Optimism as a Mediating Factor in the Relationship between Anxiety and News Media Exposure in College Students

The Honors Program
Senior Capstone Project
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ABSTRACT

Recently, media research has focused on young people to determine what effect violent media images may have on aggressive behavior, but little research has investigated the kind of psychological distress similar images may cause. What emotional impact does increased exposure to negative and even violent news coverage have on young adults? In this study, the relationship between such news media and anxiety levels is examined, as well as the possible mediating role that an optimistic life orientation may play in that relationship. It is hypothesized that the degree to which these individuals follow news media will positively correlate with their state anxiety levels, but when accounting for an optimistic worldview, this effect will be minimized or eliminated. A survey was administered to a sample of 278 undergraduate students attending Bryant University that measured their anxiety levels, life orientation in terms of optimism, and news media viewing habits. The results showed no significant correlation between news media viewing and state anxiety, and therefore also could not support any mediating role of optimism either. Limitations and mitigating factors regarding this study as well as possible avenues for future research are discussed.

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INTRODUCTION

Violent Imagery and Childhood Aggression

In the late 1900s and early 2000s, the theory that violent imagery in video games and children's television programming leads to increased aggression in America's youth was a topic of high contention and controversy. During this period, many studies were conducted to discern what link may exist, if any, between exposure to such media and childhood aggression. In one such study, nine-year-old boys were exposed to one of two films, one containing violent imagery and the other without such imagery (Josephson, 1987). The children then played a game of floor hockey together, in which physically aggressive behavior was measured (Josephson, 1987). Additionally, some conditions included a cue from the film, a walkie talkie, that was carried by the referees in order to determine if such visual cues could impact the aggression level as well (Josephson, 1987). A higher level of physically assaultive behavior was seen from those who had viewed the violent film than those who had not in all conditions, and this effect was even pronounced in the conditions containing the visual cue (Josephson, 1987). This suggests that not only are youths' actions affected by the images in the media they consume, these actions can be prompted by cues in the real world that are associated with the media content.

Other similar studies extended the measurement of aggression from exclusively physical assaults to other forms of aggression, including verbal expressions and body language. These studies again found that children who had viewed the violent films scored significantly higher on the aggression scales than those who had not (Bjorkgvist, 1985); (Anderson et al., 2003). Additionally, the same positive correlation was found between viewing violent films and

aggression in emotions and thoughts as well as outward behaviors (Anderson et al., 2003). Some studies also examined not only if there was a relationship between violent imagery and aggression, but the intensity of such a relationship. It was seen that effect sizes were larger for milder forms of aggression, such as aggressive thoughts or body language, but the effect sizes for more severe forms, such as physical assault, were still statistically significant (r = .13 to .32 respectively) (Anderson et al., 2003). This indicates that not only are physical assaults and other forms of more severe aggression linked to consumption of media containing violent imagery, milder forms of aggression such as thoughts and emotions may be even more sensitive to the influence of violence in media.

Violent Imagery and Negative Psychological Outcomes

Considering the findings that violent media images were positively correlated with forms of aggression including thoughts and emotions, exposure to such images could potentially influence other psychological outcomes as well. Several studies have examined the relationships violence in media may have with psychological issues and negative outcomes, including anger, fear, worry, general anxiety, symptoms of anxiety disorders such as post-traumatic stress disorder (PTSD) and generalized anxiety disorder (GAD), dissociation, and depression. Many of these studies use the television news medium as the instrument of exposure to violent imagery.

As seen in the studies above, violent media has been shown to be positively correlated with aggressive emotions such as anger. Other studies have noted that additional negative emotions such as sadness and fear are also increased with exposure to violence, specifically in the television news medium (Hashemi, 2014). The same positive correlation has been seen

between such exposure and various psychological problems, including heightened anxiety and depression levels (McNaughton-Cassill, 2001). An interesting additional factor in these situations was the condition of intent. When the violence was seen as intentional rather than accidental, the effect the violent images had on negative emotions was exacerbated (Hashemi, 2014). These findings indicate that the influence of violent images is not exclusive to the domain of aggression, but extends to a wide range of psychological outcomes. Additionally, these studies show how this influence is seen in the genre of non-fiction news and not just the category of fictional television programming or video games.

Terrorist Attacks of September 11th, 2001

Following the terrorist attacks on September 11th, 2001, there was a surge in interest in the American research community regarding the effects of television news exposure on mental and emotional outcomes. In 2002 Schlenger et al. found that the amount of time an individual spent viewing television news coverage of the terrorist attacks on September 11th and the few days afterward was positively correlated with a measure of broad distress levels, which included anxiety measures. However, the effect of this news consumption was not limited to low levels of anxiety or distress. The same study also found that the viewing of television news coverage of the attacks was also significantly correlated to PTSD symptom levels, an outcome that held true for people of varying ages, sexes, and ethnicities (Schlenger et al., 2002).

Another study took that PTSD correlation one step further. Instead of simply looking at the level of the symptomology, Putnam (2002) examined actual diagnoses of PTSD and depression following the terrorist attacks. Accounting for personal attachment to the attacks,

such as having a lost a loved one, Putnam (2002) found that the incidence of both PTSD and depression were positively correlated with exposure to traumatic television news images in the coverage of the attacks.

Effect of News as a Medium

Several of the studies mentioned above have shown that the correlations between violent imagery and a variety of psychological outcomes hold true for the television news medium. However, they do not examine whether or how the news medium itself impacts those relationships. A study conducted by Van der Molen & Bushman in 2008 looked at stories about violent threats, and how reactions varied with the different presentations of such threats. For this study, violent threats included stories about war, murder, and house fires. In all conditions with such violence, both fright and worry levels were seen to increase (Van der Molen & Bushman, 2008). These stories were presented in one of two ways: on television news programming or on television programming clearly meant to be fictional (Van der Molen & Bushman, 2008). More worry and fear were measured in the conditions where the violence was presented as news programming as opposed to fiction, and more intense worry and fear reactions were also associated with the news conditions (Van der Molen & Bushman, 2008). These findings are interesting because not only does violence alone seem to have an impact on psychological distress, but the news medium itself may exacerbate that effect.

Supporting Factors and Mitigating Factors

In 2013, the Pew Research Center conducted an analysis of the content of local news morning and late night broadcasts. They compared the current content of such broadcasts to that of the broadcasts in 2005, and this comparison can be seen in a bar graph infographic in Appendix

A. They found that the amount of time spent on each topic was fairly consistent over time. Approximately one third of all news media content and time during these broadcasts is spent on stories regarding crime, accidents, bizarre events, and disasters, many of which contain violent imagery. A mere five percent of content and time (as of 2013) is given to human interest stories, which generally contain more positive content and are accompanied by more positive images (Pew Research Center, 2013).

Not only is there a significant portion of news content dedicated to the reporting of violent, negative events, but these events are becoming increasingly common. As can be seen in Appendix B, the incidence of public mass shootings has drastically increased in recent years (Cohen, Azrael, & Miller, 2014). Cohen et al found that the average number of days in between public mass shootings from 1980 through 2010 was 200 days, but in the late months of 2011 that rate changed dramatically (2014). Between late 2011 through 2014, the average number of days between incidents was just 64 days (Cohen et al., 2014). These incidents were defined specifically as public mass shootings, which excludes gang related activities and incidents within private homes as these categories are qualitatively different. In addition to these events becoming a more frequent occurrence, they are also becoming increasingly violent and deadly. The average number of deaths and wounds per incident has risen from 6 deaths and 5 or fewer wounded in the 1980s to 7 deaths and 6 or more wounded between 2010 to 2013 (Shastry, 2015). These findings that violent incidents are becoming more common and more deadly are relevant to the current study because the more violence there is in the world, the more violence news coverage will depict. This makes the potential relationship between news media viewing and anxiety an ever more relevant issue.

Despite the increasing violence and the news media's coverage of it, there are some societal changes that may work to mitigate the possible effects of the violent news images. One such factor is the invention and rise in popularity of the internet. Because news information is now available through the internet in addition to traditional news media, the way individuals engage with news media may be different than ever before. People can now individually tailor their news coverage experiences, allowing them to control what kind of news they are exposed to. Tewksbury (2003) found that individuals who follow traditional news media are exposed to a broader range of news topics and content than those who follow news through the internet. The internet news followers are far more likely to focus their news intake on areas that are of specific interest to them personally (Tewksbury, 2003). This is an interesting consideration for this study, particularly because it focuses on college students, a population known for its use of technology. Individuals who may have been negatively affected by violent news content when following traditional news media may be able to avoid that exposure while still engaging in a high degree of news exposure in other areas. In a 2015 study on internet news exposure, Roche, Pickett & Gertz found a difference between exposure to traditional news media and internet news sources with relation to anxiety regarding potential victimization. As with other similar studies, a positive correlation was found between news exposure via traditional media, such as television, radio, and print, and victimization anxiety (Roche et al., 2015). However, no relationship was found to exist between such anxiety and exposure to news content through the internet (Roche et al., 2015). This suggests that the ability to tailor one's news experiences does in fact play a role in how that news exposure may affect one's psychological well-being.

Population Considerations

There are additional considerations that need to be taken into account regarding the specific population this study focuses on: college students. The mitigating factors mentioned above are especially salient for this population. Beyond simply being known for their use of technology and engagement with the internet, college students have been shown to engage in different and unique patterns of news media consumption than is traditional. Diddi & LaRose (2006) found that although college students do still obtain news information from traditional sources such as newspapers and television news programming, they also additionally gather information from comedy news as well as internet news sources.

However, there are other factors that may actually exacerbate any negative effects for this age group. For example, in the same study the students were also seen to engage with news media to gratify their needs for surveillance and escapism, suggesting that these individuals desire to be increasingly aware of their surroundings, both immediate and global (Diddi & LaRose, 2006). It was also found that an increased need for surveillance and the prevalence of negative news media content were correlated with a lowered sense of security (Diddi & LaRose, 2006). This lowered sense of security may bolster feelings of anxiety.

Additionally, today's society is more globally connected than ever before, partially due to the advent and widespread use of social media platforms such as Twitter. As of 2013, 89% of people aged 18-29 used at least one social media platform on a regular basis, as can be seen in Appendix C (Griffin, 2015). A study in 2014 used Twitter to examine peoples' anxiety levels regarding the Ebola outbreak. Even though Americans' personal risk was actually quite low,

Fung et al. found that people in the United States were highly anxious about the Ebola outbreaks and their risk of infection (2014). Despite the fact that the disease was highly contained and the risk to this population was negligible, there were still far more tweets regarding the outbreak and related worries from the United States than in countries with ongoing epidemics (Fung et al., 2014). It is interesting and pertinent to think about the implications "this influx of immediate, global information may have" (Fung et al., 2015) in such a globally connected society.

Along with the widespread use of social media platforms and the internet in general, the use of various mobile devices has also increased. Intensity of reactions such as anxiety have been seen to vary among different interface proximities. The interface proximity of a device is the "spatial, temporal, and psychological distance between the media platform interface and the user" (Xie & Newhagen, 2014, p 393), in other words, how psychologically close that interface is to the person. A desktop computer would be psychologically further away than a laptop, which in turn is further away than a handheld device such as a smartphone. In 2014, Xie & Newhagen conducted a study on anxiety in college students regarding crime alerts they received on devices with varying interface proximities. They found that interface proximity was positively correlated with increased anxiety levels, meaning that those students who received a crime alert on their cell phone were more anxious than those who had received the same alert on their desktop computer (Xie & Newhagen, 2014). This effect was not only seen immediately upon receipt of the crime alert, but also held true several days later (Xie & Newhagen, 2014). These findings may indicate that as the use of social media apps on

smartphones to gain news information increases, the effects that violent news images may have could be supported by the close interface proximity of those devices.

Optimism as a Protecting Trait/Mediating Factor

Although there are several factors that may support the negative impact of violence in the news media, there are also other factors that may play a more positive role. One such factor that several studies have examined as having the potential to protect individuals against negative psychological outcomes is an optimistic worldview. Dispositional optimism has been seen to have a negative correlation with general anxiety, meaning that more optimistic people tend to experience less anxiety (Yu et al., 2015). Such optimism also appears to help protect against adverse psychological outcomes in the face of stressful events (Weinberg et al., 2015). When women who had been exposed to a particular missile and rocket fire incident were examined for dissociative experiences and GAD, it was seen that those who scored more highly in optimism were less likely to have had those negative mental health outcomes than those with lower levels of optimism (Weinberg et al., 2015).

Optimism has also been seen to play a moderating and mediating role in relationships that involve anxiety. In a study that found a strong positive correlation between race-related stress and cognitive anxiety levels, optimism was seen to act as a moderator of that relationship (Lee, Neblett & Jackson, 2015). The effects that race-related stress may have had on levels of cognitive anxiety were muted in instances of highly optimistic individuals (Lee et al., 2015). Rumination, or the "tendency to repetitively think about the causes of one's negative emotional experience" (Selby, 2010), also seems to have a positive correlation with anxiety levels (Yu et al., 2015). Again, dispositional optimism appears to mediate this relationship

between rumination and anxiety (Yu et al., 2015). These findings of optimism affecting correlational relationships between negative factors and anxiety may point to optimism being a protective factor. Dispositional optimism may support resiliency in terms of anxiety when faced with factors that otherwise may have a negative effect on anxiety levels.

Conclusion

Although much research has been focused on the effects violent imagery in media such as television and video games on aggression and other psychological outcomes, little research has specifically looked into similar effects that news mediums may have. Thus, with the aim of discovering whether there is any relationship between the news media viewing habits and state anxiety level of college students, the following research hypothesis was formulated:

> H1: The degree to which the subjects follow news media via television,
> print, radio, social media and internet mediums will positively correlate
> with their state anxiety levels.

This hypothesis was formed on the basis of prior research indicating that exposure to violent imagery in other mediums has a positive correlation with multiple negative outcomes such as depression, PTSD symptomology, and aggression.

Furthermore, a secondary hypothesis was formulated with the aim of discovering whether optimism acts as a mediating factor in the relationship between news media viewing habits and state anxiety level of college students.

H2: Optimism will mediate the above hypothesized positive correlation between news media exposure and state anxiety levels such that the correlation will be minimized or eliminated in the case of an optimistic worldview.

In order for this second hypothesis to hold true, two further supporting hypotheses must also hold true.

H3: Optimism will negatively correlate with the subjects' state anxiety levels.

H4: The degree to which subjects follow news media will be positively correlated with optimism levels.

Prior research in this field has supported the theory that optimism serves as a protective factor against many negative psychological outcomes, mediating the effects of negative external influences on individuals' mental states. These findings are the basis of the secondary hypothesis and the supporting hypotheses (H3 and H4).

METHODS

Participant Characteristics

The participants were a sample of the undergraduate students at Bryant University. Their ages ranged from 18 to 23 years old, and the mean age of the participants was 20 years old (standard deviation = 1.6). Additional details regarding the makeup of the sample are described in the results section.

Materials

The main material needed for this study was a survey, which can be seen in Appendix D. The survey includes background questions regarding basic demographics and prior exposure to violence, a self-report measure of news media viewing habits, both sections of the Spielberger State-Trait Anxiety Inventory (SSTAI), and the Life Orientation Test-Revised (LOT-R).

A self-report measure of news media viewing habits was used because this is the way other similar psychological studies have measured this variable. The format of the question replicates that of the same measure in the McNaughton-Cassill study in 2011, with the addition of the internet/social media news medium.

Although the research questions and hypotheses proposed by this study look specifically at state anxiety, the trait section of the SSTAI was administered as well so that the trait anxiety could be controlled for. The SSTAI was chosen as the measure of state and trait anxiety because it has been highly validated and is widely used in other psychological studies. The trait section of this measure has a test-retest reliability ranging from .73 to .86, which indicates stability over time. The Cronbach's alpha for the trait section ranges from .83 to .92 and that of the state section ranges from .86 to .92, which demonstrate high internal reliability before both sections of the measure. Both inventories have also been thoroughly validated as well. The trait section correlates highly with other measures of trait anxiety such as the IPAT and the TMAS measures, indicating that the trait inventory does measure trait anxiety. Scores on the state section are statistically significantly higher when administered in stressful situations than in normal situations. As it is expected that state anxiety increases with the

stressfulness of the surroundings, this demonstrates the construct validity of the state anxiety inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983).

The LOT-R was administered to measure the life orientation of participants on an optimism-pessimism spectrum. The Cronbach's alpha of the LOT-R has been consistently found to be .81, showing its highly consistent internal reliability (Scheier, Carver, & Bridges, 1994). This measure has also been highly validated and is widely used within the psychological community as a measure of optimism.

Also needed to conduct this survey was the SPSS statistical software that was used to run statistical analyses of the data gathered in the survey.

Procedure

A survey was administered to the sample group of 278 undergraduate students of Bryant University via the anonymous online survey tool Qualtrics. This survey was used to gather data regarding participants' basic demographics, previous exposure to violence, time spent engaged with various news media, trait anxiety level, state anxiety level, and optimistic-pessimistic life orientation. Statistical analyses were then performed using the data gathered in the survey to determine what relationship exists, if any, between time spent engaged with news via various media and state anxiety levels, as well as what role an optimistic life orientation may play in that relationship.

RESULTS

The participants were recruited and the survey was administered to them between October 5th, 2016 and November 1st, 2016. A total of 278 individuals were recruited, and all 278 completed the study in its entirety. As such, there is no missing data.

A series of statistical analyses of the survey data were run through the SPSS software. The results of the descriptive statistics showing the composition of the sample are shown in Appendix E. The first set of analyses used a Pearson Correlation with the alpha level set at 0.05 to examine the correlations between the major variables of this study, and the results of these analyses can be seen in Appendix F. The final set of statistical analyses used partial correlations, controlling for the variable of optimism in order to look at the potential mediating role of optimism, and the results of this can be seen in Appendix G.

Descriptive Statistics

In terms of gender, the sample was slightly skewed, with just under two-thirds (64%) of the participants being female. The racial distribution was similarly concentrated in one area, with 83.8% identifying as white, and small percentages identifying as Asian (7.6%), African American (4.3%) or other (4.3%). Because the sample is made of undergraduate students, the participants' ages ranged from 18-23 years old. The mean age of the group was 20.1 with a standard deviation of 1.37. In terms of religious beliefs the participants varied slightly more, with 51.4% of the sample identifying as Catholic, and the other approximately half of the sample made up of other religious beliefs (21.6%), atheist (15.5%), Protestant (8.3%), Jewish (2.5%), and Muslim (0.7%). The socioeconomic backgrounds of the participants were centralized in the middle class (36.3%) and upper middle class (44.2%), with the extremes of

below poverty line, working class, and upper class making up a combined total of 19.4% of the sample. At Bryant University the majors are split into two colleges, and the distribution of participants between these two colleges was fairly even with the College of Business majors making up 57.9% of the sample and the College of Arts and Sciences majors accounting for the other 42.1%. The college class distribution was less balanced, with freshmen accounting for the smallest portion of the sample (11.9%), seniors accounting for the largest portion (41%), and sophomores (24.8%) and juniors (22.3%) make up the remainder of the sample.

The participants' prior exposure to violence outside of news media was also measured. 46.8% of the sample reported having witnessed a violent act or multiple violent acts first hand. 30.2% reported either being a victim of violence themselves, or personally knowing someone who was a victim. Of those, over a third (34.5%) had a close family member who was the victim of violence. Exposure to a community level crisis situation such as a natural disaster or terrorist attack was slightly lower, at 22.7% of the sample. There was a high level of physically aggressive sport participation, with nearly half of the sample (45.3%) participating in one or more sports that include physical aggression such as hockey or football.

Inferential Statistics – Pearson's Correlations and Partial Correlations

From the table of Pearson's Correlations, there are three values directly related to the hypotheses of this study. The first is the r-value for the correlation between total news consumption and state anxiety, which is -.04. This value does not show the significant positive correlation hypothesized, thus the results cannot support hypothesis 1. The results also show no significant correlation between optimism and total news viewing (r= -.053), thus hypothesis 3 also cannot be supported. The Pearson's correlation did reveal a statistically

significant negative correlation between state anxiety and optimism (r =-.538), which does

lend support for hypothesis 4.

A partial correlation statistical analysis was also run controlling for the variable of optimism.

Because hypotheses 1, 3, and 4 would all have to be supported in order for optimism to play a

mediating role, no partial correlation was expected between state anxiety and total news

viewing. The results showed no statistical significance to the partial correlation (r= -.05), and

thus hypothesis 3 also could not be supported by the results.

DISCUSSION

The results of the Pearson's and partial correlational analyses do not support either of the two

main hypotheses in this study (H_1 and H_2). There are several reasons why the results of this

study differ from those found in other similar studies.

The first possible limitation in this study is the homogeneity of this sample. There was little

diversity in terms of basic demographics such as ethnicity and religion. Therefore the findings

of this study may not be applicable to the population at large. Similarly, students at Bryant

University may not be representative of the college student population in general. The

university recruits mainly from the New England region, making it more likely for students to

have similar backgrounds. They are also known primarily as a business school and are thus

more likely to attract like-minded individuals.

The format of the survey also offers several limitations. The survey was administered

anonymously online in order to reach a large number of potential participants. Although using

this method increased the number of people able to participate in the study, there are several

drawbacks to the researcher not being nearby when a survey is administered. The first is that there is no way for the researcher to explain questions to participants that they were confused by, which could lead to misinformation being provided by the participant. Although the researcher's contact information was given in the consent form, none of the participants reached out with questions. The online survey format also leaves no way to identify whether or not participants rushed through questions. In general this could lead to inaccuracy in the data, but is of particular concern in this study due to the slight difference between the measures of state anxiety and trait anxiety. The directions for the two measures are very similar, but have slightly different wording. Because state anxiety (and not trait anxiety) is a primary variable of interest in this study, it is important that the data gathered from this measure be accurate. Additionally, many of the individuals participated in order to receive extra credit in a college course and thus may have wanted to complete the survey as quickly as possible. This may have led to minimal attention being paid to the questions and possible inaccuracy in the data gathered. A third limitation of an online survey format is lack of control over the setting in which the survey was administered. Because state anxiety is inherently affected by the surroundings in which the measure is administered, the setting in which participants took the measure may have influenced the results.

There are also several mitigating factors outside of the study design itself that could have affected the outcomes. The first is the inherent difficulty in studying the variable of news media viewing. This study used a self-report measure to gather data on how much participants were engaged with news content via various media. This is the method other similar reputable studies have used, but it does have its limitations. This method counts on the participants'

ability to accurately recount their average news media viewing habits in general as well as specifically divide it into the four mediums listed. The other option for measuring this variable would be a journaling approach in which participants are asked to keep a journal and record their news media viewing habits over a period of time. However, this method could innately bias the results because the act of keeping a record may make them think about the news more in depth or in a different way than they normally would, which could affect the results of the study.

It is also possible that lasting changes in mental states, such as anxiety or depressive symptomology, only occur in extreme cases. Several of the studies in the literature review that saw such lasting changes as occurrence of anxiety and mood disorder symptoms or diagnoses dealt with the aftermath of the September 11th, 2001 terrorist attacks on America. This is not only an extreme event, but was also a major historical event and catastrophe. It is not something that is typically seen in the daily news, and is qualitatively different from other news coverage. Because it differs fundamentally from other news coverage, findings of studies surrounding news media viewing at this time may not be applicable to other types of news media viewing.

Another factor possibly affecting the results of this study is the invention and rise in popularity of the internet, especially in the population examined in this study. Following news coverage via the internet or social media mediums allows viewers to use selective exposure. This permits individuals to have a high level of engagement with news media, but select not to view news stories that are disturbing or that cause them anxiety. Previous similar studies such as the McNaughton-Cassill (2001) study looked at news viewing via the television,

radio, and print news mediums, but did not have to account for the viewing of news content via the internet. The Tewksbury study in 2003 found that individuals who follow traditional news media are exposed to a broader range of news topics and content than those who follow news through the internet. Another study conducted by Roche et al. in 2015 found a positive correlation between viewers' exposure to traditional news media, such as television news, and anxiety regarding potential for victimization, but did not find any correlation between news exposure via the internet and such anxiety. Both of these studies support the theory that engaging with news via the internet allows for selective exposure that permits avoidance of disturbing or stressful news content.

The population under examination in this study differs from those examined in similar previous studies. It is possible that the findings of other studies cannot be extrapolated to this generation due to differences in how they consume and process news media content.

It is also possible that the effect violent images and messages such as those included in news coverage only have a short term effect on state anxiety and not a more generalized effect such as that hypothesized in the current study. Many of the studies in the literature review (Josephson, 1987; Bjorkgvist, 1985, Anderson et al, 2003; Hashemi, 2014) use a format of exposure to violence in some medium with a test of anxiety or other psychological change within a relatively short time frame. An avenue for future research would be to look into the possibility of the relationships hypothesized in this study being of a short-term nature by showing participants news coverage and then administering a measure of state anxiety.

APPENDICES

Appendix A – Content of Local Newscasts Infographic

Traffic, Weather and Sports Fill 40% of the Local Newscasts Studied
Percentage of Newshole

■2005 ■2012

	Crime/Trials	Traffic/Weather	Human Interest/Lifestyle	Politics/Government	Sports	Accidents/Bizarre Events/Disasters	Business/Economy	Foreign Affairs/Defense	Science/Technology	Health/Consumer
2005	29%	25	7	7	7	5	3	3	2	<1
2012	17	29	5	3	12	13	8	1	1	2
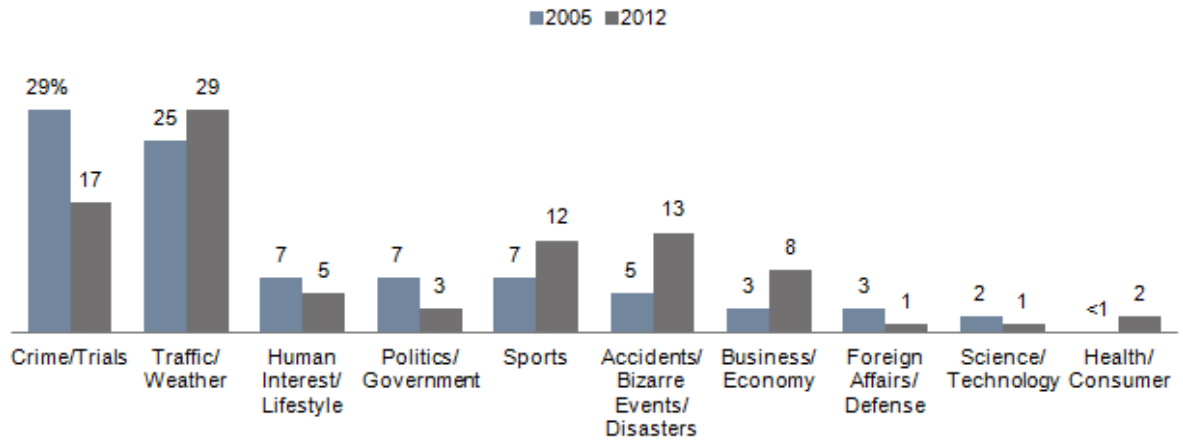
Source: Pew Research's News Coverage Index
Note: Data represent May 11, 2005, and three days in late 2012 and early 2013

PEW RESEARCH CENTER
2013 STATE OF THE NEWS MEDIA

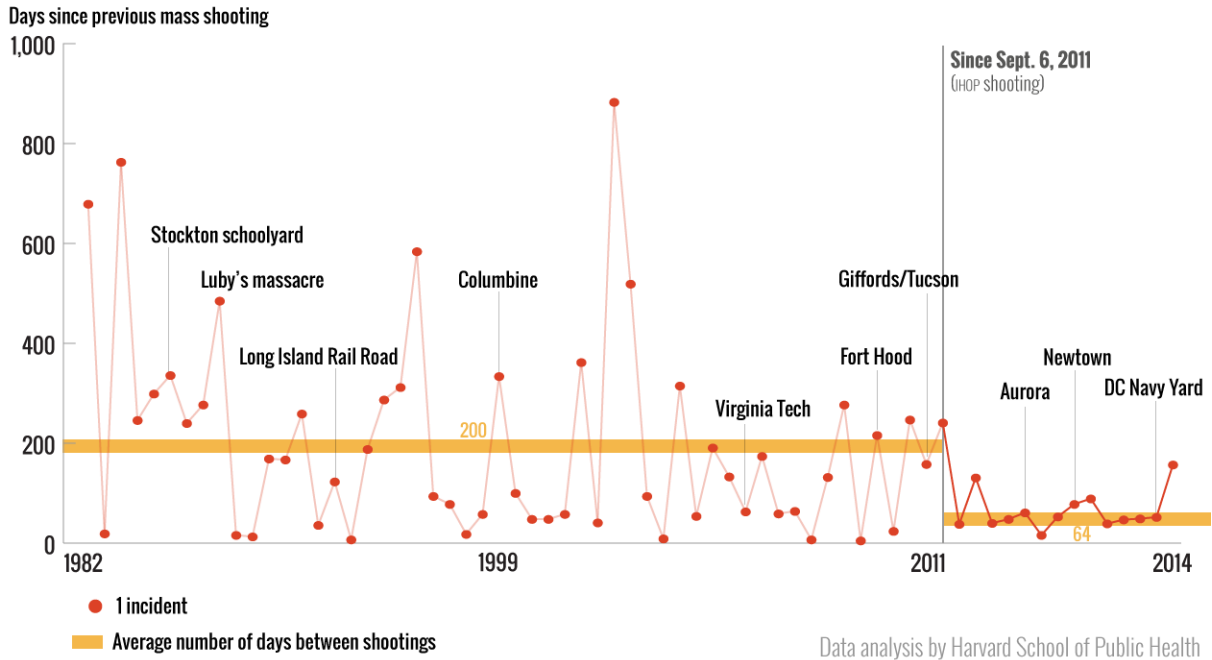Pew Research Center. (2013). *Percentage of Newshole for Morning and Late Night Broadcasts.*
        Retrieved from http://www.stateofthemedia.org/2013/special-reports-landing-page/the-changing-tv-
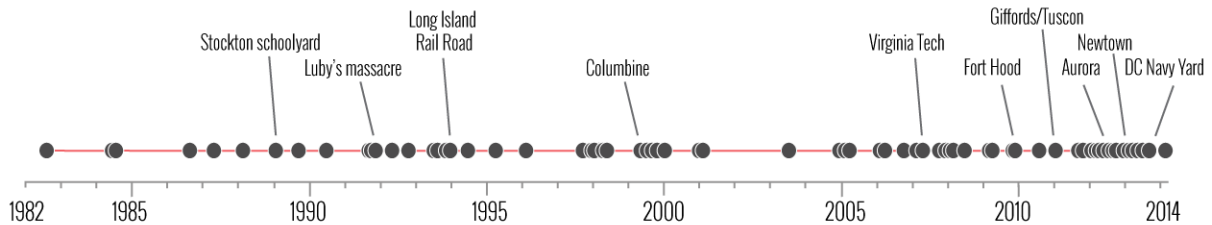   news-landscape/13-edited-packages-decrease-from-2005-to-2012/

Appendix B – Frequency of Public Mass Shootings

Cohen, A.; Azrael, D. & Miller, M. (October 15, 2014). Rate of Mass Shootings Has Tripled Since 2011, Harvard Research Shows. *Mother Jones*.

Appendix C – Social Media Usage

Social media usage among the 18-29 demographic
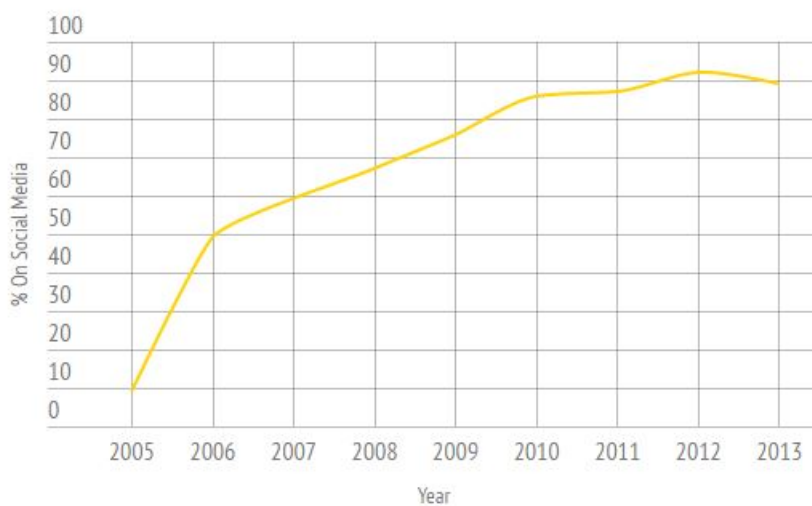
Source: The Pew Research Center. Charts by Riley Griffin/The Huffington Post

Griffin, R. (2015, July 21). Social media is changing how college students deal with mental health, for better or

worse. *The Huffington Post*.

Appendix D – Survey

Demographics

1. What is your age?

   _____

2. With what gender do you identify?
   a. Male
   b. Female
3. What race do you identify as?
   a. White
   b. Black or African American
   c. American Indian or Alaska Native
   d. Asian
   e. Native Hawaiian or Other Pacific Islander
   f. Some other race
4. Do you consider yourself to be of Hispanic origin?
   a. Yes
   b. No
5. What is your religious preference?
   a. Atheist
   b. Catholic
   c. Jewish
   d. Muslim
   e. Protestant
   f. Other
6. What is your class?
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior
7. Are you an international student?
   a. No
   b. Yes. Please specify your home country _____
8. Is your major/concentration in the:
   a. College of Business. Please specify _____
   b. College of Arts and Sciences. Please specify _____
9. Would you classify the area in which you grew up as:
   a. Below the poverty line (Annual income of $23,000 for a family of four)
   b. Working class (employed in blue-collar industries, paid by the hour)

    c.   Middle class (lower-level, white-collar workers. Household income falls between $32,500 and $60,000)

    d.   Upper-middle class (employed in high-level, white-collar positions. Household income is above $100,00)

    e.   Upper class (Household income is more than $150,000)

10. Have you ever witnessed a violent act or acts first hand? (eg war, assaults, fights etc)
    a.   Yes/no

11. Have you ever been the victim of violence?
    a.   Yes/no

12. Have any of your family members or friends been the victim of violence?
    a.   No
    b.   Yes
         i.   Please specify their relation to you (parent, friend, etc) _____

13. Have you personally experienced a community level crisis situation (eg natural disaster, terrorist attack, etc)?

14. Do you currently or have you previously played a physically aggressive sport? (Eg football, hockey, rugby etc)
    a.   Yes/no

15. Which of the following music genre(s) do you listen to most frequently?
    a.   Alternative
    b.   Country
    c.   Dance (includes House, Dubstep, Techno)
    d.   Hip-Hop/Rap
    e.   Pop
    f.   R&B
    g.   Rock

16. In an average week during your childhood through high school, how many hours did you spend playing video games that contain violent imagery?
_____

17. In an average week now, how many hours do you spend playing video games that contain violent imagery?
_____

18. In an average week during your childhood through high school, how many hours did you spend watching television programming (excluding news media) or movies that contain violent imagery?
_____

19. In an average week now, how many hours do you spend watching television programming (excluding news media) or movies that contain violent imagery?
_____

20. Approximately how many hours per week do you spend:
    a.   Watching television news sources? _____hours/week

b. Listening to radio news programming? _____hours/week

c. Reading print news materials? _____hours/week

d. Engaging with news sources on the internet and/or social media? _____hours/week

STAI Self-Evaluation Questionnaire Form X-1 (Spielberger State Anxiety Inventory)

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel **right now**, that is, **at this moment**. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Not at all	Somewhat	Moderately	Very Much
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I am regretful	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel rested	1	2	3	4
9. I feel anxious	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel "high strung"	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel over-excited and "rattled	1	2	3	4
19. I feel joyful	1	2	3	4
20. I feel pleasant	1	2	3	4

STAI Self-Evaluation Questionnaire Form X-2 (Spielberger Trait Anxiety Inventory)

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you **generally feel**. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	Almost Never	Sometimes	Often	Almost Always
1. I feel pleasant	1	2	3	4
2. I tire quickly	1	2	3	4
3. I feel like crying	1	2	3	4
4. I wish I could be as happy as others seem to be	1	2	3	4
5. I am losing out on things because I can't make up my mind soon enough	1	2	3	4
6. I feel rested	1	2	3	4
7. I am "calm, cool, and collected"	1	2	3	4
8. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
9. I worry too much over something that really doesn't matter	1	2	3	4
10. I am happy	1	2	3	4
11. I am inclined to take things hard	1	2	3	4
12. I lack self-confidence	1	2	3	4
13. I feel secure	1	2	3	4
14. I try to avoid facing a crisis or difficulty	1	2	3	4
15. I feel blue	1	2	3	4
16. I am content	1	2	3	4
17. Some unimportant thought runs through my mind and bothers me	1	2	3	4
18. I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
19. I am a steady person	1	2	3	4
20. I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

Life Orientation Test-Revised

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect"

answers. Answer according to your own feelings, rather than how you think "most people" would answer.

A = I agree a lot
B = I agree a little
C = I neither agree nor disagree
D = I disagree a little
E = I disagree a lot

1. In uncertain times, I usually expect the best. _____
2. It's easy for me to relax. _____
3. If something can go wrong for me, it will. _____
4. I'm always optimistic about my future. _____
5. I enjoy my friends a lot. _____
6. It's important for me to keep busy. _____
7. I hardly ever expect things to go my way. _____
8. I don't get upset too easily. _____
9. I rarely count on good things happening to me. _____
10. Overall, I expect more good things to happen to me than bad. _____

Optimism as a Mediating Factor in the Relationship between Anxiety and News Media Exposure in College Students
Senior Capstone Project for Danielle Hoyt

<u>Appendix E – Descriptive Statistics</u>

Table E-1
College Class Distribution of Sample

	Frequency	Percent
Freshman	33	11.9
Sophomore	69	24.8
Junior	62	22.3
Senior	114	41.0

Table E-2
Racial/Ethnic Composition of Sample

	Frequency	Percent
White	233	83.8
African American	12	4.3
Asian	21	7.6
Other	12	4.3

Table E-3
Religious Beliefs Composition of Sample

	Frequency	Percent
Atheist	43	15.5
Catholic	143	51.4
Jewish	7	2.5
Muslim	2	0.7
Protestant	23	8.3
Other	60	21.6

Table E-4
Socioeconomic Status Composition of Sample

	Frequency	Percent
Below Poverty Line	1	0.4
Working Class	19	6.8
Middle Class	101	36.3
Upper Middle Class	123	44.2
Upper Class	34	12.2

Appendix F – Pearson's Correlations

Pearson's Correlations of News Media Viewing, State Anxiety, Trait Anxiety, and Optimism

		TV News	Radio News	Print News	SM/Internet News	Total News	State Anxiety	Trait Anxiety	Optimism
TV News	PC	1	.395*	.303*	.584*	.773*	.021	.007	.005
	Sig (2-t)		.000	.000	.000	.000	.726	.905	.928
Radio News	PC	.395*	1	.363*	.284*	.551*	-.074	-.014	-.008
	Sig (2-t)	.000		.000	.000	.000	.218	.814	.899
Print News	PC	.303*	.363*	1	.309*	.578*	-.079	-.060	-.016
	Sig (2-t)	.000	.000		.000	.000	.192	.321	.784
SM/Internet News	PC	.584*	.284*	.309*	1	.898*	.039	.099	-.080
	Sig (2-t)	.000	.000	.000		.000	.513	.098	.181
Total News	PC	.773*	.551*	.578*	.898*	1	-.014	.043	-.053
	Sig (2-t)	.000	.000	.000	.000		.821	.480	.376
State Anxiety	PC	-.021	-.074	-.079	.039	-.014	1	.740*	-.538*
	Sig (2-t)	.726	.218	.192	.513	.821		.000	.000
Trait Anxiety	PC	-.007	-.014	-.060	.099	.043	.740*	1	-.670*
	Sig (2-t)	.905	.814	.321	.098	.480	.000		.000
Optimism	PC	.005	-.008	-.016	-.080	-.053	.538*	-.670	1
	Sig (2-t)	.928	.899	.784	.181	.376	.000	.000	

Appendix G – Partial Correlations

Partial Correlations of State Anxiety, Trait Anxiety, and Total News by Optimism

Control Variables			Total News	State Anxiety	Trait Anxiety
Optimism	Total News	Correlation	1	-.050	.009
		Sig. (2-t)		.404	.880
	State Anxiety	Correlation	-.050	1	.607
		Sig. (2-t)	.404		.000
	Trait Anxiety	Correlation	.009	.607	1
		Sig. (2-t)	.880	.000	

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