaluative research to assess the effectiveness or lack of effectiveness of this policy (p.281). Add to the equation that car crash is the number one cause of death among this age group, distracted driving becomes not just a serious road safety threat but also a challenging public policy issue (p. 283).

The Tech Explosion

Cellular phones appeared on the market in 1983, one year after the appearance of the millennials as a generation. Millennials do not know a world without cellular phones (Howe, 2000). The initial units were expensive, large, cumbersome, and less than reliable for common use. Nevertheless, convenience, connectedness, even safety were greater draws and the potential for an explosion in the cellular phone field existed (Selian, 2004). What was not realized was the impact that cellular phones would have on society as people became more connected and a new generation, millennials, would grow up to rely on technology to what some research indicates is an addiction (Curry, 2002).

> The hypothesis being that adolescents' quest for an individual identity and for peer bonding, functions which used to be fulfilled by habits such as smoking, are now taken over and supplied by the use of mobile phones. Addiction and addiction therapy, *a la* smoking, are the characteristics of adolescent mobile phone usage. (Selian, 2004, p. 1)

As early as 1997, it was apparent that the new technology of phones in cars would be a new challenge for drivers, law enforcement, and public policymakers. Sherzan (2010) comprehensively examined the vastness of the cellular phone industry's explosion into the mainstream culture and the value of a policy response to it. As the cell phone ownership topped 270 million in 2008 (p. 218), cellular phone use while doing other things, particularly driving, exploded and with it car crashes and fatalities (p. 219). According to Sherzan, the use of hands free devices does little to create a safer driving environment. Yet, despite the plethora of data supporting the dangers of cell phone use

behind the wheel, it continues. Sherzan suggests that as today's brain evolves, it requires constant input otherwise driving becomes boring and tedious without stimulation (p. 230). This new psychosocial requirement for constant engagement combined with variances in laws among states, difficulty in enforcement, and lenient penalties, Sherzan advocates for complete cell phone ban in all vehicles (p. 263).

According to a Pew Research survey (2013), 96% of American millennials own cellular phones. The average age of first cell phone ownership is 13. Forty five percent of businesses use wireless phones as their primary point of contact. Since 2002, the cellular phone has become the most desired item of technology among millennials (Chóliz, 2012). While nearly all young people have one, the cellular phone represents not only a communication tool, but also a social facilitator, informational resource, secretary, calendar, safety item, entertainment source, and virtual library of information of any kind. The acquisition of a cellular phone is a rite of passage in its own right (p. 33).

A 2007 study by Cramer et al. (2007) revealed the vastness of the cellular phone use distraction problem among college-aged drivers. While NHTSA reported at the time about an eight percent incidence of cell phone use, Cramer et al. conducted an observational study of college students exiting a parking lot over time concluding that college students underrepresented their actual cell phone use by as much as 100% (p. 182).

Driven to Distraction

Studies by Tison et al. (2011) examined why millennials drive while distracted. They offer three possible explanations: inexperience as evidenced by poor risk perception

and/or poor situational awareness, technological dependence, or a cultural propensity to multi-task. On examination, the cognitive and psychosocial drive the manual, visual, and auditory with regard to distractions and are the most critical to improve or control when it comes to driving distractions.

Numerous studies evaluated risk or hazard perception among young drivers. Via a national survey regarding cellular phone use, Tison et al. (2011) asked 6,000 drivers over the age of 18 from all 50 states to self-report their cell phone and distracted driving behavior. This study revealed that 77% of respondents of all ages reported they were willing to take a call. Forty nine percent of 21 to 24 year olds self-reported that they sent texts or read emails while driving. Eighty percent reported they engaged in talking to passengers, 65% adjusting the radio, and 45% eating or drinking while driving (p. ii). Forty nine percent of respondents reported they perceived that there was no difference in their driving performance while engaging in those tasks (p. 54). When asked if they would feel unsafe if they were a passenger in a vehicle in which a driver engaged in such tasks, 90% reported that they would feel unsafe (p. 49).

In 2005, Wogalter and Mayhorn examined perceptions of driver distraction among self-reported cell phone users and nonusers. Three hundred thirty volunteers from North Carolina responded to their survey regarding their personal cell phone use, use of various safety devices such as hands free devices or Bluetooth with cell phone use, and their perceptions regarding the safety of cell phone use while driving. Of the volunteers, 72% owned cell phones and 81% of them reported that they regularly used the device while driving. At the time of the survey, legislation regarding the use of cellular phones

while driving was relatively new. Users felt that they improved with practice and were willing to accept the risks anticipating the more they did it, the better they would become at it. Nonusers sensed the risk to cellular phone use while driving.

Ivers et al. (2009) evaluated risk perception among novice drivers aged 17 to 24 via their DRIVE study. Ivers et al. linked survey data to two years' worth of licensing and crash reporting data among the group. Analysis of the data showed that high scores on the survey items regarding high-risk driving items were associated with an increased crash risk. The researchers identified shades of gray in the respondents' driving risk assessment. For example, the respondents did not consider it risky to drive at speeds in excess of the speed limit if it were within 10 to 15 miles of the posted speed limit. Respondents did not consider driving with passengers to be as risky as driving alone. They considered speaking on the phone to be less risky than texting, dialing a phone call or answering a phone call.

Scott-Parker et al.(2012) evaluated the relationship between certain demographic factors including anxiety, depression, sensitivity to reward or punishment, propensity to thrill seeking, and driving risk perception in a survey of 761 young drivers aged 17 to 24. Scott-Parker et al. revealed that while the drivers were sensitive to punishment, it was not a significant factor in curtailing risky driving behavior. This was an important discovery, as most public policy regarding driving relies upon punitive law enforcement response, "…continued reliance upon punishment to curtail risky behavior is not supported by the findings" (p. 267). They found reward and sensation seeking were more likely to change risky driving behavior. Additional factors determined by them regarding risky driving

behavior among the age group noted that risky driving was associated with a positive reward of feelings of excitement, power, and control. Emotions such as depression or anxiety were also predictive of risky driving behavior.

One of the first observational studies of its kind in the United States, conducted by Simon-Morton et al. supported the notion of poor risk perception. Simons-Morton et al. (2011), researchers at Virginia Tech, examined risky driving among novice drivers and their parents using data-recording systems in their personal vehicles over an 18-month period. Overall, novice drivers were involved in 279 crashes or near crashes as compared with 34 among the parents. More importantly, the researchers found that the perceptions of the novice drivers were not as keen as that of their parents as they experienced more g-force incidents due to late or heavy braking, rapid starts, rapid turns, and sharp turns. The importance of the study was that it involved the observance of novice drivers' driving behavior over a long time period in their own vehicles. Because of this, the researchers were able to conclude that while there was a decline in crash and near-crash rates, overall the crash rate throughout the 18-month period remained significantly higher than that of adults. Actual risky driving behaviors including distracted driving, heavy braking, rapid starts, rapid turns, and sharp turns did not decline with experience, thus providing no support for theories that risky driving declines with experience.

Guo et al. (2012) classified 42 teenagers as low-, medium-, or high-risk drivers in their Naturalistic Teenage Driving Study. They based their classifications upon data collected in a naturalistic study from video recording devices in the drivers' own

vehicles. After tracking the young drivers over an 18-month period, Guo et al. concluded that experience does not improve the safe driving performance of the high-risk driver, though it does improve that of the medium-risk driver.

Multi-Tasking Propensity

Researchers have evaluated the drive to driving distraction using cellular phone and addiction studies. A study by Chóliz (2012) at the University of Valencia recognized the dependence of adolescents on cellular phones and the coincidental growth of that industry in a relatively short time. Chóliz's goal was to develop a questionnaire to diagnose mobile phone addiction. His final questionnaire included 22 questions utilizing elements contained in the Diagnostic and Statistical Manual for Mental Disorders (APA, 2013). Chóliz provided three reasons for the development of this questionnaire. First, despite the inherent value of a cellular phone, his target population possessed qualities, which made them susceptible to abuse. Second, there was no consensus regarding the risk of a cellular phone addiction. Finally, millennials as digital natives were likely to develop a far superior skill governing the use of the cellular phone making them vulnerable to addiction. He administered the questionnaire to 2,486 students. Categories of evaluation included abstinence, discomfort, and ability to control the use of the cellular phone. Results showed that problems with control regarding cellular phones *increased* with age. Participants showed signs of addiction including discomfort when they could not use the phone, difficulty with authority over the phone use, interference with other activities, and excessive use fringing upon abuse.

Weller, Shackleford, Dieckmann, and Slovic (2013) evaluated cellular phone use while driving in the context of possession attachment as an overlooked risk factor in distracted driving. One thousand six participants aged 17 to 28 were surveyed regarding driving and the degree to which they used their phones while driving. Weller et al. found that the lower the participants' perceived risk of distracted driving, the higher the use of cellular phones while driving. Those who texted often, tended to text often while driving. Those who perceived fewer risks while driving and felt greater cellular phone attachment were more likely to text while driving. The most important factors revealed by Weller et al. included that greater risk perceptions were associated with lower incidences of self-reported cellular phone use while driving and that perceived attachment to cellular phone may be a measurable risk factor for increased cellular phone use while driving.

Lee, Lee, and Boyle (2009) and Ranney, Harbluk, and Noy (2005) used simulator studies to evaluate cognitive load. They measured in-vehicle presences such as passengers and "scene clutter" such as indicator lights, environmental controls, and radios. They determined that cognitive load, or over load, caused drivers to miss important roadway cues, delay reactions, and devote less time to pedestrian traffic (Lee et al., 2009). Ranney et al (2005) found that drivers compensated for overload by increasing following distance, they also demonstrated deterioration of their vehicle control and target detection skills.

Yannis, Laiou, Papantoniu, and Christoforou (2014) also demonstrated the overcompensation for cognitive over load. They presented 34 young drivers with various traffic scenarios such as traffic congestion, weather conditions, and time of day.

Participants engaged in texting while driving in these scenarios. Texting while driving resulted in significant decreases in speed and reaction time in both urban and rural settings. It also resulted in greater probability for crashes as the driver's reaction times were delayed due to the texting distraction. They also demonstrated the greater the speed while distracted, the greater the likelihood of crash.

Liang and Lee (2010) conducted a simulator study of visual and cognitive distractions and their combination. They found that visual distractions alone or a combination of visual and cognitive distractions combined had the most profoundly detrimental effect on driving performance. Combined distraction was particularly detrimental to a driver's hazard perception.

Another study, known as the Gorilla study (Dattel et al., 2011) was designed to measure cognitive over load in terms of situational awareness and inattentional blindness on working memory and driving hazard detection. Dattel et al. corroborated much of the literature in terms of why drivers drive distracted. In the study, 36 college students watched a video, which featured a person dressed as a gorilla walking among basketball players during a game. From there, the researchers divided the group into two groups: one of those who saw the gorilla (56%) and one of those who did not see the gorilla (44%). Then, the participants watched additional driving videos while simultaneously being asked 20 questions to evaluate situation awareness, working memory, inattentional blindness, and ability to predict and detect hazards. The results suggested that those who did not see the gorilla initially also took longer to respond to certain non-driving related questions while watching the second set of videos, than did the group who saw the

gorilla. The groups, however, did not differ in the memory tests or the situational awareness tests. The group, which did not see the gorilla, performed better on the hazard perception test and working memory.

The researchers demonstrated that there exists a propensity to multi-task while driving which includes a substantial psychosocial motivation toward interacting with others via text, in vehicle conversation, or cell phone conversations. This study clearly established that drivers are unaware of the level of cognitive involvement they expend when engaging in these practices or the level of attachment they have to these practices that supersede the concern for safety.

The Evidence and the Effects

In the past decade, 46 states including Delaware, Maryland, and Washington have identified distracted driving using a cellular phone as an impaired driving category for target enforcement (Ursino, 2007). In one of the most recent naturalistic studies of distracted driving by researchers at Virginia Tech, Klauer et al. (2014), concluded that crash risk increases exponentially with the performance of secondary tasks among novice drivers. Using two groups, one of novice drivers and one of adult experienced drivers, the less experienced drivers demonstrated more attention to secondary tasks than the experienced drivers, thus putting them in more peril with regard to crash or crash potential.

In an earlier naturalistic study, researchers at Virginia Tech (Klauer, Dingus, Neale, Sudweeks,and Ramsey, 2006) calculated that in a 100-car study the crash risk increases by three times for drivers who are engaged in distracting behavior, which they

defined as taking one's eyes off the road for two seconds or more. The distracting behaviors identified during this study included makeup application, reading, reaching for objects, tuning the radio, and using a cellular phone. Furthermore, cellular phone calls were identified as being the distracting behavior most associated with observed crashes or near-crashes. In yet another earlier study, Strayer and Johnston (2001) compared crash rates of distracted novice drivers with distracted adult drivers. They showed the novice, or teen drivers, experienced eight times the crashes while distracted in comparison with mature drivers.

In a 2012 study, Froese considered the problem of driving distractions from the opposite perspective, the use of technology, specifically texting, while engaged in classroom learning. Students, specifically college students of the millennial generation, took a 10 question quiz while texting. The students then estimated their anticipated test scores prior to taking the quiz. The point of the experiment was to demonstrate the loss of cognition while being distracted by the demands of a cellular device. Students expected to perform poorer on the exam when texting and did, by 30 %. More importantly, the researchers indicated that the students knew they would not perform as well and chose to do so anyway.

Horrey and Wickens (2006) evaluated the impact of cell phone use on driving performance by conducting a meta-analysis. They examined 23 studies focused on five driving variables including: driving performance, handheld v. hands free cellular phone, conversation v. data processing, conversation with a passenger, and simulator v. field studies. They showed that the primary cost to driving performance was the ability to

respond quickly and properly to a hazard. Response time for stopping was shorter and drivers tended to brake harder or respond in a more dramatic fashion than they would have if fully focused on the task of driving. They also concluded that conversation had a greater negative impact on driving performance than information processing, as it required greater creative responsiveness on the part of the driver than merely regurgitating information. Additionally, their study concluded that hands free cellular phone use had no advantage over hand held in terms of mitigating hazards. The hazard was equal regardless of hands free or hand held technology use.

Salvucci and Beltkowska (2008) conducted a driving simulator study of college students to evaluate the effect of conversation on driving. They revealed that cognitive distraction such as conversation profoundly impacted the ability to recognize and respond urgently to a memory-reliant driving task. The researchers found that a "cognitive bottleneck" occurs reducing response time.

Benedetto, Calvi, and D'Amico (2012) studied the effect of cellular phone use on driving performance. They observed drivers using both hands-free and hand-held cell phones via video. They concluded that there is a delay in decision-making and response when using cell phones while driving. Like Horrey and Wickens (2006), they also concluded that a hands free device did not improve performance.

Nevile (2012), in a naturalistic study, analyzed driver performance from the perspective of driver interactions including cell phone use, and conversations with one passenger, and three passengers. Paying particular attention to the driver's body movements while driving and engaging conversationally, Nevile noted that the driver's

engagement often led to instances of gaze shifting from the road, hands off the wheel, emotional outbursts and involvement, and even shifting in his position all in order to communicate. This study, according to Nevile, demonstrated the totality of the effect, physically and mentally, of distractions on a driver and his performance.

Shah, Gokhale, and Mehta (2010) calculated the effect of cellular phone use on reaction time. Studying 73 college students, they compared driving behavior reaction time with and without cellular phone use. The outcome revealed no discernible difference between male and female drivers. The authors concluded that reaction time increases with cellular phone use. Often drivers slow down to compensate for their distraction and in so doing, affect the highways and roadways with slower travel. Cellular phone use while driving also translates into more erratic driving with slower reaction time and deviated attention increasing crash threat.

Countless examples of the dangers of distracted driving, focusing heavily on the behind the wheel use of the cellular phone, both hand held and hands free, exist in the literature, thus providing foundation for a solid case for a considerable public health and safety threat grown out of personal behavior. Yet little analysis of the in vehicle behavioral responses from the perspective of the driver exists beyond surveying if they do or do not drive distracted (Ibrahim, Anderson, Burris, & Wagenaar, 2011). A problem exists from a health, public safety, public policy, and behavioral standpoint, yet no examination or analysis is provided for any steps to remediate or change that behavior for the public good. Ample documentation of the effects of distracted driving on driving performance exists. Negative memory capacity, impact to short-term memory, delayed

reaction time, impaired decision-making, poor risk or hazard recognition, and cognitive overload are among the side effects of driving while distracted.

The Interventions

Internationally, policymakers promote deterrence through education and legislation to combat distracted driving (Benedetto et al., 2012). Many nations such as Great Britain, Morocco, and Portugal have outlawed some use of cellular phones in vehicles (WHO & NHTSA, 2011). The Centers for Disease Control (2013) reported that globally, motor vehicle crashes claim 1.3 million lives annually.

Driver distraction accounts for a significant number of crashes and deaths in countries such as Great Britain, New Zealand, Colombia, Canada, Spain, and Australia (WHO, 2011). While most of this is related to cellular phone use, studies conducted in New Zealand revealed that other forms of distraction, such as passenger interaction, are often present but overlooked in crash investigation (p. 16). Efforts to address distracted driving internationally include bans on hand held cellular phone use, encouragement of hands free use, fines, and public awareness campaigns. Australia was one of the first countries to enact a hand held cellular phone ban. Despite this legislation, 23% of drivers still use cellular phones while driving and 30% of drivers under 25 continue to send text messages while driving (p. 31). Researchers who conducted a 2007 study in London showed a decrease in hand held phone use immediately after the enactment of legislation, but in a subsequent study two years later they showed an increase in the use of hand held phones (p. 32).

The Governor's Highway Safety Administration (2012) revealed that comprehensive state-by-state efforts including legislation, public education, and enforcement are required to make substantive changes to the practice of driving while distracted. Former GHSA Chairman Vernon F. Betkey, Jr. (GHSA, 2012) stated, "We need to develop a traffic safety culture which does not condone driving while distracted much like we have done with drunk driving."

Social media marketing is one strategy utilized to influence behavior among millennials. Kotler and Levy (1969) were among the first to identify the value of using social marketing concepts to train the American public to refrain from or change undesirable behavior and behave in a desirable way regarding issues such as seatbelt use and drinking and driving. The United States Department of Transportation used this tactic when it launched its own website entitled distraction.gov and designated April as distracted driving awareness month (DOT Launches Faces of Distracted Driving Site as Part of Ongoing Awareness Campaign, 2011). Lennon, Renfro, and O'Leary (2010) investigated the use of social marketing using fear appeals to deter distracted driving. Their target was the millennial generation. Thus far, researchers report mixed reviews on the success of this intervention.

Lennon et al. (2010) selected six public service announcements (PSAs) directed at young people. The messages addressed smoking, distracted driving, HIV, and drug use using fear appeals. They presented the six PSAs to 840 college students under 30 years of age. There was a pre-test administered which asked the students about their current behaviors regarding the selected topics. Then, the students watched the videos and

completed a post-test. Lennon et al. (2010) concluded that the students did not view their behaviors regarding distracted driving as distracted. Further, the fear appeals messages did not motivate the students to change. While females were more receptive than males, overall the response to the videos was that they needed to be more graphic, more realistic, and more legal threat needs to be present for the students to change. Lennon et al. recommended a stronger combination of legal and social interventions to achieve behavioral change.

In 2006, Clayton, Helms, and Simpson identified car crash as the number one cause of death among people aged three to 33. They conducted a behavioral study of the relation of public safety messages including the positive "I care" message to influence driving behavior, specifically to increase seatbelt use and decrease cell phone use. They concluded that a strong public safety educational message could possibly influence driver behavior. They did not evaluate the value of public policy efforts. The first legislation adopted in the United States was in 2007 (GHSA, 2010).

Steadman, Chao, Strong, Maxwell, and West (2014) evaluated the value of You Tube public service messages (PSAs) in changing the behavior of millennial drivers. A governmental organization affiliation existed in approximately one third of the videos included in the study. The researchers noted that one third of the videos to which their population sample was exposed involved texting and driving exclusive of other types of driving distractions. Few incorporated health behavior theory to encourage behavior change. Several included celebrities. Most videos included a crash scenario relying on a negative outcome as opposed to employing a positive visual message, for example a

young driver turning off a cell phone upon getting behind the wheel. They concluded that additional research and consideration of behavioral theory was required. Further, fear based interventions proved ineffective in stemming the tide of distraction regarding millennial drivers. Reasons for this include poor risk perception, acceptance of risk, and individual sensitivity toward reward and punishment (Scott-Parker et al., 2012).

As Ramirez et al. (2013) noted, parents play a valuable and often undervalued role in the intervention process. Since children model their behavior on that of their parents, Ramirez et al. demonstrated that parents play a vital role in curbing distracted driving behavior and encouraging the development of positive driving habits. Parents who not only talked about but demonstrated safe driving practices such as driving while focused, wearing seatbelts, eschewing the use of cellular phones while driving, and minimizing other distractions who also established and enforced home rules regarding such behaviors resulted in "real world delivery" of safe driving behavior among their young drivers.

According to the World Health Organization and the National Highway Traffic Safety Administration (WHO, 2011), continued development of behavioral modification and technological innovations, which are in their infancy regarding the problem of distracted driving, is key to curtailing distractions long term. Consistency in enforcement and improved understanding of the millennial generation is a key part of developing those modifications (p. 34).

The Counter-Evidence

Several studies evaluated included evidence that some level of distraction was beneficial or that a driver might personally benefit over time from distracted driving. Examination of those studies is warranted. In general, what is learned from these studies is that one distraction can keep drivers from another, perhaps more lethal distraction such as falling asleep behind the wheel or deviating one's visual or manual skills.

A simulator investigation (Atchley & Chan, 2011) into the effect of distraction, termed by the researchers as task interference, on driving vigilance revealed that some level of distraction is helpful to maintain focus. Use of a radio, for example, may deviate the driver from mind wandering resulting in improved vigilance to the driving task. Using three verbal task levels including no verbal interference, an ongoing verbal task, and a late one, Atchley and Chan concluded that a strategically placed task could help to reduce monotony and maintain the driver's focus on the task. The driver or an electronic monitoring system would be required to determine the strategic point of interference for optimal effect.

In their 2005 study, Ranney, Harbluk, and Noy recognized that among 21 drivers, voice distractions, such as talking on a cellular phone, effectively deterred a driver from doing other distracting manual tasks such as changing radio stations, adjusting climate control, or manipulating other in-vehicle systems (Ranney et al., 2005). The study showed that by shifting one distracting task for another a driver was more likely to keep his or her hands on the wheel.

Svenson and Patten (2005) revealed that both hands free and hand held cellular phone calls equally impair a driver's cognitive ability, but that having a cellular phone available in vehicle for emergencies and accidents remains of "great value"(p. 196). The researchers concluded that emergencies are reported more expediently, drivers can be a partner to law enforcement by reporting incidences of aggression or suspected impaired driving as they occur, and cellular phones quipped with cameras can even record important forensic information such as license plate numbers and photos or videos of cars or crashes as they happen. What they did not mention is that the cellular phone can just be present and ready for use in an emergency to be effective. It does not have to be constantly in use.

Given the prevalence of public policy initiatives on a state-by-state and national levels, its identification as an epidemic, the societal cost of crash and death due to distraction, and the vast sums of taxpayer dollars directed toward changing distracted driving behavior, it is relevant to analyze the impact of legislation, marketing, and educational efforts with regard to distracted driving. It is important to determine if the interventions are making their mark and changing behavior or if other interventions should be considered and undertaken. Evaluating those interventions and legislation in light of an observational study of millennial drivers with a follow up focus group to discuss those observations may shed new light to help stem the tide of the financial and human cost of distracted driving car crashes.

Summary and Conclusion

Research demonstrates that distracted driving in all of its forms is a public health and safety threat. That threat remains unchanged despite significant governmental intervention in recent years including the adoption of legislation by 47 states in the U.S. surrounding the use of cellular phones by the driver while driving. Gaps in the literature indicate that understanding the motivation of younger drivers to continue to drive distracted, understanding the social norms of that age group, called millennials, and evaluating existing policy effectiveness is necessary to effectively address the problem and remediate it.

Dellinger and Sleet (2012) argued that in order for continued progress in road safety distracted driving requires addressing. They called for an evaluation of the effectiveness of current legislation. The greatest challenge they identified for public safety officials is to change attitudes and behaviors among drivers (p. 281). This would be the millennial generation on which this research is focused. Overton, Rives, Hecht, Shafi, and Gandhi (2014) offered a similar observation advocating continued efforts to understand millennial social norms. Their prediction was that there would continue to be high incidence of distracted driving among millennials without new and effective strategies geared toward millennials.

Technology is ubiquitous in today's world. It is in cars, classrooms, and every corner of society in nearly every corner of the world. While distracted driving is not new, it has greater prevalence as a public safety concern because of technology's entrance in a more commanding way into the world and the vehicle. This chapter has established that

distracted driving is dangerous. It is particularly dangerous to millennials, the newest drivers for whom technology is inherent. It is dangerous because it takes eyes, hands, mind, and emotions to places other than the driving task. It is physical as bodies shift to speak to passengers, eyes and hands text or glance at ringing cell phones, or adjust radio tuners. It is mental as it invades the brain challenging it to process observations and judgments while maintaining a conversation. Its pervasive encroachment into society was also sudden as cell phone growth exploded in a short time frame challenging public policymakers in myriad ways to elicit desired driving behavior and repel undesired behavior.

To date, some disconnect is evidenced between the laws and the population at which those laws are intended (Brown, 2012). To improve those laws and public outreach improved understanding is necessary. Learning from the millennial culture about their behaviors, motivations, and perceptions will assist researchers and lawmakers in experimenting with strategies, messages, and policies to elicit safer on the road behaviors and make long-term social change. The intent of this study was to unobtrusively observe driving behavior of millennial drivers in a natural setting, then delve into the findings of that observation by convening focus groups to determine if and why distracted driving exists and whether current policy is addressing the problem from the perspective of millennials.

Chapter 3 will detail the techniques, methodology, and ethical considerations of conducting this study to determine if millennials are driven to distraction, why, and what policymakers might do about it.

Chapter 3: Research Method

Introduction

The purpose of this study was to improve understanding of the roles of public policy and culture in influencing distracted driving behavior among millennial drivers for whom car crash is the number one cause of death (Bratsis, 2013). The CDC classified distracted driving as a "winnable battle," suggesting that this topic is both worthy of study and potentially preventable (Dellinger & Sleet, 2012, p. 279). The millennial generation, as the newest generation of technologically savvy drivers, is most susceptible to both the lure of distracted driving and its dangerous effects (Atchley et al., 2012). In order to reverse the trend of distracted driving and its deleterious effects on the millennial generation, it is important to investigate its prevalence and understand its lure among this population.

This study was a summative evaluation of current policy regarding distracted driving that used participatory research techniques. My intent was to use an ethnographic approach to evaluate the value of current distracted driving policy among the age group for which distracted driving is most virulent: millennials. The primary goal was to increase understanding of millennials, and their responses to distracted driving public policy. A secondary goal was to develop generalizations that incorporate an acknowledgment of cultural norms and influence into future public policies and programs.

This chapter includes a discussion of my research design and its rationale, the methodology I used, and any issues of trustworthiness I detected. I also address my role as researcher and any possible conflicts, biases, or ethical issues. The methodology section details the population, location, criterion, number, and demographics of the subjects. It also includes discussions of the observation data collection sheet, the focus group protocol, and the focus group data collection sheet. I produced all of these tools. Finally, I discuss the trustworthiness of the research including the dependability of the data collection strategies.

Research Design and Rationale

Existing distracted driving research focuses heavily on either its effects on driving performance or on the inherently dangerous results. When the research has focused on the driver's perspective, it has been in an effort to determine if drivers drive distractedly and often relies on self-reporting. Though some naturalistic studies exist including the Virginia Tech studies by Klauer et al. (2006) and Nevile (2012), few studies incorporate observations of a population's driving behavior combined with follow-up discussions with that population as to why those behaviors continue despite public policy interventions such as education and distracted driving laws. Studies show that drivers are not aware of how often they drive while distracted (Ibrahim et al., 2011). Drivers also do not regard distracted driving as a serious offense on the level of driving under the influence (WHO, 2013). In order to change distracted driving behavior, it is important to understand why people continue to do it. What drives this behavior? What will convince people to alter this behavior? In this study I focused on explaining distracted driving

behavior from the cultural perspective of those doing it and their response, or lack of response, to public policy designed to curb it.

The following research questions guided this study on the influence of public policy interventions on millennial distracted driving behavior:

1. How do millennials respond to the laws governing distracted driving?
2. To what extent has the introduction of public policy regarding distracted driving influenced millennial attitudes and behaviors regarding distracted driving?
3. What, if any, interventions are needed to change distracted driving behavior among millennials?

I chose to conduct this research as an ethnographic study and developed the research questions to produce information usable for understanding millennial ideational systems and the behaviors associated with those systems. Whitehead (2005) asserted that fieldwork is the primary research strategy for proper ethnographic research. Ethnographic fieldwork requires that researchers immerse themselves in the ongoing activities of the group that they are researching (p. 3). Ethnographic inquiry is thus, participatory in nature.

I eliminated narrative, case study, and phenomenological methods as viable research methods for this study because they focus on the examination of a single person, event, or shared singular experience of a group of people (Denzin & Lincoln, 2012). While some of this methodology, such as a narrative, would lend color to this study, it would not lead to the qualitative information I sought. Grounded theory was similarly

eliminated because it would focus on the collection of data aimed toward a theory (Patton, 2002). The undesired outcome of distracted driving continues to occur despite policy interventions, so what I to understand is why distracted driving is both so common and so virulent for millennials.

Okamura (2009) noted that the basic techniques employed in ethnographic studies include observation and unstructured, structured, or focus group interviews. The methods are complementary to one another. It is not sufficient to merely observe behavior; rather on must delve into that behavior by discussing it with its practitioners in order to identify culturally normative patterns. By observing behavior on the scene, the researcher creates a valid study by collecting and categorizing evidence of the behaviors exhibited by the population. Armed with that body of valid information, the researcher may then present it to the target population for a focus group discussion as to why that behavior exists or perpetuates.

I used a two-pronged participatory ethnographic design involving an etic approach, observation, and an emic approach, a focus group, to provide a complete picture to respond to the research questions posed. Whitehead (2005) advocated the use of both approaches to provide for a true, valid ethnographic study, and further emphasized that ethnographic study is an emergent process dependent on researcher flexibility and creativity. This premise was of particular importance to me during the focus group phase of this study as I sought to capture the nuances of the millennial generation.

For the etic phase, I observed the behind the wheel driving behavior of 100 drivers at a commuter university. Guided by research question number one, these observations served to provide evidence of the existence of distracted driving among the target population and the level of participation in the behavior among the group. Secondarily, the observation phase allowed me to categorize the observed distracted driving behaviors as students entered or left the campus. The size of the sample was chosen to assure not only to capture a variety of behaviors, but also to achieve saturation in terms of data collected using the data collection instrument I developed (Appendix A).

For the emic phase, I chose to use a focus group instead of interviews or secondary data for several reasons. Sagoe (2012) defined a focus group as an assemblage of individuals by researchers for the intent of discussing or commenting on the research topic based on participants' personal experiences. Focus groups rely on the interactions among the participants in the group to provide insight into normative cultural behavior and attitudes the group, while an interview is merely an isolated view of that topic. The researcher's intent differentiates a focus group from a traditional interview or group interview. I held two focus group sessions of six participants each, for a total of 12 participants. I had initially recruited 15 participants but three did not participate. This sample was in keeping with Carey and Asbury's (2012) suggestion to include six participants per session. They maintain that participants are there to assist in exploration of the topic and that they are not intended to be representative of the population being researched.

In this situation, guided by the focus group checklist that I developed (Appendix B), my intention was to generate dynamic interaction among the participants, particularly involving their thoughts, perceptions, or experiences in order to provide some insight into how they felt, thought, or behaved with regard to the research topic. The goal of the focus group phase was to address Research Questions 2 and 3 to arrive at a conclusion as to why the behavior persists, how, and to what degree it persists, and what can be done, from the perspective of the practitioners, to change that behavior.

I did not use secondary data because they could not provide the quality and depth of data required to offer satisfactory answers to the research questions. Secondary data would also not have allowed for an emergent learning process between me and the participants in which societal norms emerged. Secondary data would have provided merely a flat insight as to whether the behavior occurs and who is doing it. My goal was to determine why.

Role of the Researcher

My role was to observe and collect data, analyze the data, discuss the analytical findings, and arrive at a conclusion which responds to the research questions. The first role was to unobtrusively observe and collect data regarding distracted driving behavior among the target population at the selected location. This did not entail any videotaping, notation of license plates beyond the issuing state, or other identifying factors beyond the gender of the driver and the number of passengers.

My second role was as facilitator of a pair of focus groups. Sagoe (2012) has noted that it is important for the researcher to be a good moderator who has the

responsibility of keeping the focus group on task in an effort to ensure that all members participate. The higher the level of participation among the group members, the better the reliability and quality of the information derived (p. 5). Beginning with prepared questions, the researcher/moderator must be prepared to maintain order yet also adapt questions to follow an emergent thread should it present. It should be noted that while I have no personal relationship with the proposed study population, the organization I previously worked for did offer its services, at no charge, to those students. Nevertheless, a connection between me, as a researcher, and the organization were unknown to the group participants who I did not know personally. I did, however, reveal that information in the informed consent to avoid any appearance of impropriety.

Schrag (2009) also noted that ethnographic researchers often assume that their work will do no harm when it consists of observing public behavior in a public place. Schrag detailed a number of ways in which that assumption is false. He defined "harm" as a moral wrong, which includes violating their rights, lying by omission or commission, disrespect, or doing something injurious to them regarding their physical or psychological well- being (p.137). To avoid doing harm, I took measures to ensure that observations and focus group reporting protected the privacy of the participants. Methods employed to protect privacy included use of first names only during the sessions, use of pseudonyms in transcription of focus group notes, blind copy email communication, no video recording, and participant permission to audio tape. Clarity in terms of what was being researched, why it was being researched, and the ways in which it will be used is imperative when garnering informed consent.

Additional ethical considerations such as the use of an incentive to attract participants such as a meal for those who participate in the study, was a consideration, and lunch was offered. Bengry-Howell and Griffin (2012) classify millennials as a "hard-to-reach" group. Because the topic involves distracted driving behavior, which is in some iterations illegal behavior, reluctance may exist among potential study subjects. Using strategies to recruit them such as lunch for participants, or even recruiting from criminal justice or public safety classes may render negotiating access to the students a little easier. These negotiations, either at the university level or Student Affairs level, would result in a higher level of trust among all the participants, and a greater level of confidence in the resulting data and conclusions.

Methodology

The population identified for this study was one of convenience. They were college students at a commuter university in New Castle County, Delaware. This site was ideal for several reasons. First, a university was likely to yield a substantial population of millennial subjects. Second, a commuter university would yield a substantial volume of driving millennial students. Third, using university students satisfied the ethical consideration of age of consent study subjects. Fourth, an initial inquiry to the university, where driving safety is a priority, netted a positive response for conducting the research. Fifth, the layout and location of the university was ideal for observation as there is one major point of egress along a major highway. Sixth, the university was an ideal place to recruit for millennial focus group participants.

The university required that this study be approved by the Human Subjects Review Committee, which is their version of the IRB. Appendix C displays the University's written approval to conduct the study. Appendix D displays the participant consent form approved by Walden University's IRB. Also required was the completion of NIH "Protecting Human Research Participants" course which is included in Appendix E. Combined with this university's IRB process, the welfare of the participants was well-protected.

The student participants were primarily Delaware residents, but the university also draws from Maryland, New Jersey, and Pennsylvania. For phase one, the observation, there is one point of entry and exit at the college onto a busy 8-lane highway Route 13 in Delaware. The observation site is on a public roadway. The observation time was as class dismissed at lunchtime on day one, and as class started at 5 p.m. on day two during high traffic times. Day one was a Tuesday at noon exit lane. Day two was a Wednesday at just before 5 p.m. entry lane. The point of observation was at the corner of the Doberstein building parking lot facing the exit and entry lanes of the university of which there is one each at Route 13. This location is approximately 25 feet from the entry and exit lanes in plain view. Because there is a traffic signal, it was easier to notate the presence of distracted driving behavior as only a limited number of cars could pass per cycle. The traffic signal also limited the speed of the drivers, facilitating the observation. Participants were of convenience and simply the first cars entering or exiting the campus upon the start of the observation. Sample size was 100 vehicles, fifty per observation period. One hundred vehicles was a number significant enough to allow for meaningful

saturation to take place as evidenced in other driving studies (Carey & Asbury, 2012; Klauer et al., 2014). No electronic devices recorded this process. The data was recorded on the Observation Tracking Form (Appendix A) in real time. Observations were notated on the tracking form as the first behavior seen for each vehicle. A near miss was defined as a situation in which a driver stops short, tires squeal, or swerves to miss the vehicle in front of him or her as a result of inattention. If multiple actions were observed at one time, for example, eyes off the road adjusting controls, or hands off the wheel holding cell phone or drink, both items were notated. Driver behaviors were only noteworthy while the vehicle was in motion, not while the vehicle was stopped.

While definitions of saturation vary widely, Walker (2012) identifies two types of saturation – data and theoretical. Data saturation is the point at which data repetition has occurred. Theoretical saturation is the point at which no new themes emerge. Ethnographic validity depends upon sufficient time spent in the field gathering data (Sagoe, 2012). In this case, 100 vehicles ensured sufficient repetition of behaviors and provided evidence of the performance of distracting behaviors. The observations occurred during university rush hours of noon and 5 p.m. continuing until data for 100 vehicles was collected. Absent the adequate repetition of data, the focus group portion of this research had no value (Carey & Asbury, 2012). The emergence of new themes was also a desirable outcome so that observers accumulated a sufficient bank of relevant, valid, and consistent data to prove the existence of distracted driving behaviors for discussion during the focus groups.

I developed a tracking sheet, (see Appendix A), which provided for easy recording and subsequent coding of various distracted driving behaviors. This sheet allowed for notation of behaviors that were not considered, and also provided a means to identify behaviors quickly and consistently by gender, state, and whether a near miss or other occurrence was detected during the observation reinforcing rigor. After, it was analyzed to answer Research Question 1, how do millennials respond to distracted driving public policy?

Phase two involved a second set of recruited students who participated in the two investigative focus groups responding to Research Questions 2 and 3. Recruited by networking with professionals at the university who are versed in the requirements needed for participants from the student body, communication was via email from them to me. Professionals referred students fitting the focus group requirements for the study. Using the snowball method, each recruited student was asked for the names of one additional referral for recruitment. I contacted them all via blind copy email. Referrals were recruited until the required number of participants was obtained. While I needed twelve, I recruited fifteen as a precaution. These two focus groups convened once each over a two week period providing a forum to analyze the observations by viewing the written results of the observation phase and then responding to open ended questions regarding the observed behavior and cultural norms. The sessions lasted less than two hours each in duration. The focus group participants addressed questions as outlined in the Distracted Driving Key Activities Checklist (Appendix B). Questions were added,

none removed, as the discussions unfolded allowing for flexibility and the capturing of original ideas, attitudes, or suggestions not anticipated by the researcher.

A summary of the focus group results were provided via email through which the students viewed the interpreted results of the observation, and focus group conclusions and were provided with an opportunity to elaborate or correct any findings. Bengry-Howell and Griffin (2012) advocated the use of the research participants in the development of the focus group discussion questions as part of the informed consent process. With what they term "hard-to-reach" (p. 403) groups such as millennials, engaging the potential participants in the research process may result in a clearer picture of the research and its importance for the group serving to both raise the ethical and credible value of the study. Using the students' responses to develop additional focus group questions based on the observation results as the sessions unfolded, not only resulted in a more informed and collaborative effort, but also allowed for interpretation and inquiry of data among the group that was observed, of which I, as researcher, am not a part.

The intent of the focus group was to generate original data regarding distracted driving behavior, normative social behavior among millennials, and the response to and regard for public policy efforts to change distracted driving behavior. As such, theoretical saturation was achieved when no new themes emerged during the focus groups. Walker (2012) wrote that in ethnographic inquiry, theoretical saturation is achieved when data is collected from between three and fourteen participants. In this study, a minimum of six was chosen as a median number per focus group with a total of twelve participants

overall. Fifteen were recruited in anticipation of attrition, which did happen. A minimum of six participants populated each group. Criteria for inclusion in the group was that the students had to be a millennial, born between 1987 and 2004, a licensed driver of a vehicle to school, and had to have been leaving or entering campus during the appointed observation times.

I collected focus group data through audio-taping and copious note-taking during the sessions at the university. I facilitated the sessions taking notes as we went, supplemented by the audio tapes for later transcription. Audio recording devices were used with the consent of all participants. I coded themes as data was collected using Ethnograph 6.0. I chose Ethnograph 6.0 as it is a text-based software which will accommodate downloads from Microsoft Word. Since this was an inductive process, the data collected directed the conclusions derived.

The location of the focus group was in the student union of the university so as to eliminate as many obstacles to attendance as possible. A conference room was used that isolated the focus group from the general public, this provided privacy to protect the participants' identities, but also provided a quiet, task-oriented environment. Permission from the university was obtained. Seating arrangements for the focus group was a table with moderator and participants seated around it to make the setting less imposing, more inviting for interaction and to minimize any impression of researcher power over the participants. Students signed in endorsing two informed consent forms, one for their records, one for mine, and presented their driver's licenses to verify they were over 18 and licensed driver, this information was not collected. First names on name tags,

including that of the researcher, were used to encourage a more personalized interchange, again minimizing any perception of the researcher as an authority figure.

The sessions began with the facilitator/researcher explaining the purpose of the research, inviting questions, obtaining signed informed consents, and presenting the observation results opened the session establishing trust and communication with the participants. Grouped under the heading of each research question, questions were posed to the focus groups (see Appendix B). Upon completion of the session, I concluded by explaining that the summary would be transcribed from the notes and audio tapes. The findings were analyzed and interpreted, first by question and then theme. Consensus and dissent was noted and emergent ideas identified. An executive summary was prepared which included results and conclusions. A final summary email was sent to the participants to share the results and serve as an electronic opportunity to discuss any additional ideas, insights, or inaccuracies noted by the participants.

Issues of Trustworthiness

The intent of this study was to understand the millennial generational approach to an emergent driving behavior, distracted driving. Distracted driving is more fatal to the millennial generation than other generations due to the inherent presence of technology in their lives, but perhaps due to additional factors. The ultimate goal in understanding millennials was to suggest methods to better address the problem of distracted driving among the newest drivers. To ensure that trustworthiness is maintained, Lincoln and Guba (1985) wrote that being fair, balanced, consistent, and conscientious in research from data collection to analysis is essential. They link the idea of trustworthiness with

authenticity and a journalistic approach. Using methodological triangulation (Patton, 2002) it is possible to achieve that level of journalistic objectivity favored by Lincoln and Guba (1985) to ensure the credibility, transferability, dependability, and confirmability of this study.

Patton (2002) defines methodological triangulation as the use of multiple methods when studying a problem. The purpose is to establish consistency and in turn, valid and credible data from not only a variety of sources, but also in a variety of ways to reinforce the meaning of information collected. In this study, the literature review provided the first side of the triangle. Naturalistic observation of distracted driving behavior was the second method employed to determine the credibility of the assumption that millennials drive while distracted. Focus group provided the third.

The focus group participants were presented with the outcome from the observation phase and asked to delve deeper into the behavior further evaluating the why of distracted driving behavior and what might alter it. This phase was a test of the consistency of the observation among the generation using a sample of those observed. It is the duty of the researcher/moderator to allow the participants the freedom to speak while also maintaining control of the group remaining true to the goals of the focus group to respond to the research questions. It is also the duty of the researcher to avoid generalizations endeavoring to extract the specifics and to explore all sides of the issues addressed (Patton, 2002). Maintaining objectivity, as advocated by Lincoln and Guba (1985), is exemplified in the focus group questions by asking "why or why not?" during the discussion and the use of largely open-ended questions in the journalistic tradition.

Guarding the welfare of human participants was of critical importance and the responsibility of the researcher. Using informed consent, protecting the identities of the participants, giving them the opportunity to ask questions, providing the opportunity to review the data and conclusions derived, and IRB oversight from two universities were all stalwart safeguards for this study. Of highest importance to the validity of this study, was that the participants understood that their participation was confidential so that they were candid in their responses. When protecting the identities of the participants, Carey and Asbury (2012) suggested either using pseudonyms to represent the participants or giving the participants a choice to be identified. For this study, in the sessions only first names were used, in the transcripts and presentation of findings pseudonyms were used.

Carey and Asbury (2012) advise that rigor is an ongoing process. To ensure rigor, journaling was done immediately following each focus group session to capture any impressions of the setting and group dynamics. Transcribing of the sessions occurred within forty-eight hours of each focus group. Transcripts were maintained on my personal laptop which is password protected and backed up twice daily onto a remote site via Mozy to ensure that all data is preserved confidentially. Data and transcripts will be kept for a minimum of five years in accordance with the requirements outlined by the American Psychological Association (2010). Requests to share the data will be honored in accordance with ethical standards and will include a written agreement for its use.

Summary

This chapter outlined the research design, methodology, setting, research questions, ethical and validity considerations, dual data collection methods, and data

analysis for this qualitative ethnographic study. As a result of this study, data detailing the degree to which the millennial population engages in distracted driving was obtained. Additionally, that same population provided some insight as to cultural norms, their reliance on technology, level of concern for distracted driving as a public safety and policy issue, and regard for current interventions to deter it. On a broader level, these insights may also reveal more about the millennial generation as a culture perhaps leading to more effective policy making, lives saved, and social change.

Chapter 4: Results

Purpose of the Study

The purpose of this study was to observe and inquire as to the driving behavior and attitudes of millennials regarding distracted driving behavior in light of the public policy efforts to reduce or eliminate the behavior. Distracted driving is a contributing factor in crashes, particularly among millennials, for whom car crash is the number one cause of death (Bratsis, 2013; CDC 2010). A scholarly inquiry of millennial behaviors and attitudes regarding distracted driving, their understanding of the law, and their observance or disregard of the law, was a critical step in designing effective public policy for both this new threat and this new generation.

As indicated earlier in this study, Chriqui et al. (2011) demonstrated that inclusion of evidence-based behavior modification theory is rare among public policy interventions with regard to laws. This is in stark contrast to the fact that the study of public policy making is the study of behavior and its consequences for designing policy to elicit the desired response (Lynn, 1986). Observing and understanding those to whom policy interventions are directed is of critical importance to changing social norms to reduce injuries and fatalities, to making effective use of limited public funds, and to crafting effective public policy which can stand the test of time.

In this chapter I will review the research questions posed in this study, and describe the research methods I employed to answer those questions. In the process, I will discuss the research setting, subject recruitment process, participant demographics, data

collection and analysis methodology, efforts to maintain and demonstrate trustworthiness. I conclude this chapter by detailing the research results.

Research Questions

The following research questions guide this study to determine the effect of public policy interventions on millennial distracted driving behavior:

1. How do millennials respond to the laws governing distracted driving?
2. To what extent has the introduction of public policy regarding distracted driving influenced millennial attitudes and behaviors regarding distracted driving?
3. What, if any, interventions are needed to change distracted driving behavior among millennials?

A dual method approach, using observation and then focus groups, provided an opportunity to first collect concrete evidence that distracted driving was exhibited by the student population at my study site, thus validating both the need for the study and the credibility of the study. Two focus group sessions followed the observation. During these, student participants viewed the observation results and responded to questions that I designed to answer Research Questions 2 and 3.

Recruitment, Setting, and Sample – Observation Phase

As presented previously, the setting for this study was a commuter university in Delaware. Despite the fact that I conducted this study during summer, school was in session and well-attended which provided sufficient numbers of vehicles for observation and a suitable number of focus group participants. Observation participants were that of

convenience and limited to 50 cars per observation session. Conducted twice, on successive days, the observations occurred once at noon on a Tuesday and once at 5 p.m. on a Wednesday. I chose these times not only to capture both day and evening students, but also to target high volume and high stress times of day when drivers are most tempted to multi-task while either exiting or entering campus. I also chose these times to factor in meal times.

I conducted the observations from an elevated pedestrian walkway 25 feet from the signalized entrance/exit of the campus to provide me ample opportunity to see in the vehicles as much as—or even a little more than--law enforcement would. Each session took under 25 minutes. The weather was hot and clear each day. I used no recording devices, thus protecting driver identities.

Data Analysis – Observation Phase

My use of a simple researcher-developed form (see Appendix A) resulted in a simple, straightforward data analysis for the observation phase. Each sheet held the tracking data for ten cars, and I used five sheets per observation session. I noted the date, time started, time finished, and weather conditions on the first sheet of each session. As each car passed, I noted the appropriate data for gender, behavior, and state using categories that I had coded in advance for ease of analysis. I tallied the sheets at the end of each session, making note of extraneous observations in the comments section of the sheets as behaviors occurred. Discrepant cases, such as drivers whose behavior was unable to be tracked because of tinted windows, went unrecorded and the next car was tracked in its place until reaching an observed value of 50 per session.

Results – Observation Phase

The intent of the observation phase was to answer Research Question 1: How do millennials respond to the laws governing distracted driving? Observation of drivers in a natural environment provided the best setting and means to provide a credible response to the research question. Using the combined data collected from the observation and focus group phases, I was able to positively answer the research question -- millennials respond to the laws governing distracted driving by largely ignoring them.

In the 100 vehicles I observed (N =100), there were 55 male drivers and 45 female drivers. Eighty vehicles had Delaware license plates, 5 exhibited Maryland plates, 4 exhibited New Jersey plates, and 11 exhibited Pennsylvania license plates. It is worth noting that all four states ban texting while driving. Pennsylvania permits hand held cell phone use for talking, while Delaware, Maryland, and New Jersey ban hand held cell phone use. New Jersey also bans drowsy driving, which is considered to be a form of distracted driving (NHTSA, 2015), and the New Jersey legislature is currently considering some policy governing eating while driving (GHSA, 2014).

Overall, 84 (n = 84) of the drivers in the observation exhibited distracted behaviors including cell phone use (either talking or texting), passenger interaction, and eating or drinking, all which validated for me the need for the focus group portion of the study. Further, 84 exhibited multiple distracted driving behaviors, not just one behavior. Sixteen drove without obvious distraction. Of those driving without distraction, 8 were male, 8 were female. Fourteen drove Delaware licensed vehicles, 1 Maryland, and 1 New Jersey. All of the Pennsylvania licensed vehicles were driven by distracted drivers.

Seventy-two of the observed drivers were talking on phones, and of those, 42 were talking while holding their phones. Twelve drivers were visibly texting while driving, though none of those were driving Delaware licensed vehicles. This is relevant given Delaware's early ban on cell phone use—including hand held talking on devices and texting--and early adoption of educational efforts to both publicize the anti-distracted driving laws and raise awareness about the perils of driving while distracted. Eighty drove using only one, or neither, hand, and 50 were looking somewhere other than forward. Nineteen were actively engaged with their passengers as evidenced by being turned away from the wheel and facing the passenger, talking animatedly, or reaching to accept or give something to the passenger. Eighteen were eating or drinking, and 12 drivers were obviously reading either their phones or a paper.

I observed four near misses, defined in Chapter 1 as driving events during which crashes are narrowly averted. Of those, three vehicles had Delaware plates and one had a New Jersey license plate. All drivers of these vehicles were males. Of the near miss events, the vehicle with New Jersey license plate ran into a curb while texting. The driver of one Delaware licensed vehicle was observed talking on a hand held phone and had to swerve to avoid a stopped vehicle. Another was eating and talking on a hand held cell and did a U-turn in the road to avoid another vehicle, and the fourth drove too close to the curb and ran over it without stopping. All drivers involved in the near-miss events drove vehicles registered in states where hand held cellular phone use for talking and texting is banned. Near misses would have been averted if the drivers were obeying state law.

Behaviors identified as "other" in Table 1 included fixing hair, applying makeup, yelling with both hands off of the wheel while moving, and looking in the mirror.

A few general observations I noted included my inability to see in a vehicle with tinted windows and my difficulty with seeing below level of the door. Both of these issues have been identified (Sherzan, 2010) as hampering law enforcement's ability to identify distraction and are valid concerns. Eating and drinking while driving, though distracting, are legally permissible behaviors in all of the states observed at the time of this study. Observing these numerous incidences helped me to identify just how dangerous these behaviors are as drivers frequently have hands off of the wheel and eyes off of the road to remove water bottle caps, take paper off of sandwiches, clean up food and drink spills, and look into bags to get food or accept it from a passenger. Of the 25 vehicles with passengers, all were actively engaged with their passengers, often looking at them or accepting food or drink from them. Overall, males on the campus exhibited more distracted driving behaviors than females, averaging 3.05 behaviors versus the 2.88 demonstrated by females. Males were at the wheel of all of the vehicles tracked with near-miss incidents. While I did not specifically focus on gender except to include it in the observation phase, it is relevant because National Highway Traffic Safety Administration (2011) statistics show that males are more likely to drive distractedly and use cellular phones behind the wheel, and are more likely to experience a near miss event. Males experience more crashes than women (Tison et al., 2011).

Table 1

Frequency of Distracted Driving Behaviors Observed by Gender and Distraction Type

	Male	Female
	55	45
Talking on Cell	35	37
Passenger	15	4
Drinking/Eating	14	4
Reading	7	5
Hands off wheel/texting	55	47
Manipulating controls	4	1
Eyes off road	29	21
Other	1	3
No distractions	**8**	**8**
	160	122

Recruitment, Setting, and Sample – Focus Group Phase

Two focus groups totaling 12 participants, six per session, were recruited using a brochure distributed to university professors and students via blind copy email and Facebook postings. The recruited students were millennials aged 18 to 35 years of age, English speakers, enrolled at the study site, licensed drivers, who drove to school. Two focus group times and a pizza lunch were offered, students responded with interest for a focus group slot via email to me.

Participants displayed drivers' licenses and student identification cards upon arrival. Participants viewed a Power Point presentation which included informed consent details prior to signing the informed consent. In addition to the informed consent, the Power Point included the purpose of the focus group, the questions to be asked, information on assistance if they were in crisis, and information on confidentiality. After,

participants received two paper copies of the informed consent to sign, one for them to keep, and one for the research files. The participants gave verbal consent to being audio taped to assist in note taking accuracy only. Participants received contact numbers, phone, email, and text, for crisis support via a free service, Delaware 211, in case they were upset as a result of the focus group discussions. Delaware 211 is a free service and provides referrals to community resources and human services.

There were 10 males and two females in the focus groups, with five males and one female in each independent group. This demographic was naturally occurring and not by design. Demographics included students who self-identified as Latinos (2), African Americans (8), and Caucasian (2). All were millennials and students who drove to school. When asked why they chose to participate in the study, several responded that upon reading the recruitment material they recognized their own distracted driving behavior and were curious about the topic because of it. One student self-reported as a Behavioral Science major interested in the topic for his own potential research.

The intent of the focus groups was to respond to Research Questions 2 and 3 after being presented with validating observation phase data. First, the focus group was charged with discussing why distracted driving behavior occurs. Secondly, they were charged with discussing what might change the behavior in light of existing public policy initiatives.

Data Analysis -- Focus Group

The focus group discussions were recorded during the sessions on two Apple I cell phones using the Voice Record Pro application. This application was used for its

clarity of recording, convenience, and because the data could be automatically stored in the iCloud associated with the phones as well as in Mozy, an online file saving system, for the required period of five years. Additionally, copious hand-written notes were taken during the sessions. Using dual methods of recording focus group conversations, and dual backup methods for information retention provided for consistency, dependability, and credibility in the data collection and data analysis of this study.

Focus group data were inductively coded and analyzed using semantical content analysis, specifically attribution analysis. The recorded and hand-written data was then transcribed into a Word document. An executive summary detailing the overview of the sessions was sent via the blind copy email function simultaneously to all of the participants to review for accuracy. No responses with corrections were received. The word document of the transcribed sessions was loaded into Ethnograph 6.0 software to assist in data organization and analysis. Organized first by research question, then prompt question, categorization in the form of key themes and terms for coding emerged including cultural traits, laws and penalties, technology, distractions, and finally, attribution which was conceptually defined for this study as fitting into one of the following: conditioning/Pavlovian, habit, or Maslow's Theory (Maslow, 1987). Initially, there were many more categories, but re-evaluation of the categories in light of the research questions prompted a streamlining of the categories. This streamlining allowed for the emergence of the sought for data in a more concise way which corresponded to the research questions.

Using guidelines by Lincoln and Guba (1985), repetition and emergence of themes and saturation of categories shaped the coding and analysis of these groups. Terms were considered to be significant when echoed by three or more participants, for example the notion that use of technology is addictive or habitual akin to drug addiction became significant after session two when echoed by multiple participants. In session one, only one participant considered technology use to be an "addiction". Some individual observations provided unique value and while not included within the coding due to the singular nature of the comment or response, they were anecdotally reported within the analysis results. I organized data within the streamlined categories. There was a high degree of consistency in response between the focus groups. Dissention was most noticeable between the two groups when presented with the idea that cellular phone use might be an addiction.

Results Focus Group Phase – Response to Observation

After the informed consent, focus group participants viewed the results of the data from the observation phase presented in a Power Point format. The Focus Group Key Activities Checklist (Appendix B) guided the focus groups. A researcher-developed Power Point which mirrored the checklist provided a secondary delivery method to the discussion. It served as a tool to clarify the questions, keep the focus group on track and advance, and satisfy, the variety of learning styles within the focus groups. While the informed consent made it clear that a discussion of personal behavior would not be required due to ethical considerations discussed during the Institutional Review Board process, 10 out of 12, students volunteered that they wanted to attend the focus group

sessions because they themselves drove distracted, particularly with regard to cellular phone use, and it was a topic to which they could relate. “Of all the studies we are asked to participate in, this was one I wanted to participate in, because I know I do it, and I know I shouldn’t, and I don’t know why but I can’t stop,” said one male participant.

The two groups demonstrated a consistent response to the observation data presented. There was great interest in when, where, and how the data was collected which was discussed at length and in detail. The data itself was not surprising to either group, in fact, they expected it to be even higher and stated that. The variety of the behaviors exhibited was surprising to them. A frequent comment was “I had not thought of that behavior being distracting, but it is!” The drinking of water, an act widely considered to be good for you, proved particularly surprising as the participants practiced opening and closing a bottle while pretending to drive. Ultimately, they concluded water drinking behind the wheel could be one of the most distracting acts.

Time of day was another topic of discussion for the participants. Because of the timing, done deliberately, with one observation session at the end of class at lunchtime, the other before class at 5 p.m., the focus group participants found the 84% of distracted drivers to be what they would expect, some expected closer to 100%. As one participant stated, “You get out of class and you have to catch up on all that went on while you were in class. Or you are going to class and you need to make plans for after class. It’s hard to leave the draw of social interaction.” Grabbing a quick meal behind the wheel was considered to be “normal” and a “good use of time” for the multi-tasking millennials.

Focus group participants offered two explanations for the observed behavior results. First, the multi-tasking behaviors such as eating, drinking, fixing hair or makeup were necessary due to the stringent time constraints which students, particularly commuter students who might have jobs or families, face. “You need to multi-task these days to get everything done,” said one participant. “They are just staying on top of everything,” said another. “As a millennial, it’s normal to do,” said another. All participants agreed that multi-tasking was a cultural proclivity of millennials necessary given their lifestyles.

A second view regarding the observation results focused heavily on the technology observation. Posed was the question was this more of an addiction, a Pavlovian response to ringtones, text tones, and alerts, or a satisfying of needs for belongingness, knowledge, and the latest news? All participants agreed that an element of needs satisfaction for belongingness exists in the response to technology, but the groups were split on the addiction question. Group one had only one participant who felt technology use constituted addiction. The second focus group included three additional participants who echoed the opinion that technology use could be considered an addiction. Overall, use of technology in any venue was deemed to be “culturally acceptable” by all participants, and the conclusion was that distraction is a problem on not just their campus, but everywhere and a topic worthy of scientific inquiry.

Results Focus Group Phase - Interactive Discussion

The design of the interactive discussions of the focus group was to respond to Research Questions 2 and 3 -- To what extent has the introduction of public policy

regarding distracted driving influenced millennial attitudes and behavior toward distracted driving? and What, if any, interventions are needed to change distracted driving behavior among millennials? The observation phase as validation of the problem of distracted driving directly impacting the focus group participants fostered intense discussion of the issue beginning with a discussion of the definition of the millennial generation and culture, distracted driving and cellular phone use, and a discussion of the laws and penalties surrounding it. All of the participants emphatically agreed that distracted driving was not particular to the millennial generation. They also agreed the generation was more "techy" than previous generations. Millennials, they said, use technology in a variety of ways, unlike previous generations, in part as a tool, but also in part for needs satisfaction along the lines of Maslow's theory (Maslow, 1987). Examples cited included the basic physiological needs such as food, ordering a pizza, to safety, the ability to call 911, to belongingness and the need to be in constant contact with others. Cultural traits identified by the participants included: social connectedness, tech savvy, multi-tasking, "show me", "I got this", and money does not mean as much to me as my friends, my freedom, my phone.

Participants were asked to define distracted driving. Responses varied from "anything which takes your eyes or hands off the wheel" to "all of the things tracked in the observation." All disagreed with current policy which governs only the use of the cellular phone as a source of distraction. Participants in both sessions cited passengers and eating and drinking as greater threats to highway safety and greater sources of driver distraction than technology. "Passengers are *very* distracting. They are far worse than

anything else," said a male from the second focus group. Participants agreed that while it is the driver's responsibility to control the passengers, often passengers are not courteous in return. A suggestion was made that training people to be better passengers might be a good idea. Another suggested the ability for law enforcement to site a badly behaving passenger, thus deflecting the responsibility from driver to passenger.

Eating and drinking arose as serious threats after the presentation of the data from the observations. "I had not considered eating and drinking behind the wheel as a serious threat until we began discussing it here, and acting it out. The act of removing a cap from a water bottle truly takes both hands off the wheel!" The groups agreed that eating and drinking were normal behaviors while driving for the same reasons mentioned previously, that time was short, and multi-tasking necessary to get everything done. "Eating breakfast or lunch while driving is just a normal part of the day," responded a female participant, "doing it [eating or drinking] while driving is not much different than doing it while doing homework or reading."

The definition discussion extended naturally into an inquiry as to whether the government should control the use of technology behind the wheel revealed a unanimous and decisive response that for public safety and for the greater good of society, government "should" control the use of technology while a driver is behind the wheel of a vehicle. Several pointed out that the government "had" to intervene or be seen as sanctioning the behavior or validating it. All agreed that the use of technology while driving is both easy to hide and difficult to enforce, making it less likely that drivers will observe the laws as they exist. Ten of the 12 participants felt distracted driving policy

should extend well beyond technology use behind the wheel. A sole participant felt that music was the most distracting thing of all. “It can make you feel aggressive, want to dance, all of those things, and in so doing, really distract you from the task of driving,” he said. Overall, the focus group participants devised a more comprehensive, and tougher, definition of distracted driving than is currently used. All participants advocated that public policymakers include other distractions, in particular eating and drinking and sleep deprivation when devising policy. Several cited the case of Tracy Morgan, a comedian who was gravely injured in a crash in 2014. The driver of the other vehicle had not slept in over 24 hours (Moyer, 2015).

While all of the students knew that texting is largely outlawed by most of the states, talking on a cell phone was something of which they were less sure. None liked using Bluetooth citing various deficiencies from “difficult to use”, “difficult to hear or be heard”, to did not have it in their vehicles. Delaware licensed drivers exhibited the most comprehensive knowledge of the law. A Pennsylvania participant was unsure as to whether his state was a hands-on or hands-free state when it came to talking on a phone. The remaining participants did correctly know and comprehend their own state’s laws. Comprehension of penalties were less clear. None of the participants knew the penalties for violating distracted driving laws in their state nor did they know of anyone who had ever been stopped or cited for distracted driving.

Turning the attention to what might change the behavior, I first posed the question of the effectiveness of current policy efforts such as public service announcements (PSAs) and fines. Of the 12 respondents, two could recall specific PSAs. One was the “It

Can Wait" campaign by AT&T that was the cellular phone provider that the participant had. The other participant remembered a SnapChat seatbelt PSA because SnapChat "forces you to look at the ads before you can move on." When asked why the PSAs are not memorable, most of the participants admitted that they change stations or channels on TV or radio during advertisements. Four participants felt that the PSAs were not negative or shocking enough, citing reality shows like "Scared Straight" as effective media examples for behavior change. Overall, the participants found PSAs to be too soft, "obviously fake", and not focused on real life. Reality type messages must be harsh, and based on real stories to be effective. Participants from the second group cited the recent anti-smoking commercials that show real people who have catastrophic health problems as a result of smoking. "You think you can do it, so you do it. You need to give me a really personal reason why I should not," summarized one participant.

Participants were asked what would change behavior and to rank them in order. One participant summed it up, "A fine will not deter me. You can fine me today and I will pay it and go out and keep doing it anyway. Probably the only thing that will deter me is a serious accident." Most participants, 8 of 12, echoed that same feeling. Participants ranked interventions to change distracted driving behavior. Their rank order was:

1. Personal impact – having a crash or knowing someone who was seriously hurt or killed in a distracted driving crash.

2. Stiffer penalties – Felony offense, suspension of license, points on license, and/or a much higher fine. Only one participant stated anything that raised his insurance rates would cause him to change behavior.
3. Positive evidence-based program demonstrating the dangers of distracted driving. One student had participated in such a program in the state of Delaware.

When asked to consider various driving behaviors, some of which are currently controlled via public policy and some which are not, participants discussed and ranked what they see as the most severe or dangerous behaviors behind the wheel. The overall rankings of behaviors as judged collectively by the focus groups from most to least dangerous are as follows:

1. Drowsy driving
2. DUI – driving under the influence
3. Driving while upset or emotional
4. Passenger interaction
5. Eating or drinking while driving
6. Distracted driving with particular emphasis on texting
7. Aggressive driving

The participants chose drowsy driving as the number one dangerous behavior by all of the participants for several reasons, the most noteworthy being that many knew of someone or personally knew someone who had been killed in a drowsy driving crash. Six participants volunteered that they had driven drowsy and had scary near-miss situations. Nearly all of them knew of the Tracy Morgan crash which involved drowsy driving

(Moyer, 2015). Driving while upset or emotional was another example of something the participants had other experienced themselves as drivers or passengers and experienced a "reality" message. Participants cited emotional driving as something that is particularly prevalent early on as a new driver. Most experienced emotional driving situations during high school that made an impression. The focus groups' distracted driving definition fostered the emergence of both drowsy driving and emotional driving for consideration as distracted driving behaviors worthy of examination by policymakers.

Millennials

According to Lynn (1986), understanding the behavior of the entities which produce the conditions to which public policymakers react, is the key to creating effective public policy. Coulson (2014) emphasized the importance of understanding and working within cultural boundaries to elicit behavioral change over embracing forced change against culture. The purpose of this study was to gain a greater understanding of the millennial culture in hopes of crafting more effective public policy resulting in the desired behavior. An intensive discussion of the millennial culture occurred in each session to aid in gaining that understanding. Figure 3 illustrates the various traits of millennials as self-identified during the focus groups. Participants were asked to free associate what they considered to be millennial traits. On occasion, I would present a term such as "entitled" which is generally considered to be a millennial trait to elicit a response. Each trait identified was listed and references to it by the group were counted. The number of coded referrals to those traits resulted in their placement, higher or lower, on the graph (Figure 3). The term "stressed" was most frequently referenced during the

millennial traits discussion, 37 times, and appears at the top. “Entitled”, which was not well-received, appeared at the bottom of the list. While most participants disagreed that millennials are entitled, two agreed. “Millennials are entitled in that we expect to have an education, a good job, and good stuff. What’s wrong with that?” Another participant responded, “A lot more is expected of us. So we should get a lot more in return.”

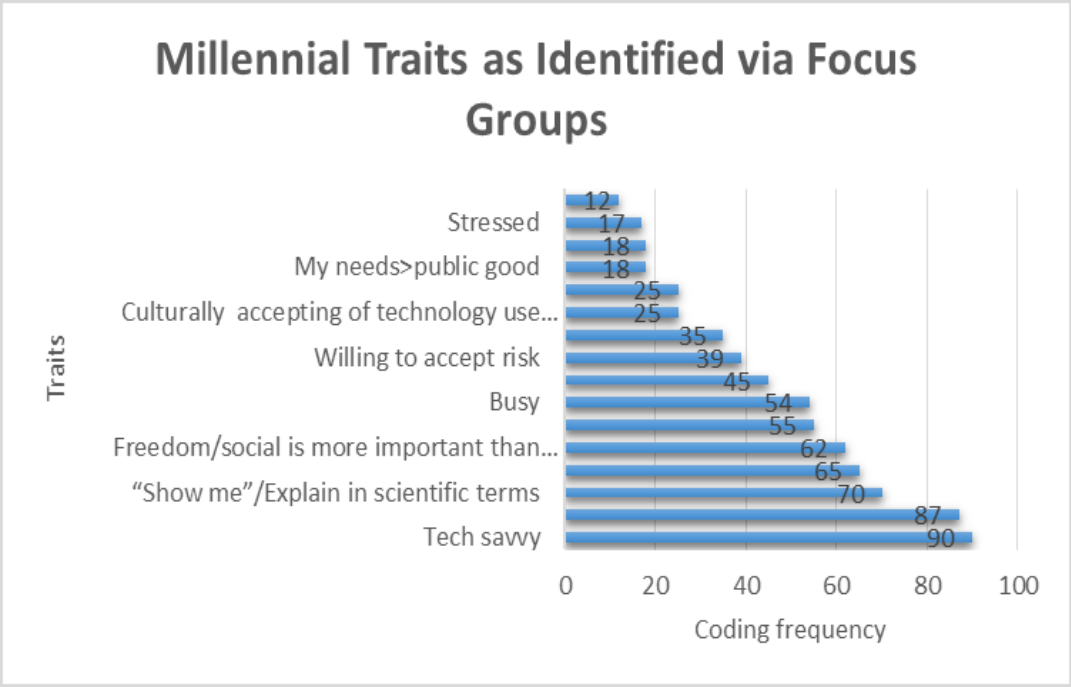

Figure 3. Millennial traits by ranking of most self-identified to least self-identified as a result of focus group interviews.

Between the groups, there was a split decision as to whether millennials used more technology in the vehicle or if it was a similar percentage across the generations. Participants in Group 1 felt strongly that all ages used technology equally. Participants in Group 2 felt that the millennials used technology more than any other group both in and out of the vehicle. The reasoning for Group 2 participants was because of the nature of

the millennial relationship with technology as a multi-purpose platform which served as marketer, communicator, news source, organizer, information center, calendar, communication device, social link, and in some ways, oracle, acceptable in every aspect of life socially, economically, scholastically, vocationally. As one participant summarized, "It's a revolution. Technology has to stop growing for us to stop using it. And the companies are making it easier, more features, Bluetooth, new phones all the time, dictation software, it's easier and safer, why stop?"

As focus group questions turned to the reasons why millennials might drive distracted, particularly in terms of technology use, a number of inconsistencies were evident. From the focus group data, participants felt that the government had a responsibility to control technology use, and perhaps even other behaviors, when addressing distracted driving. Yet participants also felt that violating the law was easy to do, while enforcing it was difficult. "It's too hard to enforce. How can they?" said one participant.

While the laws are necessary, the millennial participants felt violating them was inevitable, even necessary to accomplish all they need to do. "Much is expected of us, we have to use our time, all of it, as best we can." That wise use of time might include eating lunch while driving to class or work, or catching up with a friend while driving via text. Absent compelling reasons not to drive distracted such as knowing someone who had been cited or even injured in a crash while distracted, participants agreed unanimously the "draw" to do it far outweighed any operant conditioning to change. "Catching up" to what was missed while in class, connectedness, the coordination of social plans, staying

on top of the happenings, even multi-tasking to have lunch while driving to or from school, were all mentioned as reasons important enough to eschew the law, though they were clear, multi-tasking is not what distracted driving is about. “There is a draw to connectedness and belonging, and a fear of missing out or being left out if you don’t stay connected that is unacceptable,” said a participant.

As the discussion of the reasons behind driving distracted progressed, participants used terms such as “conditioned” and “habit” to explain why they continually use cellular phones and seem to be so reliant on technology. This led to the question, “is there a reward to technology use or engaging in other activities while driving, is it addiction or is it just habit?” Unanimously the participants agreed that there is a reward and a fulfillment of need in staying connected via technology, which is why it is so difficult for them to stop, even to perform the act of driving. “You would have to break it like a drug habit,” was one response. That same participant admitted that for him he felt it was an addiction. “There is a “Pavlovian” response to hearing a text, and even knowing that though a phone is on silent mode, there might be a text, so one must check often to not miss anything”, he explained. Several participants reported feeling anxious if they were without their phones or unable to check it frequently.

Participants cited social norms and logic as additional reasons for the perpetuation of distracted driving. As one female participant responded, an etiquette exists in which responsiveness is key, “to ignore the text even while driving is considered to be rude”. Another provided this summation, “Knowing we can drive and use technology without crashing, knowing we probably won’t get caught, knowing we get satisfaction from

knowing what that last text or post said, all of that is culturally acceptable by millennials." Other behaviors, such as eating while driving were considered to be stress relievers of a sort. "We must multi-task to get everything done that's expected of us. If eating behind the wheel as we go from school to job or job to school gets something out of the way, then that's a big thing off of our shoulders," responded a female participant.

The participants offered a final reflection on technology in society in general and the vehicle specifically. All agreed that the technology companies feed the obsession and they bear a certain responsibility greater than the government. The continued promotion of new and better phones, greater data packages, the lines of people who wait for the latest I phone creating the ultimate form of group think "gotta have it" mentality, the added features to make it safer and easier to stay constantly in touch (i.e. Bluetooth, Bluetooth in vehicles, docking stations in vehicles, dictation software, translation software to read texts and emails aloud) feeds the obsession and creates an illusion that it is "safer" with each technological upgrade. An inquiry as to whether this shifting of responsibility from the user to the manufacturer was not more millennial entitlement or failure to take responsibility for one's actions was met with disdain as one participant summed it up, "If they put it out there, we are going to use it, it's that simple. It's not our fault. Why do people climb mountains? Because they are there."

Gender and State Revelations

While I did not endeavor to delineate behavior by gender or state, both factors were included in the tracking sheet for the observation phase as a curiosity. Given the fact that the observation was taking place, the opportunity to notate state via license plate and

gender existed and I did not wish to squander an opportunity. The state from which a driver originated was relevant because of Delaware, Maryland, and New Jersey's early and complete adoption of cell phone prohibition legislation with regard to distracted driving and Pennsylvania's one foot in, one foot out, slow entry into distracted driving legislation. In fact, Pennsylvania still permits hand held talking on a cellular phone for drivers over the age of 18.

Gender became a very interesting topic when the focus group participants were overwhelmingly, 80% male. With males being the highest crash risk group among young drivers aged 16 to 35 (NHTSA, 2015), it is noteworthy that the statistics from the observation phase demonstrate males participating in distracted driving with the most dramatic outcomes with greater frequency, 168 to 130, than females in this small study. Though a chi-square test revealed no statistical significance between the groups, perhaps the outcome of note was that near miss events only occurred with male drivers (Table 1).

Evidence of Trustworthiness

This study was designed to incorporate evidence of and insurance for trustworthiness throughout the data collection and data analysis phases, including extra effort expended to ensure credibility, transferability, dependability, and confirmability. The strategies described in Chapter 3 included the use of the observation phase to validate the study. Demonstrating the existence of distracted driving as a viable and serious problem directly impacting the focus group population not only proved the credibility of the study, but also demonstrated dependability and confirmability by being done through a method that could be easily analyzed and replicated. This phase also

provided a solid foundation to unite the focus group participants and ignite meaningful discussion upon presentation.

The focus group data were collected using triangulation. Journaling, voice recording, and the use of an executive summary confirmation with the participants provided multiple means of ensuring the dependable collection, analysis, and reporting of the collected data. Finally, the use of multiple, independent, and confidential focus groups comprised of research participants whose only common connections were that they were English-speaking, millennial, licensed drivers and students who drove to that particular campus, elevated the credibility, transferability, and dependability of the data collected.

Summary

This chapter presented the recruitment methods, demographics, data collection and analysis methodology, and results of a two-pronged research study. The results of the observation phase which included tracking the distracted driving behaviors of the drivers of 100 vehicles entering or exiting the campus of a commuter university proved that millennials do drive while distracted, thus providing a credible and valid answer to Research Question 1. When presented to the focus group participants, this fact provided validation of the need for the study.

Secondly, I detailed the recruitment procedure and demographics of 12 focus group participants recruited from a commuter university. Then, I presented the results of the focus group interviews. The responses during the focus groups provided insight into the millennial culture, the social norms of the culture, explored the attitudes and

behaviors with regard to distracted driving among the members of the culture, and perhaps, provided some guidance as to what policy maneuvers might be implemented to elicit the desired behavior from this new generation of drivers. Finally, I discussed efforts to maintain trustworthiness during the study. To follow in the final chapter are the conclusions, recommendations, and implication for social change of this study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to improve the understanding of the millennial generation with regard to its response to public policy approaches governing distracted driving behavior. With car crash as the number one cause of death among millennials, and the incidences of distracted driving involvement in that statistic dramatically increasing annually (CDC, 2010; NHTSA, 2013), researchers such as Overton, Rives Hecht, Shafi, and Ghandi (2014) have advocated improved understanding of the millennial generation to adjust public policy in order to stem the tide of distracted driving crashes and deaths. Using a qualitative, ethnographic study employing a two-pronged methodology including observation and focus group methodology, I hoped that the results of this study could add to the body of knowledge to improve understanding of millennial culture. In so doing, I could provide some insight which might help improve the policymaking surrounding distracted driving behavior.

Among the key findings were a definition by millennials of distracted driving, a definition of their culture, an enumerating of millennial traits observed and identified during focus groups, the validation of a number of previous studies, and an explanation of why millenials are driving distractedly and what interventions and strategies might help them to stop. In conducting the observation and focus groups, I had the opportunity to track behaviors and focus group responses by both gender and state, which provided additional categories of qualitative data.

Interpretation of the Findings

The design of the study was adequate for me to gather new data while validating many studies included in the literature review. I was able to generate additional knowledge such as an identification of millennial characteristics, clarification about millennial attitudes toward current distracted driving policy, how they define and react to it, and what can be done about distracted driving among millennials. On a more general level, the insights I have generated may also translate to a more comprehensive cultural understanding of the millennial generation and a change in public policymaking to elicit the desired behaviors from millennials.

My first interpretation is an ethnographic description of millennial culture as both self-identified and observed. Millennials, as Howe (2000) stated, are the generation of people born between 1982 and 2004. This generation appeared simultaneously with the popular appearance of the cellular phone. To millennials, they have no frame of reference of a world without this technology. Jones and Healing (2010) coined the term "Digital Natives" (p. 352) to describe their technological comfort and capabilities as inherent in millennials because even their toys, games, and often textbooks are computer- or technology-based. Millennials are, by their own admission, comfortable using technology in any way and in any venue. They describe it as "normal to do." In fact, they prefer to use technology, especially smartphones. They view it as a necessary and multi-purpose tool of life which serves as calendar, reference library, phone book, map, notebook, communication device, data manager, entertainment device, radio, music library, camera, video player, video recorder, voice recorder, weatherman, social secretary, and most of

all connection to the world and friends to satisfy social and esteem needs. Without their phones, or with them turned off, they often feel anxious, as if they are missing something important, or are violating millennial etiquette and being rude. Texting is the social communication norm understood as acceptable in any situation. Phone calling is less normal, and is viewed as "really important" if someone makes a phone call. Satisfying social needs, being connected with peers, and being accepted and part of the group are the most important things to a millennial as defined by the focus groups in this study.

Millennials are busy. According to the participants in the focus groups, they multi-task because they must in order to accomplish all they need to do as students or young professionals. They self-identify as stressed all the time and they feel entitled to attend college, have good jobs, live well, and feel the government has a responsibility to govern, if only to demonstrate that they are not sanctioning a behavior that is not in the interest of "common good." In the case of distracted driving, they agree that laws should exist, but they also do not feel they need to obey the law because it is hard to enforce and they know they can do it without getting caught. To obey the law, they need a more compelling reason than has thus far been provided. Without compelling reasons, their needs trump public good. Overall, they prefer to have things proven to them scientifically or in reality-based programs or demonstrations that provide millennials with the "show me" reason. According to the focus group participants, emotional or fear-based threats and pleas are not meaningful, and they do not pay attention to traditional marketing efforts such as television or radio advertising. They do pay attention more when forced to by technology or advertising on social media. Calculated risk is something they are

willing to take as was evidenced in my study by their acceptance of risk in distracted driving. They also define distracted driving very differently than current policymakers. To millennials, distracted driving is anything but cellular phone use, which factored next to last when participants listed distracted driving behaviors in the focus groups. According to the focus group participants, distracted driving included being drowsy or physically or emotionally incapable of driving safely, DUI, eating, drinking, and interacting with passengers--all of which they considered far less safe than cell phone use behind the wheel.

The observation phase provided an immediate method of validating the occurrence of distracted driving on the study site campus. The sizable bank of valid and fresh data from my observations drove home for participants the size of the distracted driving problem, which directly impacts the focus group participants who need the reality check or "show me" data. My inclusion of the observation phase provided valuable and immediate insight into the variety of behaviors which constitute true distracted driving and the vastness of distracted driving as a problem, thus providing an answer to Research Question 1. My observations were consistent with Nevile (2012) who identified the impact on driving performance of gaze shifting, hands off of the wheel, driver and cellular phone interactions, and driver and passenger interactions, all of which I observed in my study. Eating and drinking, for example, led drivers to take one, and sometimes both, hands off the wheel to uncap water bottles or to eat a dripping sandwich and then clean it off of their laps. Eating and drinking also took eyes off the road when a driver tilted his or her head to drink or to extract food from a bag and then a wrapper to eat.

During the observation phase, near misses occurred within minutes of the start of the session, and demonstrated to me how quickly a true disaster can happen if a driver cannot or does not react quickly. Benedetto, et al. (2012) identified the delay in decision-making with cellular phone use, which was evident in my observation of cellular phone users entering or leaving the study site campus. In fact, of the four near misses I observed, three involved cellular phone use with two of the drivers on a hand held cellular call and one texting.

The observation phase also demonstrated to me the difficulty with enforcement, consistent with Sherzan's (2010) assertions. Observing other drivers while trying to drive, as law enforcement might, is not only distracted driving in itself, but also is nearly impossible. Myriad opportunities exist for a driver to eliminate or cover up for behaviors when they see a law enforcement officer, giving the distracted driver the upper hand. Unless law enforcement conducts distracted driving checkpoints--as they would for drunk drivers or seatbelt checks--and specifically sits still and watches for texting or hand held cell phone use, preferably in an elevated vehicle or location, it is quite difficult to see the behavior and consequently, even more difficult to enforce the law as written. This fact is well known to the millennials.

The presentation of the observation findings provided an opportunity to both gauge the reaction of the focus group participants and ask them to define what they considered distracted driving to be. As pointed out by Lennon (2010), the millennial definition of distracted driving differs from that of traditional public policy, and is much broader and far reaching including any behavior which takes eyes or hands off of the

wheel. This definition takes a much harder line than do public policymakers for behaviors such as eating, drinking, being physically or emotionally impaired or distracted, and being tired. Participants ranked passenger involvement and eating and drinking while driving as far more dangerous than technology use, and drowsy driving as most dangerous of all. All of the participants in the focus groups agreed that the current definition and policy initiatives are falling short because they fail to sufficiently include behaviors other than cellular phone use into distracted driving policy.

During the focus group phase, the goal was to answer two research questions: to what extent has the introduction of public policy regarding distracted driving influenced millennial attitudes and behavior toward distracted driving? and what, if any, interventions are needed to change distracted driving behavior among millennials? Participants provided great insight into the millennial culture via an emergent behavior, distracted driving. Distracted driving's appearance as a problem worthy of governmental intervention worldwide occurred at the same time millennials became the newest drivers, car crash became the number one cause of death among millennials, and technology in vehicle and in the form of cellular phone, collided as a perfect storm on highways. Hence, presenting these questions to millennials is a key factor in someday reducing injuries and fatalities caused by distracted driving crashes.

Millennials, by their own admission, are attached to their technology as an essential, multi-purpose tool for everyday living. While some call it an addiction, the majority see it as part essential tool, part needs satisfier. By their own ranking, the use of that tool while driving was ranked sixth out of seven unsafe driving practices, some of

which are controlled by policy. This is validation of Dellinger and Sleet's 2012 study which found that millennials do not consider distracted driving as dangerous as drunk driving. Yet, the same millennials felt that it was the government's responsibility to control, or least put forth a effort to control, the behavior lest it be seen as a sanction to do it. Again, an inconsistency within the millennial culture identified in 2013 by NHTSA and confirmed by this study. While millennials feel the government has a responsibility to create policy surrounding a public safety issue, they also do not wish to obey a policy governing a behavior they do not see as wrong and have no intention of stopping.

I found that millennials placed greater responsibility upon the technology companies as peddlers or facilitators generating easier and "safer" ways to do it, better phones, perpetuating a cycle of "you gotta have it" upgrades to be current, have status, and not miss a thing, than upon themselves. One participant termed this a "cultural revolution". "The technology has got to stop growing for us to stop using it," he said. According to the focus groups, the technology companies feed the obsession, and things like Bluetooth, dictation applications (apps), and in vehicle technology make it easier and easier to ignore the law and feed the frenzy while millennials behave, according to them, as the good consumers they have been raised to be. "Safer by their (manufacturer) standards just makes it easier and more acceptable by ours," said a respondent.

In the final analysis, the information gathered during the focus groups raised two questions for researchers and policymakers. First, how successful can any policy be if those at whom that policy is aimed do not comprehend it or conceive of it as wrong? Second, if this is a cultural revolution, then does policy shape culture, or culture shape

policy? History is ripe with examples of each, such as Lincoln's approach to changing a culture of slavery with the Emancipation Proclamation and the 13th Amendment to abolish slavery, or Franklin Delano Roosevelt's repeal of Prohibition because of its failure to change culture.

Observance of the current distracted driving law is optional by millennial standards. Reasons cited include difficulty with enforcement, they have never known anyone against whom it has been enforced, the behavior is easy to hide, the police cannot sufficiently enforce the law, the penalties are not sufficient to deter the behavior, and the draw to do it because of the need to belong, participate, or stay on top of things far exceeds any fear of any ramifications of that behavior. "Because I do not consider this to be wrong to do, something drastic will have to happen to make me stop," said a participant.

Tison et al. (2011) identified three explanations for millennial distracted driving propensity, the first being driver inexperience including poor risk perception and poor situational awareness, the second being technological dependence, and finally, a cultural propensity to multi-task. The results of this study indicate that Tison et al. were partially right. Technological dependence is self-identified as both a factor and millennial trait by the focus group participants. By the definition of some, not all, of the participants, there is a cultural propensity to multi-task, but there are other cultural propensities as well which provide explanation. In an effort to explore these explanations for millennial distracted driving propensity, I chose a two-pronged theoretical framework using

Skinner's theory of operant conditioning and Maslow's hierarchy of needs (Maslow, 1987, Skinner, 1971).

When examining the literature, it seemed the explanation could lie with either needs satisfaction or operant conditioning, or perhaps, both. Because effective public policy is the art of eliciting the desired behavior (Lynn 1986), understanding the behavior via two psychological theories made sense. Under this assumption, distracted driving is either attributable to a particular pattern of operant conditioning or because the driver feels safe and is both motivated and able to pursue higher need satisfaction. According to the focus group results, there exists a willingness to accept the risk in order to satisfy a higher need. Again, that risk should be qualified because the focus group participants reported they knew no one who had been either injured in a distracted driving crash or cited by law enforcement for driving distracted. Additionally, they knew it was a difficult law to enforce. A key finding of the analysis is that millennials feel safe enough using technology while driving that they are able to pursue higher needs such as belongingness and self-esteem. To quote a focus group participant, "There is a draw to connectedness and belonging, and a fear of missing out or being left out if you don't stay connected that is unacceptable." In light of Tison et al.'s (2011) conclusion regarding poor risk perception, millennials understand the risk, but see it as a calculated benefit that outweighs the risk. Regarding situational awareness, in the focus groups the participants self-identified as a culture for which "technology is acceptable anywhere," and to reject that cultural norm results in someone who is in breach of millennial etiquette.

In 1989, Skinner (p. 14) wrote, “Behavior is shaped and maintained by consequences. We do what we do because of what has happened, not because of what will happen.” According to Skinner (1971), operant conditioning results when the desired or undesired behavior occurs, and either a positive or punitive measure reinforces or deters the behavior. In fact the draw to technology becomes the operant conditioning with behavior positively rewarded with information, confirmed plans, social interaction, and satisfied belongingness and self-esteem needs. Distracted driving practitioners are rewarded with an additional dose of operant conditioning because of what “has happened”, or has not. By their responses, the focus group millennials knew no one who had been injured in a distracted driving crash, or cited for distracted driving. They arrive alive despite having driven distracted. They know the law is hard to enforce and perhaps, most importantly, they have satisfied their needs for connectedness, belongingness, and self-esteem.

I interpreted the findings to consider some options that might change distracted driving behavior. This revealed several areas for focus. First, the most basic revelation was the dramatic difference between current policy definition of distracted driving and the focus groups’ expanded definition of what they consider distracted driving to be. Secondly, dramatically strengthening the current penalties for driving distracted to include points, license suspensions, higher fines, and jail time as was done with driving under the influence many years ago, was strongly identified by participants as a means of getting millennial attention to change behavior. Points refer to a system used by drivers licensing authorities in which demerits, or points, are assessed for particular driving

infractions. These points when accumulated can result in the increase in a driver's insurance costs or even license suspension. In the area of public education, the use of catchy taglines is not working, nor are fear-based "fake" PSAs and commercials. Millennials need to see something both real and really scary (Lennon, 2010; Scott-Parker et al., 2012) to consider changing. Traditional media is a poor method of disseminating information as millennials tune out or change channels or stations during advertisements. Rather, use of social media in marketing (Kotler & Levy, 1969) is the preferred medium. Using legislation to enact a complete ban on cellular phone use while driving is another option. Finally, using technology to force millennials to absorb a message is effective as SnapChat does by prohibiting a user to proceed without at least clicking on a marketing image. Using technology in other ways, such as blocking a driver's phone in vehicle except for the ability to dial 911, or blocking all cellular phones in vehicle are additional options to result in behavior change.

Ghazinoory and Ghazinoori (2006) advocated for the use of a SWOT (strengths, weaknesses, opportunities, threats) analysis in assessing the overall strategic value of policy and establishing best practices. A SWOT analysis of the policy initiatives regarding distracted driving, in light of this study, yielded some revelations. First, a strength, is that the initiation of policy and associated traditional approaches including laws and public service announcements, has successfully caused millennial drivers to be cognizant of their own behavior despite their protestations to the contrary. The evidence of this was the willingness of the university students to participate in this research. As one participant noted, "I saw the flyer and had to come to the focus group because I am

guilty of distracted driving and I can't stop." Millennials understand distracted driving, and further, can define it, and have taken that definition to a higher level including more and different behaviors than have policymakers to date.

It appears that policy weakness exists. Despite the laws and public service announcements distracted driving behavior continues as observed firsthand. The focus of the policy does not necessarily coincide with the target population's definition of what behaviors constitute distracted driving and what behaviors do not. Because of the millennial cultural propensity for and acceptance of cellular phone use, they do not admit that cellular phone use while driving is an unlawful behavior. While they agree a policy should exist, in their view, the policy focus is deficient in that it fails to address behaviors the target culture would include as distracted driving behavior such as drowsy driving, eating, drinking, elements of passenger interaction, and use of other technology such as in-vehicle GPS, radio, MP3 players, or environmental controls.

Understanding what drives millennials to perpetuate this behavior is critical. The evaluation of their attitudes and behaviors in light of Maslow and Skinner revealed that there is a complicated hybrid element of both needs satisfaction and operant conditioning at play. Millennials are well-aware of what they can get away with regarding distracted driving. For example, that the likelihood of being fined or otherwise stopped by police is low, and the penalties minor even if they were caught. For a culture which self-identifies as a "show me why" generation, seeing evidence that something is not enforced, seeing no evidence first hand that it can hurt them financially or physically, and understanding that they repeatedly perform the behavior and get some satisfaction out of it without

detrimental effect, a new approach is indicated to elicit new behavior from millennials. Additionally, given the satisfaction of their needs for safety by the operant conditioning mentioned previously, the continued behavior provides a much desired higher order needs satisfaction for connectedness and belonging.

Opportunities with regard to public policy include studies such as this that provide insight not only into the culture at which policy is aimed, but also at what that culture considers to be distracted behavior or worse. The opportunity to strengthen laws and penalties exists. First, the opportunity to reverse the operant conditioning exists by undermining millennials feelings of safety while violating distracted driving law. Increase fines, increase patrols and enforcement, and take the opportunity to use their beloved technology against them. By their own admission in focus groups, these would be the ultimate means of controlling what they see presently as uncontrollable.

Threats to public policy include the perpetuation of only cellular phone use as distracted driving prohibited behavior given the results of this study. Something needs to change to make the policy effective. Attitudes and behaviors of millennials are only the beginning of the trend, and subsequent generations are learning and developing by watching millennials. Millennials are now procreating and raising children who will model their behaviors. The trend will continue unimpeded unless appropriate interventions are introduced.

Limitations of the Study

The main limitation of the study was that this was conducted in one small window of time on one college campus in America. Clearly, the problem extends to more than

one campus. In order to include the observation phase, which provided solid evidence for the focus group participants of the existence of the problem in their own midst, this study could only be done on a campus by campus basis. If that phase were eliminated, it could be conducted nationwide via a survey, again sacrificing some of the interactions and the personal proof of the distracted driving problem, but gaining a larger pool of cultural information refuting or validating the results detailed here.

Recommendations

Several recommendations emerged from this study. First, expanding this study to include different regions and more millennials would help to strengthen external validity reinforcing or refuting the facts determined with this isolated observation and focus group combination. Considering the suggestion from several focus group members that the propensity for technology use, specifically cellular phone use, could be considered an addiction, a broad administration of Chóliz's 2012 questionnaire might confirm or deny whether cellular phone use is approaching that level among millennials.

Having an enlightened understanding of the millennial culture as a result of this study leads to several recommendations to create policy that works for a new culture. A consideration of expanding the definition of behaviors constituting distracted driving is warranted for two reasons. One, millennials, as evidenced by not just this study but others as well, seem to recognize other behaviors such as passenger interaction, drowsy driving, eating and drinking, as greater distracted driving issues and greater threats than cellular phone use. This recognition is apt as evidenced by their observations and by statistics as recent NHTSA (2015) panels on drowsy driving suggest the need for research,

quantification of the problem, public education, and establishment of countermeasures. Some behaviors including the ones mentioned above, are as distracting, if not more so, in some ways than for example, a hands free cellular phone, as they take hands and eyes off the wheel or road, challenge a driver mentally, physically, and psychosocially. This is not to detract from the seriousness of cellular phone use as a public safety threat, but rather as an expansion of perspective that these other behaviors could also be an untracked factor in crashes and fatalities.

With or without an expansion of the distracted driving definition, a reexamination of policy in terms of public education and penalties is required. There was some confusion among the focus group participants regarding the laws and what the laws were in each contiguous state. While the penalties were relatively unknown, they just knew they were not onerous. It is common knowledge, at least among the focus group, that the law is difficult to enforce. It is easy to hide distracted driving behavior while doing it. Enacting consistent laws across the states, particularly in a region such as the Middle Atlantic States on the East Coast where it is common to drive in two or three states in the normal course of a day, is necessary to have a profound effect on the distracted driving statistics among millennials.

Communicating the full extent of the laws and penalties in a forum millennials frequent, such as social media, would provide the necessary public education to achieve widespread understanding. Communicating a message using real people who have been injured or affected in some way by a distracted driving crash, along the lines of reality television, would be effective. Instituting distracted driving check points or distracted

driving traps used to detect drunk driving would be a deterrent and would reverse the viewpoint that the law is unenforceable. Instituting more stringent and well-communicated impactful penalties that might hurt the driver economically, as well as his or her freedom either by license suspension or jail time, would achieve the desired effect to reduce the behavior and save lives.

Implications for Social Change

Implications for social change derived from this study include a re-examination of how public policy initiatives are approached when policymakers have the goal of behavior change or modification. To create effective public policy, which addresses this growing public health and safety threat, it is necessary to understand the dynamics of distracted driving including attitudes, responses, behaviors, and habits of those who engage in this behavior most frequently (Lynn, 1986). Policy legitimacy only exists when those toward whom that policy is intended believe it is appropriate, just, and will be enforced (May & Jochim, 2013). Additionally, strong and appropriate policy tends to benefit the newest drivers most, as they have the least experience and are most likely to fall victim to driving while distracted (Bingham, 2014). Using the twin theories of Skinner's theory of operant conditioning and Maslow's hierarchy of needs, the study participants revealed important traits about the millennial culture and their motivations to drive while distracted and whether to obey the law.

Among the things revealed by participants were that millennials tune out or turn off commercials and public service announcements, which have traditionally been a sizable investment of public funding to communicate a behavior change message. Unless

forced to view or listen to them by technological means, it is likely that the message will not be heard by the intended audience. Catchy phrases, slogans, or campaigns are lost on millennials unless exceedingly negative or threatening in message and tone, they also need to be reality-based. I found that reevaluation of the messages and delivery methods is prudent.

Understanding the science behind or the whys of policy are of great import to millennials. The potential for using technology to combat the use of technology behind the wheel may have great merit, as evidenced by the SnapChat messages, which must be viewed to progress. Peer to peer social media messaging is also a worthy consideration. Millennials are so invested in their social media culture and so invested in the social in terms of needs satisfaction, creating a grassroots movement to change behavior might be an effective method when pursuing means to modify behavior.

The notion of expanding the definition of distracted driving is one worthy of pursuit. The behaviors identified during the focus groups are known behaviors, at the grassroots level, as threats to safety and millennials feel strongly about those. Including some of those in policymaking may well result in a profound life-saving effort. The numbers of crashes and fatalities involving those behaviors are likely not tracked, or at least not tracked sufficiently or frequently as is evidenced in the 2015 NHTSA drowsy driving panel.

As with changing the view of drunk driving, policymakers had to make a stand and take a very hard line to change the cultural view that driving under the influence was acceptable. Previous generations lived in a world without seatbelts, and where the local

police officer drove you home if you were stopped when suspected of having been drinking. Distracted driving now is no different than drinking and driving a generation or two ago. Imposing stiffer penalties, using enforcement methods of distracted driving traps or checkpoints, even changing law enforcement's vantage point to be able to see in the vehicle, would be using tried and true methods to accomplishing behavior change for a new but just as dangerous problem likely to persist. Evaluating the technology producers and creators as the liquor and beer companies were and are, imposing requirements to provide education about the dangers of the use of the product, even imposing limitations such as mandatory blocks on the driver's phone, are worthy of consideration, as their actions encourage the actions of their consumers. This problem is not one that is not going to get better without serious intervention.

Conclusion

The process outlined in this study led to a definition of millennial traits and improved comprehension of millennials as a unique generation and culture. It led to the validation of distracted driving among millennials on one college campus which serves four states, and the revelation of a wide variety of behaviors that could also be considered to be distracted driving which are not included in current legislation. Most importantly, this study led to meaningful insights by the millennial culture with regard to distracted driving behavior, policy, enforcement, and penalties which may lead to policy and social change thus saving lives.

Focus group participants indicated that texting and cellular phone use are culturally inherent and acceptable behaviors tied to both operant conditioning and higher

level needs satisfaction. Millennials are being asked to change a behavior that is not only socially normative, but even necessary, and most importantly, one they do not see as wrong. Because distracted driving policy only addresses texting and cellular phone use this demonstrates a cavernous generation and culture gap between policymakers and those for whom those policies are intended most.

For policymakers to create effective policy from definition to penalty to enforcement, understanding cultural changes and developments in light of the technological advances of the past two decades is paramount. A revolution is happening. As a result, revolutionary action including a reevaluation of definitions and behaviors constituting distracted driving, an overhaul of educational and enforcement efforts, and an investigation of using fire to fight fire, in this case, technology itself, is necessary to stem the tide of distracted driving's violent impact on society.

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Appendix A: Observation Tracking Sheet

Observation Tracking Sheet	Behaviors Legend		
Date	1 = talking cell	5 = hands off wheel	9 = NO DISTRACTIONS
Time	2= psnger interaction	6 = manipulating controls in vehicle	
Location	3= drinking/eating	7 = eyes off of road	
Weather	4 = reading	8 = other (notate behavior)	

Car #	*Driver Gender*	*# Passengers*	*State on Plate*	*Behaviors observed*	*Near misses*	*Comments*
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Appendix B: Distracted Driving Focus Group Key Activity Checklist

1. Identify specific objectives for focus group research.
    a. Determine the answers to the research questions from the perspective of millennials
2. Key Research Questions
    a. RQ1— How do millennials respond to the laws governing distracted driving?
    b. RQ2 - To what extent has the introduction of public policy regarding distracted driving influenced millennial attitudes and behavior toward distracted driving?
    c. RQ3 - What, if any, interventions are needed to change distracted driving behavior among millennials?
3. Focus Group Activities
    a. Two (2) focus groups of 6 participants each
        i. Present criteria to key professionals for recruitment
        ii. Recruit referred students via referral by professionals, snowballing
        iii. Ensure that focus group criteria requirements (driver, entering or leaving campus during observation times and dates, appropriate age group)
    b. Email present findings and conduct any necessary follow up clarifications.

4. Moderator –
    a. Welcome and Introduction
        i. Introduce other team members and roles
        ii. Use of audio taping devices, note takers, etc.
        iii. Informed consent signed upon entry
    b. Establish trust via explanation of research
    c. Presentation of observation findings by moderator
        i. Entertain any questions from participants regarding findings or intent of research.

ii. Open discussion by asking participants if the results are surprising or what they would expect? Why or why not?

d. Research questions to be answered
   i. RQ1— How do millennials respond to the laws governing distracted driving?
      1. Ask participants to define distracted driving
         a. What behaviors in your view constitute distracted driving? List.
      2. What are the laws in your state regarding talking while driving?
      3. What are the laws in your state regarding texting while driving?
   ii. RQ2 - To what extent has the introduction of public policy regarding distracted driving influenced millennial attitudes and behavior toward distracted driving?
      1. To what extent do you consider distracted driving to be worthy of public policy intervention?
         a. Why?
         b. What types of interventions/penalties do you consider to be reasonable?
      2. Rank the following driving behaviors:
         a. Talking on a cell phone
         b. Texting
         c. Driving aggressively
         d. Driving while under the influence of drugs and alcohol
         e. Driving while drowsy
         f. Driving while eating
         g. Passenger interference
         h. Driving while upset/excited
      3. Can you think of any anti-distracted driving campaigns? Which ones? Why? Were they effective? Why or how?

iii. RQ3 - What, if any, interventions are needed to change distracted driving behavior among millennials?
    1. In your view, do millennials drive distracted more often than other generations? Why?
    2. Rank the following in order of what would cause you to change your behavior:
        a. A fine of over $150
        b. A fine of under $50
        c. Parental penalization
        d. Fear of crash risk or death
        e. A felony conviction for injuring or killing someone
        f. Participating in an educational course which shows the scientific facts about driving and distractions
        g. If you knew someone who was hurt in a distracted driving crash.
        h. Losing your license for a period of time
        i. Increased insurance rates

5. Conclude focus group by explaining next steps
6. Analyze data
7. Write report
8. Email focus group one final time to report findings and ensure accuracy in reporting of findings. Clarify any changes or discrepancies.
9. Write Chapter 4.

Appendix C: Human Subjects Review Committee Approval

HSRC 8

WILMINGTON UNIVERSITY
HUMAN SUBJECTS REVIEW COMMITTEE (HSRC)
PROTOCOL REVIEW

This section is to be completed by the HSR Committee Person.

Principal Investigator: Karen Versuk

Date submitted: _____

The protocol and attachments were reviewed:

The proposed research is approved as:

____Exempt X Expedited ____ Full Committee

The proposed research was approved pending the following changes:

____See attached letter

____Resubmit changes to the HSRC chairperson

The proposed research was disapproved:

____ See attached letter for more information.

HSRC Chair
or Representative Michael S. Czarkowski
Print name

Michael S. Czarkowski
Signature Date: 03/25/2015

HSRC Chair
Or Representative Linda H. Fraser
Print name

Linda H. Fraser
Signature Date: 3/27/2015

Appendix D: Participant Consent Form

DISTRACTED DRIVING CONSENT FORM

You are invited to take part in a research study of distracted driving attitudes and behavior among Millennials. The researcher is inviting Millennial generation students aged 18 to 35 who understand English, are licensed drivers, and drive to or from Wilmington University – New Castle Campus for classes Monday through Friday afternoons to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Karen Versuk, who is a doctoral student at Walden University.

Background Information:
The purpose of this study is to determine the response of Millennials to current distracted driving public policy. .

Procedures:
If you agree to be in this study, you will be asked to:

____Participate in person in one of two focus groups lasting two (2) hours each. The focus groups will be on campus in the student union.

____Review the electronic results of the focus groups and respond electronically.

Here are some sample questions:

1. Define distracted driving.
2. What behaviors in your view constitute distracted driving? List.
3. What are the laws in your state regarding talking while driving?
4. What are the laws in your state regarding texting while driving?
5. Under what circumstances do you feel distracted driving is "okay"?
6. Do you consider those to be violations of the law/crimes?
7. Should you be penalized? If so, how?
8. Do you consider your use of technology to be worthy of government intervention?

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at your university will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as becoming upset. Being in this study would not pose risk to your safety or wellbeing.

If you find you are upset or in crisis, free counseling is available at 2-1-1 or by visiting Delaware211.org.

This study may benefit society as a whole by revealing information which will positively impact public policy initiatives targeted at distracted driving and Millennials as a generation.

Payment:
There is no payment but lunch will be served for participants.

Privacy:
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by using

pseudonyms, password protected documents and devices, and maintained on a password protected server. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone or text at 302-690-6245 or via email at Karen.versuk@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 612-312-1210. Walden University's approval number for this study is **06-04-15-0185827** and it expires on **June 3, 2016.**

The researcher will give you a copy of this signed consent form.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Printed Name of Participant _____

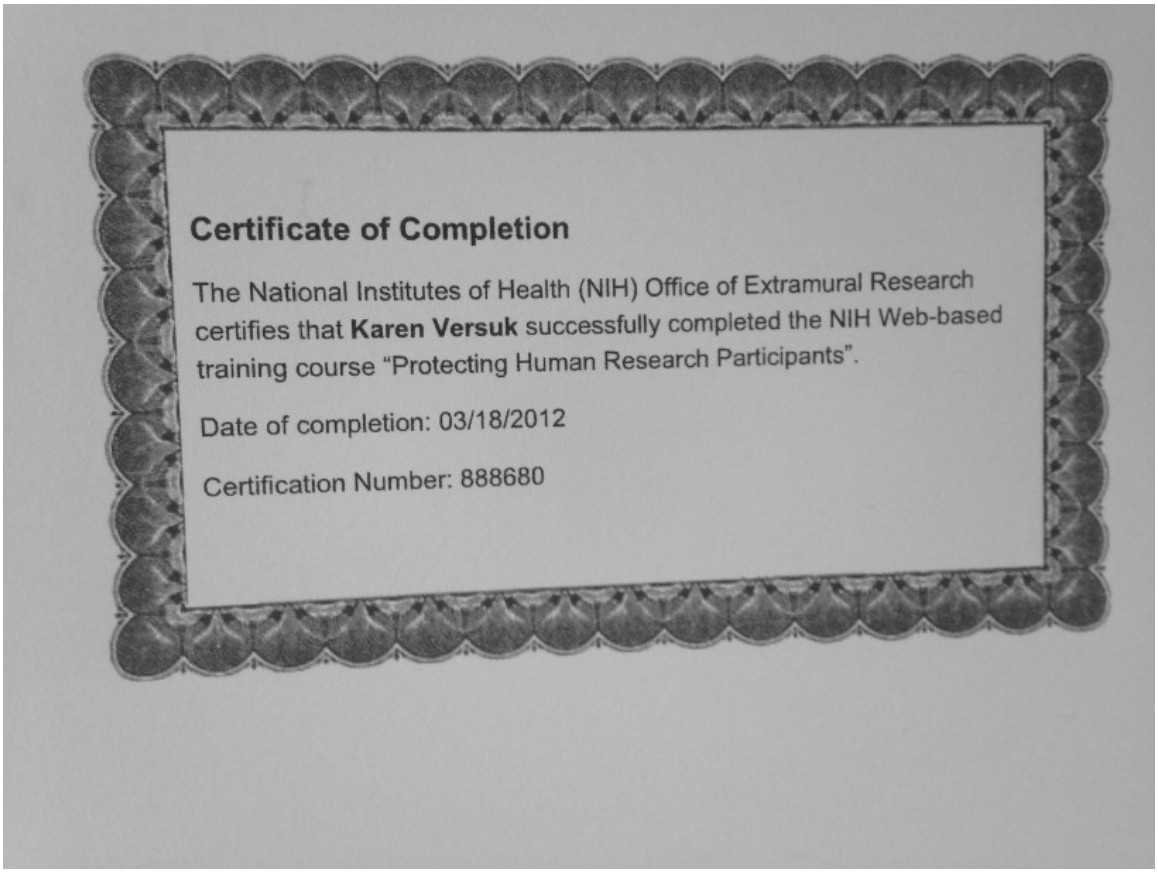
Date of consent _____

Participant's Signature _____

Researcher's Signature _____

Elizabeth Munson
2015.06.04 17:10:22 -05'00'

Appendix E: NIH Certification



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Karen Versuk** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 03/18/2012

Certification Number: 888680

Appendix F: Facebook Recruitment

Volunteer Participants needed for A Doctoral Research Study — The Influence of Public Policy Interventions on Millennial Distracted Driving Behavior

You are invited to take part in an innovative research study investigating distracted driving attitudes and behavior among Millennials. The researcher is inviting students aged 18 to 35 with driver's licenses who drive to or from University – Campus for classes to be in the study. This brochure is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Karen Versuk, who is a doctoral student at Walden University. She has obtained consent to conduct two focus groups of a minimum of 6 and maximum of 12 students each.

Background Information:

The purpose of this study is to determine the response of Millennials to current distracted driving public policy.

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at your university will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as becoming upset. Being in this study would not pose risk to your safety or wellbeing.

This study may benefit society as a whole by revealing information which will positively impact public policy initiatives targeted at distracted driving and Millennials as a generation.

Payment:

There is no payment but lunch will be served for participants.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by using pseudonyms, password protected documents and devices, and maintained on a password protected server. Data will be kept for a period of at least 5 years, as required by the university.

Disclaimer:

Participation is voluntary. There is no compensation; you are participating in your own personal capacity (on your own time); this activity is not a university activity or study; you are not speaking in any official capacity

In Crisis?

Dial 2-1-1 or

Visit Delaware 211.org

for crisis counseling.

Participants are asked to :

- Provide informed consent
- Meet at one of two focus group sessions on campus in the Student Union
- Participate in a focus group session of no more than 2 hours in length
- Be audio taped during focus group
- Share your perceptions about distracted driving
- Review the electronic results of the focus groups and respond electronically with comments.
- Drive to school
- Be a student at University
- Understand English

For more information or to volunteer please contact the researcher:
Karen Versuk
Phone:302-xxx-xxxx
Email:
karen@xxxxxxx.xxx
http://facebook.com

Appendix G: Recruitment Brochure

Seeking Volunteer Participants for a Doctoral Research Study Focus Group to discuss the influence of public policy interventions on Millennial Distracted Driving behavior.

For more information or to volunteer:

Karen Versuk

302-xxx-xxxx

Karen@

Xxxxxxx.xxx

Participants are asked to :

- Provide informed consent
- Meet at one of two focus group sessions on campus in the Student Union
- Participate in a focus group session of no more than 2 hours in length
- Be audio taped during focus group
- Share your perceptions about distracted driving
- Review the electronic results of the focus groups and respond electronically with comments.

Requirements:

- Be between the ages of 18 and 35
- Understand English
- Be a licensed driver
- Drive to school
- Be a student at University

Disclaimer:

Participation is voluntary. There is no compensation; you are participating in your own personal capacity (on your own time); this activity is not a university activity or study; you are not speaking in any official capacity.

For more information contact the researcher:

Karen Versuk
Walden University
Phone:302-xxx-xxxx
Email:karen@xxxxxxx.xxx
IRB# 06-04-15-0185827

Volunteer Participants Needed for A Doctoral Research Study

The Influence of Public Policy Interventions on Millennial Distracted Driving Behavior

About the Study

You are invited to take part in a research study investigating distracted driving attitudes and behavior among Millennials. The researcher is inviting students aged 18 to 35 who drive to or from University – Campus for classes Monday through Friday afternoons to be in the study. This brochure is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Karen Versuk, who is a doctoral student at Walden University. She has obtained consent to conduct two focus groups of a minimum of 6 and maximum of 12 students each.

Background Information:

The purpose of this study is to determine the response of Millennials to current distracted driving public policy.

Procedures:

If you agree to be in this study, you will be asked to:

1. Participate in person in one of two focus groups lasting two (2) hours each. The focus groups will be on campus in the student union.
2. Review the electronic results of these focus groups and respond electronically.

Sample questions for Distracted Driving Focus Groups::

- Define distracted driving.
- What behaviors in your view constitute distracted driving? List.
- What are the laws in your state regarding talking while driving?
- What are the laws in your state regarding texting while driving?
- Under what circumstances do you feel distracted driving is "okay"?
- Do you consider those to be violations of the law/ crimes?
- Should you be penalized? If so, how?
- Do you consider your use of technology to be worthy of government intervention?

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at your university will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as becoming upset. Being in this study would not pose risk to your safety or wellbeing.

This study may benefit society as a whole by revealing information which will positively impact public policy initiatives targeted at distracted driving and Millennials as a generation.

Payment:

There is no payment but lunch will be served for participants.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by using pseudonyms, password protected documents and devices, and maintained on a password protected server. Data will be kept for a period of at least 5 years, as required by the university.

In Crisis?

Dial 2-1-1-

Or

Visit Delaware 211.org for crisis counseling.

For more information or to volunteer please contact the researcher:
Karen Versuk
Walden University
Phone:302-xxx-xxxx
Email:
Karen@xxxxxxxx.xxx

APPENDIX H: Permission

Karen Versuk <

Feb 27

to martina.kynclo.

Hello,

I am completing my doctoral studies at Walden University. My dissertation includes a diagram included inhttp://www.upce.cz/fes/veda-vyzkum/fakultni-casopisy/scipap/archiv/e-verze-sborniku/2012/sbornik-2-2012.pdf regarding Maslow's hierarchy. I have included the appropriate references to P. Cizek and your publication.

May I please have permission to use this?

Thank you very much in advance.

Karen Versuk, MBA, ABD

Feb 29

Kynclova Martina via unipardubice.onmicrosoft.com
to me

Dear Karen Versuk,
Yes, you have permission to use this text.

Thank you for information.

Best regards,
Martina Kynclova

Martina Kynclova
editor

University of Pardubice
Faculty of Economics and Administration
Studentska 95
532 10 Pardubice
Czech Republic