

Exploring the Effectiveness of Distracted Driving PSA (Public Service Announcement)

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Abstract

The issue of “distracted driving” has been a popular topic in research and the subject of numerous campaigns and laws. Fear appeals have commonly been utilized to prevent people, adolescents mainly, from engaging in such behavior. This paper examines the impact that a public service announcement featuring a fear appeal to discourage distracted driving has on the perceptions and intentions of a sample (N = 102) of Texas State University students. The students viewed a thirty-second PSA before completing a self-report questionnaire. Responses were analyzed to gauge the effectiveness of the PSA and look for the presence of gender differences and the third-person effect within the sample. This study focused specifically on the distracted behavior of text messaging while driving. Overall, students expressed the opinion that the PSA was believable and somewhat useful for preventing texting while driving. In line with past literature, males and females in this sample responded differently to the message, with females being more responsive. Contrary to past research, this study did not find support for the third-person effect.

Keywords

PSA (Public Service Announcement), Distracted Driving, Third-Person Effect

1. Introduction

Given the pervasiveness of handheld technology in our society, there has been growing concern about the risks involved with using such devices, specifically cell phones, while operating a vehicle. This phenomenon, generally referred to as “distracted driving”, is at the basis of numerous new traffic safety laws and campaigns aimed at preventing car accidents and loss of life on the road. In 2010, a national summit comprised of “safety experts, industry leaders and several U.S. senators” was held to examine what potential regulations could be enacted to

solve this social danger (Wilson & Stimpson, 2010: p. 2213).

According to the National Highway Traffic Safety Administration (2011), approximately 20% of the car crashes involving injuries in 2009 were reportedly due to distracted driving. Moreover, even though drivers of any age could suffer consequences of driving distracted, there seems to be a greater propensity for younger drivers to engage in this behavior. Recent statistics show that drivers under age 20 had the largest amount of fatal crashes as a result of distracted driving, followed by drivers age 20 to 29 (NHTSA, 2011).

In an attempt to combat this dangerous practice, various organizations concerned about public safety, such as municipal police departments, the Department of Transportation and even wireless telephone companies, have created advertisements and public service announcements. A public service announcement, or PSA, can be defined as, “a type of advertising, sponsored by either government agencies or other organizations, to promote causes and activities generally considered socially desirable” (Murry, Stam, & Lastovicka, 1996: p. 1). One tactic that is commonly found in these messages and studied in past research is the use of shocking content and/or appeals to fear (Brennan & Binney, 2010; Dahl, Frankenberger, & Manchanda, 2003; Hastings, Stead, & Webb, 2004; Lennon, Rentfro, & O’Leary, 2010). This tactic is relevant to the present study’s topic because, according to Lewis, Watson, Tay and White (2007), advertising on the issue of “road safety is particularly renowned for its use of physical threats in which drivers and passengers are often shown to be injured and killed as a result of unsafe and/or illegal behavior” (p. 203). However, debate over the effectiveness of these tactics as well as controversy about the extreme graphic content sometimes found in the ads still exists.

The present study aims to examine the effectiveness of a public service announcement against distracted driving on a convenience sample of college students attending Texas State University. This age group was selected for two reasons. First, most previous research in this area has utilized young adults in their samples (Dahl, Frankenberger, & Manchanda, 2003; Lennon, Rentfro, & O’Leary, 2010; Schoenbachler & Whittler, 1996). Second, this age group appears to be at the greatest risk, at least statistically, of being involved in a distracted-driving car crash (NHTSA, 2011). Cramer, Mayer and Ryan (2007) assert that “motor vehicle crashes are the leading cause of death and disability for young Americans” (p. 181). Thus, the present study will restrict participants to both males and females between the ages of 18 and 24. The subjects will be shown one time a thirty-second public service announcement from the National Highway Traffic Safety Administration’s campaign against distracted driving. Afterwards, they will complete a self-report questionnaire regarding their perceptions of the ad and their intent to engage in cell-phone use while driving. The researcher will analyze the survey data quantitatively to answer three research questions as follows:

RQ 1: What is the impact of viewing an anti-distracted driving public service announcement on students’ perceptions and intent?

RQ 2: Do responses to the PSA differ according to gender?

RQ 3: Is there evidence of the “third-person effect” within the data results?

2. Literature Review

2.1. What Is Distracted Driving?

Distracted driving is defined as, “any non-driving activity a person engages in that has the potential to distract him or her from the primary task of driving and increase the risk of crashing” (NHTSA, 2011). Distraction can be broken down into three overarching types. Visually distracted drivers avert their gaze from the road, manually distracted drivers remove their hands from the steering wheel, and cognitively distracted drivers lose focus while driving (NHTSA, 2011). This phenomenon is an important topic of study because it is prevalent in American society and can have grave consequences. The National Highway Traffic Safety Administration administered a survey in 2009 that reflected an increased frequency of electronic device use while people were driving (NHTSA, 2011). Moreover, recent research has shown that deaths resulting from distracted driving have risen more than 25% since 2005 (Wilson & Stimpson, 2010). And, as Gozzi (2011) points out, one can die by being a distracted driver themselves or as a victim of another individual driving in that manner. Therefore, organizations such as the National Highway Traffic Safety Administration have tried to create persuasive campaigns to reach drivers and tackle this hazardous activity. These campaigns generally fall under the umbrella term of social marketing.

1) *Social marketing—its uses and appeals*

The goal of social marketing is to “encourage changes in behavior that benefit the individual, community, and

society at large” (Nicholson & Xiao, 2011: p. 2529). Advertisements in this category tend to promote real-life practices or ideas rather than products or services. Many government agencies and nonprofit organizations in the United States utilize social marketing; their prerogative is to induce those who view the advertisement (i.e. the American public) to behave in a way that is “socially desirable” (Lennon, Rentfro, & O’Leary, 2010: p. 96). Brennan and Binney (2010) believe that these types of advertisements are useful to society because they promote individuals to consider others and act in their best interest. The present study focuses on a campaign encouraging safe driving, but advertisements exist on a number of other social issues such as environmental protection, drug abuse and safe sex practices.

2) *Use of fear in advertising messages*

A commonly used strategy in social cause advertising seems to be appealing to fear. Lennon, Rentfro and O’Leary (2010) define a fear appeal as “a persuasive communication attempting to arouse fear, promoting precautionary motivation and self-protective action” (p. 97). Advertisements that use these appeals influence on “present viewers with the negative outcomes that they may experience as a result of engaging in the depicted unsafe and/or illegal behaviors” (Lewis, Watson, & Tay, 2007: p. 49). The goal behind this strategy is grounded in the notion that fear makes individuals feel tense and anxious, thus they will “seek ways to reduce these feelings” (LaTour & Zahra, 1989: p. 61). Previous research has looked at the ways in which fear is used and the effectiveness of doing so (Brennan & Binney, 2010; Hastings, Stead, & Webb, 2004; LaTour & Zahra, 1989; Lennon, Rentfro, & O’Leary, 2010; Lewis, Watson, Tay, & White, 2007).

For instance, Lewis, Watson and Tay (2007) claim that “threatening advertisements have been widely used in the social marketing of road safety” (p. 48). In their experimental study, Lennon, Rentfro and O’Leary (2010) had a very large sample of 840 adolescents view two separate fear-based advertisements discouraging distracted driving behaviors. The subjects in the study did find the illustrated behaviors to be “more distracting than they previously believed”, a seemingly positive effect of the advertising appeal (Lennon, Rentfro, & O’Leary, 2010: p. 95). Yet, despite this response, the subjects also reported a higher level of intent to behave in the ways depicted in the ads; this reaction is known as the “boomerang effect” (Lennon, Rentfro, & O’Leary, 2010: p. 95). The boomerang effect can be seen as an adverse reaction to viewing a threatening advertisement. Still, some positive benefits have been found to exist from using fear-based or shocking content within advertisements. Dahl, Frankenberger and Manchanda (2003) analyzed college students’ responses to controversial AIDS prevention advertisements. The results of their study showed that “shocking content in an advertisement significantly increases attention, benefits memory, and positively influences behavior” among the sample (Dahl, Frankenberger, & Manchanda, 2003: p. 268).

2.2. Relationship between Gender and Response to Fear Appeals

A focus of the previous literature on fear appeals in advertising is what, if any, differences exist with regard to gender as a variable. Seeing as both males and females have the capacity to engage in distracted driving and they are both included in the target audience of PSA’s designed to discourage such behavior, it is reasonable to study how each gender responds to the social marketing messages they encounter.

Lennon, Rentfro and O’Leary (2010) found that the young men and women in their study’s sample did not respond to the public service announcement they viewed in the same manner. The females reacted more favorably to the message and content in the announcement than did the males; furthermore, males believed that punitive measures by law enforcement, such as getting ticketed or arrested, were more useful means of preventing unsafe driving (Lennon, Rentfro, & O’Leary, 2010). In line with this research, Lewis, Watson and Tay (2007) used a questionnaire instrument to measure the behavioral intentions of a sample of 152 drivers in Australia both before and after they viewed two different, threatening advertisements promoting road safety. Again, the results of this study found the difference between genders to be significant. Males were significantly less likely to express intention to both decrease their driving speed and refrain from drinking under the influence of alcohol than were females (Lewis, Watson, & Tay, 2007: pp. 55-56). In their review of numerous studies that have utilized fear appeals, Lewis, Watson, Tay and White (2007) drew the conclusion that young males are considered a “high risk road user group” and threatening appeals aimed at them tend to emphasize physical danger (p. 213). However, males as a group “appear less influenced by physical appeals intending to target them” (Lewis, Watson, Tay, & White, 2007: p. 213). This issue presents a problem for social marketers because the advertisements they create are seemingly reached by primarily one gender instead of both. Related research on physical threat

appeals has found that, when compared to other messages, adolescents react more positively to public service announcements “that depict negative social consequences” (Schoenbachler & Whittler, 1996: p. 52). Though Schoenbachler and Whittler (1996) looked specifically at PSA’s designed to discourage the use of illegal drugs by adolescents, their findings could help in the creation of various other social marketing campaigns.

2.3. Concerns Regarding the Use of Fear Appeals

Despite the popular use of fear appeals in social marketing, and especially in road safety advertising, inconsistent opinions remain regarding the effectiveness of this strategy (LaTour & Zahra, 1989; Lewis, Watson, & Tay, 2007; Lewis, Watson, Tay, & White, 2007). Lewis, Watson and Tay (2007) observe that “a substantial body of literature spanning over five decades attests to contradictory findings regarding the manner in which fear is related to persuasion” (p. 49). One possible reason for this inconsistency is described in LaTour and Zahra’s (1989) review of fear-inducing advertisements. They note that not every individual responds to fearful messages in the same way; rather, “responses to fear appeals depend on the perceptions people develop concerning the enormity of the pending danger and on their evaluations of its effect” (LaTour & Zahra, 1989: p. 63). In other words, if an individual does not perceive the behavior depicted in a PSA to be dangerous or relevant to him/herself, the advertising message might be lost on that person. Another limitation described in prior research is that, although fear appeals seem to elicit viewers’ attention, their capacity to induce real behavioral change in individuals is debatable (Lennon, Rentfro, & O’Leary, 2010; Lewis, Watson, Tay, & White, 2007). That is, advertising messages in this category may grasp audience awareness in the short-term, but may not necessarily accomplish the objective of enhancing driver safety in the long-term. In addition, some researchers believe that explicit, fear-arousing content in social marketing is not very effectual on their target audience because “today’s youth have had much greater exposure than previous generations to graphic images and other fear messages” (Lennon, Rentfro & O’Leary, 2010: p. 96). In other words, one could argue that this cohort has been desensitized. With this in mind, it may be necessary for social marketing messages to either include more intense fear-arousing content or try an alternative approach altogether if they are to successfully impact young adults.

Beyond just debating its efficacy, past research has also considered what ethical issues can arise from the use of fear-based appeals in social marketing. Hastings, Stead and Webb (2004) chastise social marketers for their pervasive use of threatening messages and describe their concerns regarding the negative effects of these campaigns. Specifically they point out that “maladaptive responses”, such as ignoring or suppressing the message within the advertisement, can occur in viewers and suggest that only those individuals who are psychologically healthy are actually persuaded by and benefit from such campaigns (Hastings, Stead, & Webb, 2004: pp. 974-975). Moreover, they may have harmful effects for those members of society who are less psychologically stable or “vulnerable” (Hastings, Stead, & Webb, 2004: p. 975). Therefore, some scholars argue that, rather than using scare tactics to persuade people, “public health campaigns should focus more on instilling in audiences the belief that they are capable of exercising control over their health behavior and less on attempting to frighten them with fear appeals into ceasing, or not starting, deleterious health habits” (Anderson, 1995: pp. 205-206). In his study, Anderson (1995) exposed his subjects to PSA’s that featured two different messages of self-efficacy as a means of preventing the act of driving drunk and one PSA that solely described the likelihood of being arrested for driving drunk. The results of this study demonstrated that participants who viewed the self-efficacy PSA’s were better able to discourage others from driving under the influence of alcohol than were the participants who viewed the consequence-based control PSA (Anderson, 1995). These results, as well as the results of similar studies on this topic, seem to suggest that there is room for positive appeals in campaigns to prevent socially undesirable activities. However, Anderson’s (1995) findings are limited in that his research was concerned with participants’ ability to change the behavior of others, as opposed to modifying their own behavior.

3. Theoretical Framework

Much of the prior research that studied the effectiveness of fear appeals to alter behavior has referenced two main theories as part of their conceptual frameworks. These two theories are the Protection Motivation Theory and the theory of the Third-Person Effect.

The Protection Motivation Theory, originally developed by Rogers (1983), was described and then modified by Tanner, Hunt and Eppright (1991). This theory attempts to explain and predict how individuals will respond to a communication message utilizing appeals to fear. Essentially, the theory posits that individuals will expe-

rience four processes when they are exposed to a threatening message: they evaluate how severe the threat is to them, the likelihood that the threat will affect them, how to eliminate or manage the threat, and whether they are able to perform the actions necessary to cope with the threat (Lewis, Watson, Tay, & White, 2007; Rogers, 1983; Tanner, Hunt, & Eppright, 1991). Believing Rogers' model to be limited in scope, Tanner, Hunt and Eppright (1991) altered the original Protection Motivation Model in their study of college students' responses to fear-provoking messages about sexually transmitted diseases. As cited by other researchers, their model considered "...the role of the social context of the coping response to a threat communication, introduced the notion that responses may be due to factors other than the communication itself, and emphasized, rather than minimized, the role of emotion" (Schoenbachler & Whittler, 1996: p. 38).

Another theory commonly referenced in the past literature is the Third-Person Effect. This theory, created by Davison (1983), proposes that "people will tend to overestimate the influence that mass communications have on the attitudes and behavior of others" (p. 3). That is, people tend to "perceive that the media's greatest impact will not be on 'me' or 'you' but on 'them'—the third persons" (Davison, 1983: p. 3; Park & Salmon, 2005: p. 26). In their study of road safety advertisements, Lewis, Watson and Tay (2007) found the third-person effect to play out within their study participants. The male adolescents in their sample expressed the opinion that others would be more affected by the advertisements than they would be; females, on the other hand, expressed "reverse third-person effects" in that they believed the advertisements influenced themselves more than other people (p. 48). Park and Salmon (2005) measured the responses of a sample of 229 people to multiple news releases; these researchers also found support for the existence of the third-person effect in their experimental study.

4. Method

This study took a quantitative approach to examine the relationship between the independent and dependent variables, and answered the aforementioned research questions. A 30-second PSA against distracted driving from the National Highway Traffic Safety Administration served as the independent variable. The dependent variable was college students' reported intent to text while driving. A self-report questionnaire with 26 questions was developed to assess some demographic information about respondents, their perceptions of the PSA, and their intent to engage in a particular distracted driving behavior, text messaging while driving. The questionnaire focused mainly on the behavior of texting while driving because, according to the National Highway Traffic Safety Administration (2011), it involves all three of the main distraction types mentioned previously. Qualifying questions were included to ensure that subjects fit into the sample criteria of students aged 18 - 24 attending Texas State University. The survey instrument also utilized items from a preexisting scale entitled the "Affective Response (General) Scale" (Bruner, 2009: p. 15). This semantic differential 5-point scale uses three items to measure a respondent's emotional reaction to a stimulus, in this case a PSA. A reliable construct, it has a reported Cronbach alpha of 0.95 (Bruner, 2009).

The researcher searched for and viewed several public service announcements online on the issue of distracted driving before selecting one to utilize in the present study. A thirty-second PSA from the National Highway Traffic Safety Administration's "Put it down" campaign entitled "BAM!" was chosen as the study's media clip because it was brief, current, and utilized a fear appeal. The ad discourages distracted driving by portraying three different drivers, each using a cellular telephone while driving, in what appears to be an everyday American setting. Suddenly, the ad shocks the audience by showing each driver crash their vehicle as a result of their distraction. The goal of the ad is to elicit fear and compliance into the audience by insinuating that they, too, could have a vehicle wreck on the road if they use their cell phones while driving. The PSA ends with the "Put it down" campaign logo and lists the NHTSA as the sponsor.

The PSA was shown one time to a convenience sample of 109 students in one large undergraduate level class and two small graduate level classes in the Mass Communication department at Texas State University in the fall of 2011. All students viewed the same PSA and were administered the same version of the questionnaire. The questionnaire was comprised of dichotomous (yes/no) questions to obtain background information, as well as Likert scale questions in which respondents indicated their level of agreement or disagreement regarding perceptions of the PSA, and demographic items. Intentions to engage in distracted driving were measured by asking students to rate their agreement or disagreement regarding the likelihood that they would text while driving and speak up when they were passengers with a driver who is texting. After all completed surveys were collected, it was determined that seven of the surveys either had incomplete responses or belonged to respondents out of the

18 - 24 age bracket. These questionnaires were removed from the sample. Thus, the final sample size in the study was 102 making the response rate for the surveys 93.5%. Data from the questionnaires was entered into and analyzed using the statistical software program, SPSS.

5. Results & Discussion

5.1. Characteristics of the Sample

Studying the dataset in SPSS led to some conclusions about the sample. First, with regard to descriptive characteristics, it was found that the sample was 42.2% male and 57.8% female. The modal classification within the dataset was “Junior”, with 41.2% of respondents belonging to that category. In addition, freshman was 1%, sophomore was 22%, senior was 23%, and graduate student was 14%.

When asked the question, “How often do you write/read text messages while driving?” the majority of respondents (61.8%) answered that they did so “sometimes” and 10.8% answered “frequently”. These statistics substantiate the claim that many young adults, by their own admission, are engaging in a very distracting behavior while driving. When asked to rate their agreement on the statement, “It is less dangerous to read text messages while driving than to write them”, a slight majority (34.3%) reported that they “strongly disagree”. However, the results for that question were mixed in that the proportion of respondents who answered either “somewhat disagree” or “somewhat agree” were roughly equivalent. When asked if they knew someone who had been involved in a car accident, injured or killed as a result of texting while driving, 75.5% of respondents answered “No” and 24.5% of them answered “Yes”. Although it is a smaller proportion, the finding that approximately one-quarter of the sample personally knows someone who has been affected by distracted driving is notable.

5.2. Perceptions of the PSA

As part of RQ 1, some questions on the survey asked respondents to give their opinions regarding the PSA. The researcher first wanted to know how many individuals in the sample had previously seen the PSA used in the present study. The majority of respondents (76.5%) responded that they had never seen the PSA before, which supported the researcher’s initial reasoning to select the particular PSA for the study. With regard to the content of the PSA, the following statistics were reported. 78.4% of respondents disagreed with the statement “The PSA is too graphic.” This result could be explained by the fact that the particular PSA shown did not utilize extreme gore as some fear-arousing advertisements do; it could also reflect the notion mentioned in the previous literature that adolescents today are more accustomed to frightening appeals in the media. Approximately 60% of respondents reported they “strongly agreed” that “the PSA is believable” and that “the PSA should be played on television.” When asked if they were able to discern which organization sponsored the PSA, just under one-quarter (24.5%) of the sample agreed that they could do so. This finding might be useful for social marketers to know if they aim to be transparent sponsors.

The “Affective Response (General) Scale” by Bruner (2009) included within the survey asked respondents to rate their emotional response to the PSA. Approximately 60% of the sample rated the PSA to be on the “Unpleasant” side. Roughly equivalent percentages of the sample expressed they “Liked” and “Disliked” the PSA with the modal response being “neutral”. Almost 70% of the sample rated the PSA on the “Left me with a bad feeling” side of the scale. **Table 1** shows the measures of central tendency for the three scale items.

5.3. Post-Viewing Intentions

The other part of RQ 1 concerned the impact of an anti-distracted driving PSA on student intentions. The data showed that 47.1% of students “somewhat agreed” and 16.7% “strongly agreed” that they were less likely to text while driving after viewing the PSA. Moreover, 42.2% of students “somewhat agreed” and 22.5% “strongly agreed” that they were more likely to speak up when they were passengers and a driver was texting. Based on

Table 1. Affective response (general) scale.

	Unpleasant	Dislike	Left me with a bad feeling
Mean	2.29	3.01	2.12
Median	2.00	3.00	2.00

these results, it does seem as though the PSA evokes the sought after intentions in the sample.

5.4. Responses According to Gender

RQ 2 explored what, if any, differences exist between males and females with regard to their response after viewing the PSA. To do this, a chi-square test was run for gender and intention to text while driving. The results showed that a statistically significant relationship exists between these two variables ($\chi^2 = 23.867$, $p = 0.000$). Another chi-square test was run for gender and intention to speak up when another driver is texting. Again, there was a statistically significant relationship found between these variables ($\chi^2 = 12.856$, $p = 0.012$). Females agreed with the two intention measures more strongly than did males. These findings are in line with those of prior research, which have often found that males and females respond differently to PSA's using fear appeals, with females being more responsive.

5.5. Presence of the Third-Person Effect

The third research question sought to determine whether or not the third-person effect would occur within the sample of students. To explore this question, the data were analyzed for correlations between a question about a generalized audience (third-persons) and a question specific to the respondent (first-person). Results showed that a significant positive correlation existed between the variables measuring students' intention to text while driving after having seen the PSA and students' perception that viewing the PSA would help prevent the average 18 - 24 year old from texting while driving. A second significant positive correlation was found between the variables measuring students' perception that PSA's help to prevent texting while driving and their reported likelihood of thinking of the PSA they had viewed when they drove from now on. Both of these associations suggest that the third-person effect was not present in this sample because students' first-person opinions and their opinions concerning others moved in the same direction. These findings contradict those of previous research that have found strong evidence of students underestimating the effect PSA's have on themselves and overestimating the effects they have on generalized others.

6. Conclusions

In conclusion, the present study adds to previous research on this topic by exploring three research questions and contributing useful information pertaining to Texas State University students' perceptions and intentions after having viewed a fear-arousing PSA. Over half of the students perceived the PSA as "believable" and thought it would be beneficial to air on television. Most students in the sample "somewhat agreed" that, after watching the PSA, they were less likely to text while driving and more likely to speak up when they were passengers; this finding suggests a degree of effectiveness from the fear appeal. In line with past literature, a gender discrepancy did appear in responses to the PSA. Yet, the present study did not find support for the third-person effect.

This study has implications for social marketers and public safety organizations. The students in this sample reported that they did text while driving even though most students (44.1%) "strongly disagreed" that the PSA made texting while driving seem more dangerous than it actually was. Therefore, creators of PSA's should investigate young adults' motivations behind engaging in distracted driving in order to better influence their behavior. Moreover, stronger emphasis should be placed on reaching males in the target audience, as they appear to respond less to public service announcement messages.

This study did have its limitations. First, it employed a nonrandom, convenience sample. The sample was comprised entirely of university students, who were critiqued as being "a relatively homogeneous group" (Lewis, Watson, & Tay, 2007: p. 58). Additionally, it would be better if sample were larger. By making these modifications, the study results could be generalized to the larger population. The present study lacked a pre-test to compare students' initial opinions to those after viewing the PSA. Finally, a main limitation was that reported intentions might not fully and accurately determine actual behavior in people. As quoted by Lewis, Watson, Tay and White (2007), "while intentions are a good predictor of behavior, they are far from a perfect measure" (p. 212).

Future research could examine whether any differences in response to PSA's such as the one used here exist with regard to other demographic factors, such as whether one belongs to a majority or minority group. To learn if behavioral change actually occurs, study subjects could be involved in follow-up research with a qualitative research methodology. In this manner, students could describe their reactions to the PSA and their motivations

to engage in distracted driving behaviors open-endedly. Moreover, since they tend to be the target audience, young adults could be helpful in designing the content and messages in distracted driving PSA's.

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