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THE EFFECTS OF MEDIA VIOLENCE  
ON AGGRESSIVE BEHAVIOR


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JENNIFER L. LUTZ




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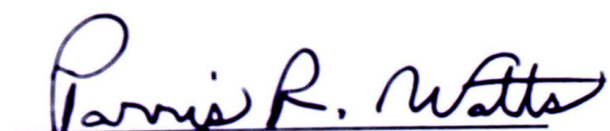
  
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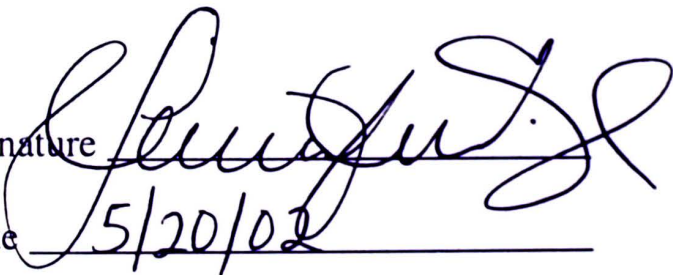
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ON AGGRESSIVE BEHAVIOR

A Thesis Proposal  
Presented for the  
Masters of Arts Degree  
Austin Peay State University

Jennifer L. Lutz

November 2001



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## DEDICATION

This thesis is dedicated to my

husband

Clay H. Lewis IV

and my parents

Larry and Brenda Lutz

for giving me the love and support throughout my life,

and the courage to succeed.

## ACKNOWLEDGMENTS

I would like to thank my major professor, Dr. Frederick R. Grieve, for his encouragement, support, and guidance throughout my educational career. I would also like to thank Dr. Maureen McCarthy and Dr. LuAnnette Butler for their guidance and support in this and other areas of my education. Additionally, I would like to thank the American Association for Retired People, the AWR Watts Senior Center, Walking Horse Meadows Retirement Home, Mrs. Louise Covington, and the countless others that assisted me throughout this project. Thank you all so very much for your help, assistance, and patience. I am truly indebted to you all.



## ABSTRACT

The current research examined the effects of media violence on aggressive behavior. The hypotheses under study were that individuals who viewed violent media would exhibit an increase in their aggressive tendencies; males would display an increased number of aggressive word associations when compared with females regardless of viewing violent or nonviolent media; and college students would exhibit a higher increase in aggressiveness versus older adults. A 52-item word association task served as the dependent measure and the independent variables were type of media viewed (i.e., violent or nonviolent), age, and gender. Results indicated both older adults and college students who viewed the violent media made an increased number of aggressive word associations as compared to those individuals who viewed the nonviolent media. No other main effects or interaction effects were found. This study supports previous research indicating that media violence increases aggressive behavior, and establishes the importance of shifting the focus of research to the now booming population of older adults.

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# CHAPTER I

## INTRODUCTION

Television has become an ubiquitous part of the American household. There are relatively few households in America that do not have at least one television. Bushman & Anderson (2001) reported that 98% of homes have a television set, and many homes have several television sets. There is an astounding amount of violence displayed on television every day, and the amount is increasing as networks strive to grab the attention of Americans by introducing “shock value” to a rising number of programs. How does this increase of violence in the media effect the population? The existing research indicates that media violence effects viewers in several ways, despite what the media industry attempts to portray. While many studies have been done that demonstrate the detrimental effects of violence on adults and children, few studies have examined the potential effects media violence has on the now booming population of older adults in our society (Bushman & Anderson, 2001). The purpose of the present study is to compare older adults and college-aged adults’ aggressive tendencies after viewing violent and nonviolent films.

### The Association Between Aggressive Behavior and Media Violence

The modern staple of American society known as the television was first introduced at the 1939 World’s Fair in New York, and, like so many other inventions, the television had only begun its long-standing place in the homes of Americans. World War II forced America to focus on other inventions to spur the productivity of war materials; therefore, after the Federal Communications Commission approved the first television stations in 1941, the popularity of television was suppressed until 1946. Since 1950, when only 9% of Americans had a television in their home, the number of Americans



with a television has risen dramatically to approximately 98% (Bushman & Anderson, 2001). Television has become an important source of normative information for American society. This form of media is the most successful and powerful root of common culture in the United States. The violence portrayed on television creates a learning environment for individuals that is frequently portrayed to be an effective way for solving personal, as well as social, problems. Content analyses of television programming indicates that the normative information that television provides to society is becoming increasingly violent (Hennigan et al., 1982).

The disturbing trend of violence on television has increased significantly in recent years. Since 1975 the magnitude of the effect of media violence on aggression has increased, and indicates no signs of decreasing or leveling off (Bushman & Anderson, 2001). By the time a child has reached the end of elementary school he or she has witnessed approximately 8,000 television murders and more than 100,000 other various episodes of violence on television (Bushman, 1995). Violence is not simply the focus of 60% for every 8,000 hours of programming on television; it has also become the mode of entertainment for video games and movies. Bushman & Anderson (2001) report that 85% of popular video games contain violence.

Media and reality have often been inconsistent with one another, and the topic of violence only adds to this discrepancy. The media portrayal of violence is not consistent with what actually occurs in real life. In reality 87% of crimes committed are classified as nonviolent by the Federal Bureau of Investigation (FBI) and only 0.2% of crimes reported are murders. However, an overwhelming 50% of incidents of violence displayed on television are acts of murder (Bushman & Anderson, 2001). This discrepancy is an

unfortunate inaccuracy being portrayed by the media which is viewed and believed by millions of Americans every day.

Reports by the media on the relationship between media violence and increased aggression have significantly decreased in recent years, and some networks have gone as far as to indicate there is little or no effect on the American public despite the overwhelming evidence to the contrary (Bushman & Anderson, 2001). Many television and motion picture companies claim that violent media has no effect on aggressive behavior. These companies suggest that violent media may influence behavior in a beneficial manner serving as an outlet for individuals to release their aggressive behavior that would otherwise be kept inside, and potentially be released in a more detrimental manner later.

Inconsistent with the media, scientific evidence stemming from sundry studies indicates that viewing violence increases aggression (e.g., Anderson, 1977; Bushman, 1998). Bushman (1998) performed research to test the hypothesis that participants who viewed a violent videotape would more quickly discern aggressive words as an English word when compared to nonwords. This research consisted of male and female undergraduate psychology students ( $N = 300$ ). The participants were told that they would be viewing an exciting movie segment used to induce arousal, and that reaction time would be assessed through a lexical-decision task. The participant viewed either a violent or nonviolent videotape, and was then instructed to determine whether letter strings shown on a computer screen for 154 msec. were English words or nonwords by pressing a button on a keyboard. Results indicated that those individuals who viewed the violent videotape had quicker reaction times to an aggressive word as an English word when compared to those individuals who viewed the nonviolent videotape.



Anderson (1977) reported a positive relationship between viewing media violence and the subsequent aggressive behavior displayed by those viewers. These findings spurred action by six major professional societies – the American Psychological Association (APA), the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, the American Medical Association, the American Academy of Family Physicians, and the American Psychiatric Association – to sign a joint statement indicating the hazards of exposing children to media violence (Joint Statement, 2000, p.1).

### Theoretical Explanations of Aggressive Behavior

#### *Cognitive-Neoassociation Analysis*

Leonard Berkowitz postulated that memory is regarded as a collection of associated networks, which consists of units or nodes that are interconnected through associative pathways (Berkowitz, 1984). Berkowitz indicated that aggressive ideas portrayed by violent media can prime other semantically related nodes, suggesting that viewers will have other aggressive thoughts immediately while viewing media violence or directly afterward (Bushman, 1995).

Berkowitz used the concept of associative networks and spreading activation theory developed by Collins & Loftus (1975) that asserted the idea that thoughts, feelings, and action tendencies are linked together in memory. Spreading activation theory hypothesizes that when a thought element is brought into focal awareness, the activated node or unit radiates out along an associative pathway to other nodes (Anderson, Anderson, & Deuser, 1996). This process can lead to priming (Berkowitz, 1984). Berkowitz proposed that since thoughts, feelings, and action tendencies are related through associative networks they can develop complicated associations between

aggressive ideas, feelings or emotions related to violence, and the tendency for aggressive actions (Bushman, 1995). Berkowitz indicates that externally presented thoughts or ideas can activate other particular feelings and specific actions, as well as certain types of thoughts or recollections concerning aggressive events (Berkowitz, 1984). Media violence affects aggression through aggressive ideas aroused by violent movies or television programs. These aggressive ideas prime other semantically related thoughts and spread throughout the network along several nodes, increasing the chances that a viewer will experience other aggressive thoughts during this period. Therefore, media violence creates complex associations that consist of aggressive ideas, emotions related to violence, and the impetus for aggressive actions (Bushman & Geen, 1990)

### *Social Learning Theory*

In social learning theory, aggression is treated as a complex event. This event encompasses behavior that produces destructive and injurious effects as well as a social labeling process (Bandura, 1973). Social learning theory was proposed by Albert Bandura and is characterized as one of the most influential theories concerning media-related aggression (Bushman, 1998). Social learning theory focuses on the idea that people acquire aggression and aggressive behaviors through direct experience with the behavior or by observation. Social learning places emphasis on the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others.

The content and structure of attitudes is conceptualized by social learning theory, because the observation of media violence may affect how an individual perceives aggression and its acceptability in society (Rule & Ferguson, 1986). The observation of others helps an individual to form an idea of how a new behavior is performed, and on later occasions, this coded information serves as a guide for action. Four processes



underlie observational learning that are essential to social learning theory: attention, retention, motor reproduction, and motivation. First, social learning theory focuses on the process of attention to a modeled event. The event is attended to based upon its distinctiveness, complexity, prevalence, and functional value for the individual. Individuals cannot learn by observation if they fail to attend to, or recognize, the salient features of the behavior of the model. Second, social learning theory places emphasis on the retention process. The retention process includes symbolic coding, cognitive organization, symbolic rehearsal, and motor rehearsal. An individual is not influenced by a model that he or she cannot remember, therefore, long-term retention of behaviors that have been modeled is important. Third, motor reproduction is focused on physical capability, self-observations of reproduction, and accuracy of feedback. This component of social learning theory centers on the overt enactment of the behaviors learned by the individual. Finally, social learning theory focuses on the process of motivation that encompasses external, vicarious and self-reinforcement. An individual may attend to, retain, and control the ability to exhibit a modeled behavior, but the learning may seldom be activated into external performance if the behavior is negatively received. Therefore, portrayals of media violence that are met with positive reinforcement aid in the selective retention of the behavior that was learned through the motivation of viewers to code and rehearse such modeled behavior (Bandura, 1973).

Social learning theory explains behavior as a continuous reciprocal interaction between cognitive, behavioral, and environmental influences (Bandura, 1973).

Therefore, television actors or actresses may serve as models of aggression that are imitated by people. Bushman (1998) reported that approximately one third of all actors or actresses shown on network television programs were involved in violent interactions.

Bandura (1973) indicated that television influences aggressive tendencies primarily by demonstrating how to aggress and by the way in which television portrays the functional value of coercive behavior. Media violence affects aggressive behavior through direct experience or the observation of others according to social learning theory. Individuals attend to the aggressive behaviors portrayed by violent movies and television programs. These behaviors are subsequently retained into memory until motor reproduction occurs, and the overt enactment of the aggressive behavior is displayed. Finally, the individual relies on reinforcement of the aggressive behavior to determine whether the behavior will be used in future situations.

#### *Developmental Theory and Information Processing Perspective*

Huesmann (1986) proposed a developmental theory that built upon Bandura's theory of social learning. This developmental theory indicates that the effect of media violence on individuals is mainly the result of a cumulative learning process that occurs during childhood. Huesmann emphasizes the role that individuals' cognitions play in determining how the individuals process information observed in the media. The developmental theory indicates that each individual develops a characteristic level of aggression which remains relatively stable over time (Huesmann, 1986).

Huesmann postulated that when children observe violence in the media they create a script for that aggressive behavior. A script is defined as a sequence of vignettes in which an event is encoded through perceptual and conceptual information that is gathered about the situation. The learning of aggressive scripts are divided into three phases: acquisition and encoding, maintenance, and retrieval or emission phases. The acquisition and encoding phase involves attending to a stimulus and encoding that stimulus into memory. The maintenance phase occurs when the internal representation is



elaborated on. Finally, the retrieval and emission phase is defined as the point where the internal representation manifests itself in actual behavior (Huesmann & Malamuth, 1986). Once a script is encoded into memory, it may be retrieved later as a guide for behavior (Bushman, 1998). Children are continually observing others, encoding what seems important, and integrating those observations into encoded scripts for future behavior (Huesmann, 1986). Huesmann's model suggests that media violence will effect aggressive behavior through a cumulative learning process in which the child's observation of violence eventually will lead to the child employing more aggressive scripts for behavior (Huesmann, 1986).

### Interaction of Gender and Media Violence on Aggressive Behavior

Gunter & Furnham (1983) suggest that the observation of media violence can lead to increased levels of personal aggressiveness and social outbreaks of violence. Not long after the introduction of television in American households, a dramatic increase in violent crime was observed (Felson, 1996). Homicide rates have more than doubled since 1950 with recently reported figures at 22 homicides per 100,000 people (Osofsky, 1995).

Research indicates that males are more likely than females to act aggressively after exposure to violent media, and typically exhibit higher levels of aggressiveness (Wood et. al., 1991). Films chosen by males tend to contain more violence than those films chosen by females. The amount of violence in films chosen by males also increased when aggressive fantasies were present versus when nonaggressive fantasies were present (Fenigstein, 1979). Fenigstein (1979) performed research to test the hypothesis that participants who were induced to express an aggressive fantasy would have an increased interest in viewing violence than those expressing nonaggressive fantasies. This study consisted of male and female undergraduate psychology students ( $N = 87$ ). The

participants were told that the study was investigating the “effects of verbal and visual stimuli on thought process,” (p. 2309) and were induced to express either an aggressive or a nonaggressive fantasy. The fantasies were created through the use of one of two sets of 24 words. Participants were asked to construct a story using these words. One group received 10 words on the list that had aggressive connotations (e.g., hurt, knife); the other group received 10 words on the list that had nonaggressive connotations (e.g., praise, pen). The remaining words on the list were constant for both groups. After completing the story, participants were given the opportunity to select 10 film clips from a pool of 26. Each clip was described by a brief phrase, for example, “a fist fight,” “a student taking a test.” Following the choice of films, each participant was given a questionnaire to determine expectations of the film he or she chose. Participants were then asked to rate their chosen films on a 7-point bipolar scale measuring interest, humor, violence, action, education value, and aesthetic value. Participants in the experimental group only were then given a second questionnaire to measure the motives and emotions that had been expressed earlier in their “word stories” on a 5-point scale ranging from 1 (not expressed at all) to 5 (expressed very strongly). Results indicated that aggressive fantasies in males, compared to nonaggressive fantasies, increased the preference for viewing violence. In addition, films chosen by males contained more violence than films chosen by females.

Investigations clearly indicate that exposing males to portrayals of violence against females results in more negative attitudes about females and an increased tendency in aggressive behavior towards females (Linz, Donnerstein, & Penrod, 1984). Bushman and Geen (1990) observed that stimuli associated with violence reduced inhibitions against aggression in males and females. Studies show that aggressive behavior is increased in both males and females after viewing violent media, however,



this evidence demonstrates a more significant increase for males (Bushman & Geen, 1990; Fenigstein, 1979; Huesmann, Eron, Lefkowitz, & Walder, 1984). Bushman (1995) performed research to test the hypothesis that males would set higher noise levels for their "opponent" on a reaction time task than females would after viewing a violent videotape. Consistent with this hypothesis, males in the appropriate condition gave more intense noise blasts to their "opponent" than did females.

### Stability of Aggression as a State and/or Trait in Personality

Aggressive tendencies over time and situations have been shown to be stable (Bushman & Geen, 1990). Bushman (1995) performed research to test the hypothesis that individuals with high trait aggression are more affected by violent media than are individuals with low trait aggression. This study consisted of male and female undergraduate psychology students ( $N = 420$ ) who had previously been given a self-report measure to assess trait aggressiveness in a mass testing session. The participants were told that this study was to assist the Department of Journalism and Mass Communications with the measurement of attitudes. The participants were then asked to report the number of hours per week they spent watching various types of television programs, and then given 12 film descriptions to read. The participants rated the 12 films responding to the statement "I would like to watch this film" on a 7-point Likert-type scale ranging from -3 (strongly disagree) to 3 (strongly agree). Results indicated that as the level of trait aggressiveness increased, the likelihood of choosing a violent film to watch also increased.

Bushman (1995) reported that scores on personality measures may provide an indirect measure of the extent and development of an individual's aggressive cognitive-associative network. Therefore, he asserted that people with increased scores on trait

aggressiveness inventories should have a more extensive aggression network than those with low scores on trait aggressiveness inventories. Huesmann, Eron, Lefkowitz, & Walder (1984) reported that aggression could be viewed as a consistent trait that may be influenced by situational variables but possesses substantial cross-situational constancy. Research performed by Gunter & Furnham (1983) indicates that unstable or neurotic extroverts, as measured by the Eysenck's Personality Questionnaire, may show stronger propensities to exhibit intense anger and violent or unruly behavior than other personality types.

Research suggests that certain individuals with propensities towards particular personality traits exhibit increased cognitive and emotional responses to violent media (Bushman & Geen, 1990). Bushman & Geen (1990) performed research to test the hypothesis that observation of media violence elicits thoughts and emotional responses related to aggression. This study consisted of male and female undergraduate psychology students ( $N = 100$ ). Participants were shown either a nonviolent videotape or a tape showing one of sundry predetermined levels of violence. Subsequently, participants were instructed to list the thoughts they could recall having as they viewed the videotape. The participants were then asked to rate the videotape on a 5-point rating scale measuring the degree to which the videotape had been enjoyable, amusing, realistic, and violent. Personality variables were assessed using a personality questionnaire. Results support Berkowitz's hypothesis that observation of violence elicits thoughts related to aggression, because aggressive thoughts and violence ratings both increased with the level of violence demonstrated in the videotape.



## Limitations of Previous Research

Sundry studies report the relationship between aggressive behavior and media violence with adults (Anderson, 1977; Bushman, 1995; Bushman, 1998; Bushman & Geen, 1990; Huesmann et. al., 1984), as well as violence with children (Heath, Knuttschnitt, & Ward, 1986; Osofsky, 1995). However, few studies report the relationship of media violence on aggression with the older adult population.

## The Present Research

The previous limitations mentioned indicate the necessity of the current study. This study is intended to examine the effects of media violence on the older adult population, as well as the undergraduate college population. Gender differences were assessed in relation to the older adult population, as well as the college undergraduate population.

## Hypothesis

This study, examining the effect of media violence, comprises three hypotheses. First, it is hypothesized that individuals who view the violent videotape will exhibit an increase in their aggressive tendencies as measured by a word association task versus those individuals viewing the nonviolent videotape. Second, males will display an increased number of aggressive word associations when compared with females regardless of viewing the violent or nonviolent videotape. Finally, college students will exhibit a higher increase in aggressiveness as measured by a word association task versus older adults.

## CHAPTER II

### METHOD

#### *Participants and Design*

Participants for this study were 66 college students, aged 18 to 35 years, and 60 older adults, aged 55 years and older. Participants were recruited from a small mid-south university and from older adult organizations within a mid-size southern city. The college sample was composed of 39 female participants and 27 male participants. The older adult sample was composed of 40 female participants and 20 male participants. The mean age of the college student sample was 23.44 ( $SD = 4.40$ ) and the mean age of the older adult sample was 71.98 ( $SD = 9.03$ ). In addition, the average number of years of education for the college student sample was 15.65 ( $SD = 2.03$ ) and for the older adult sample was 13.82 ( $SD = 2.96$ ). The ethnic composite of the college student sample was 2 American Indians, 4 Hispanics, 53 Caucasians, and 7 African Americans. The ethnic composite of the older adult sample was 1 American Indian, 55 Caucasians, and 4 African Americans. The marital status composite of the college student sample was 50 single individuals, 15 married individuals, and 1 widowed individual. The marital status composite of the older adult sample was 2 single individuals, 35 married individuals, 5 divorced individuals, and 18 widowed individuals. Significant differences were noted between college students and older adults for educational and marital status. Participation was voluntary for the college student sample, as well as the older adult sample. However, the college student sample was offered an incentive of possible extra credit dependent upon participation in the research. This extra credit was based on the discretion of participant's professor.



The design for this study was a 2 (Male vs. Female) x 2 (Older Adult vs. College Student) x 2 (Viewing violent media vs. Viewing nonviolent media) between subjects design. This study involved three variables as follows: gender, male or female; age, older adult or college student; and type of media viewed, violent or nonviolent. Therefore, 8 conditions were created: a male older adult viewing violent media, a male older adult viewing nonviolent media, a female older adult viewing violent media, a female older adult viewing nonviolent media, a male college student viewing violent media, a male college student viewing nonviolent media, a female college student viewing violent media, and a female college student viewing nonviolent media. The dependent variable was the number of aggressive word associations made by the participants and measured by the word association task (Bushman, 1998).

### *Measures*

*Demographics.* A demographics questionnaire was given to each participant (see Appendix A). It assessed age, gender, race, level of education, and marital status.

*State Aggression.* State aggression was measured by using a homonym word-association task (see Appendix B) developed by Bushman (1998). This task includes homonyms selected with two definitions where one meaning was significantly more aggressive in nature than the other meanings (e.g., punch, sock, pound), and control words that were selected to have nonaggressive meanings (e.g., feather, glide, relax). The aggressive homonyms exhibited increased aggressiveness ( $M = 2.7$ ,  $SE = 0.04$ ) versus the nonaggressive words ( $M = 1.3$ ,  $SE = 0.03$ ),  $t(199) = 35.04$ ,  $p < .05$ ,  $d = 2.46$ .

### *Videotapes*

The videotapes used in this study were adapted from an earlier study published by Bushman (1998). Each segment of videotape used in the study is approximately 15

minutes long. The violent videotape used in the study is an excerpt from the movie *Karate Kid III*. The 15-minute segment chosen for viewing consists of a scene in which a young man defeats an opponent who refuses to fight by the rules. Prior to the fight the opponent had destroyed the young man's property, kicked his girlfriend, and repeatedly insulted him.

The nonviolent videotape used in the study is an excerpt from the movie *Gorillas in the Mist*. The 15-minute segment chosen for viewing consists of a scene where a scientist watches gorillas in their natural habitat. During this segment, the gorillas appear threatened by the scientist's presence; however, after time the gorillas begin to trust the scientist allowing her to interact with them. Both videotapes were chosen for their excitement and suspense, but no violence was exhibited in the nonviolent videotape.

Earlier research performed by Bushman (1995) indicated that the selected 15-minute excerpts from *Karate Kid III* and *Gorillas in the Mist* did not elicit significant differences in their effects on cardiovascular arousal (i.e., systolic blood pressure, diastolic blood pressure, mean arterial pressure, heart rate), as well as sundry rating dimensions (i.e., exciting, boring, arousing, emotionally moving, action packed, enjoyable, entertaining, funny, sad, or frightening). Bushman (1995) found that participants who viewed the violent videotape exhibited increased levels of anger and aggressive behavior when compared with those who viewed the nonviolent videotape.

### *Procedures*

When participants arrived, they were given a packet of information, consisting of an informed consent document (see Appendix C) and the demographic questionnaire. They were then told that the purpose of the study was to determine the different effects of arousing stimuli on a word association task. After completing the informed consent, the



participants were asked to complete the demographic questionnaire as accurately as possible. Participants were randomly assigned to either view the violent segment of videotape or the nonviolent segment of videotape. The violent segment of videotape was viewed by 60 participants (26 older adults, 34 college students) and the nonviolent segment of videotape was viewed by 65 participants (34 older adults, 31 college students). Participants involved in the experiment viewed the videotapes in small groups, but completed the word association task individually.

After viewing the videotape, the participants were asked to complete the word association task. The procedure used in this study was similar to the one used by Bushman (1998). The word association task was disguised as a speed task to allow for the strongest association possible for each word presented. The title on the response sheet and the printed instructions were adapted from those used by Bushman (1998). The title on the word association response sheet was "SPEED OF ASSOCIATION TASK." Below this title the printed instructions were as follows:

This is a task to determine how quickly you can think. In the space after each word, write neatly and clearly the first word or phrase that comes to your mind, no matter what that word or phrase may be. This task is only to determine your speed of association with words, and there are no right or wrong answers. Work straight down the list of words, do not skip any words, and give only one response for each word. It is important that you write clearly because any words that cannot be read will not be counted towards your score. Please do not ask any questions once the test has begun.

For each participant the same list of words was used. All participants were given an adequate amount of time to read the instructions, and the experimenter asked if there were any questions. After all questions were answered the experimenter indicated a large clock visible to all participants and explained that the experimenter would indicate when all participants were to begin. When the participants had completed all words they were required to record the time indicated on the clock and calculate the amount of time it took them to complete the task in the upper right hand corner of the answer sheet. The experimenter again requested if there were any last questions, and said "begin." The experimenter wrote this start time on the front board visible to all participants. The experimenter checked all calculations made by participants. After all participants were finished, they were debriefed (see Appendix D) about the experiment and dismissed.



## CHAPTER III

### RESULTS

In this study, a total aggression score was derived by summing the number of aggressive associations for each participant on the word association task. This total was submitted to a 2 (Male vs. Female) x 2 (Older Adult vs. College Student) x 2 (Viewing violent media vs. Viewing nonviolent media) Analysis of Variance (ANOVA). Results indicated a main effect for viewing violent media vs. nonviolent media ( $F(1, 117) = 12.012, p = <.001, d = .58$ ). Participants who viewed the violent media made more aggressive word associations ( $M = 6.40, SD = 3.60$ ), as compared to participants who viewed the nonviolent media ( $M = 4.26, SD = 3.18$ ). There were no other significant main or interaction effects found in the present study.

#### *Age Differences*

Mean and standard deviations are reported in Table 1 for the male and female college and older adult samples. In order to understand the age data and the relation to

Table 1

*Mean and Standard Deviations of Male and Female College and Older Adult Sample*

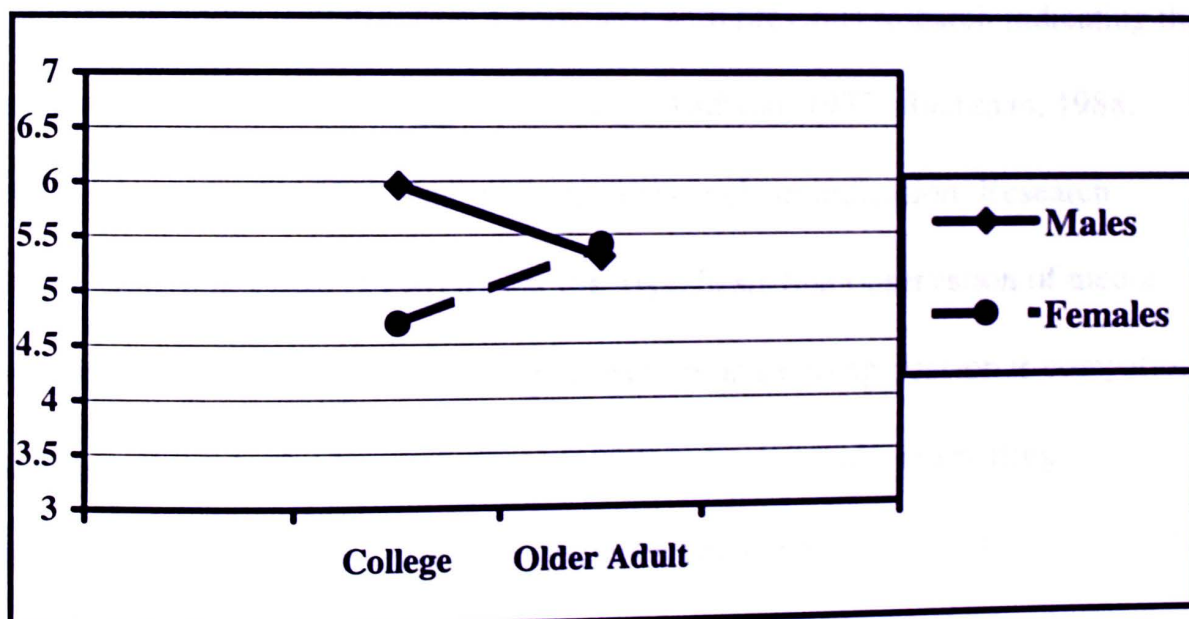
	Males	Females
Older Adults	5.30 (2.54)	5.41 (3.70)
College Students	5.96 (3.80)	4.69 (3.65)

gender focusing on the number of aggressive word associations while viewing either the violent media or nonviolent media two sets of *t*-tests were performed. The first *t*-test

focused on age differences partitioned by gender, therefore, comparing younger males and younger females with older adult males and older adult female. A larger difference in mean scores was observed between college age males and females versus older adult males and females. However, this difference was not found to be statistically significant. The second  $t$ -test performed on the data focused on equating gender differences partitioned by age thereby comparing older adult male and younger males with older adult females and younger females. Results indicated that younger males exhibited more aggressive word associations than older adult males. In contrast, older adult females demonstrated more aggressive word associations than younger females (see Figure 1).

Figure 1

*Relationship of Aggressiveness Between Male and Female College and Older Adult Samples*





## CHAPTER IV

### DISCUSSION

The main purpose of this study was to examine the effects of media violence on aggressive behavior in college students and older adults. The first hypothesis under investigation was that individuals who viewed the violent videotape would exhibit an increase in their aggressive tendencies as measured by a word association task versus those individuals viewing the nonviolent videotape. The analysis comparing the violent videotape to the nonviolent videotape exhibited statistical significance in relation to the number of aggressive associations on a word association task. Both college student and older adult participants who viewed the violent videotape made a greater number of aggressive associations to the word association task than did college student and older adult participants who viewed the nonviolent videotape. These findings lend support to the first hypothesis under investigation. Congruent with previous research indicating that viewing media violence increases aggression (e.g., Anderson, 1977; Bushman, 1988; Felson, 1996; Wood et. al, 1991), this study presents such an indication. Research reported by Bushman & Geen (1990) to test the hypothesis that observation of media violence elicits thoughts and emotional responses in relation to aggression is compatible with the current research. Bushman & Geen (1990) indicate results supporting Berkowitz's hypothesis that observation of violence elicits thoughts related to aggression, because aggressive thoughts and violence ratings both increased with the level of violence demonstrated in the videotape. Consistent with the results reported by Bushman & Geen (1990), the present research also lends support to the hypothesis of cognitive-neoassociation analysis postulated by Leonard Berkowitz.

The present research indicates that media violence increases aggressive associations. The increase in aggressive associations made by older adults and college students who viewed the violent videotape supports the notion of public awareness by the scientific community through the hypothesis of cognitive-neoassociation analysis, that individuals who observe violence will elicit thoughts related to aggression. Bushman & Anderson (2001) note that since 1975 the magnitude of the effect of media violence on aggression has increased, and indicates no signs of decreasing or leveling off. Violence is no longer simply the focus of 60% for every 8,000 hours of programming on television; it has now become the primary mode of entertainment monopolizing video games and movies. Present research contributes support to the potential effects media violence has on the now booming population of older adults in our society, as well as all age and gender groups. Research focusing on this area indicates that media violence may increase aggressiveness. However, sundry other variables have a potential effect on this research such as increased gun availability, more urban areas, and the increase in the population required to live in the same amount of space. It is important to note that a correlation occurs, but research can never prove a cause and effect relationship exists between media violence and aggressiveness.

The second hypothesis under investigation was that males would display an increased number of aggressive word associations when compared with females regardless of viewing the violent or nonviolent videotape. Wood, Wong, & Chachere (1991) report previous research indicating that males are more likely than females to act aggressively after exposure to violent media, and typically exhibit increased levels of aggressiveness. Congruent with results of previous research indicating a tendency for males to exhibit an increase in aggressiveness after exposure to violent media, the present



research reports a larger difference in mean scores related to aggressiveness in college age males and females when compared to older adult males and females. However, this relationship is not statistically significant and unable to support the second hypothesis under investigation. Previous research focusing on gender by Fenigstein (1979) noted that films chosen by males contained more violence than films chosen by females, and that aggressive fantasies exhibited by males increased the preference for viewing violence. Other investigations indicate that exposing males to portrayals of violence against females results in more negative attitudes about females and an increased tendency in aggressive behavior towards females (Linz et. al, 1984).

While previous research demonstrates a more significant increase in aggressiveness for males versus females (Bushman & Geen, 1990; Fenigstein, 1979; Huesmann et. al, 1984) these studies all employ direct (explicit) memory tasks (e.g., recall, recognition) that require conscious expression of remembering and are more easily influenced by demand characteristics or other strategic factors. The present research makes use of an indirect (implicit) memory task (e.g., identification, word completion), and is less likely to be influenced by such characteristics (Anderson, 2000). The indirect memory task in the present research was disguised as a speed of association task, therefore causing participants to focus on how quickly they completed the task rather than the content of associations. Consistent with the characteristics of an indirect memory task, videotape content did not have an effect on the time it took a participant to complete the word association task. This observation indicates that demand characteristics were unlikely to have occurred and adversely effect the present research. Finally, no participants expressed suspicion about the research. The notion that gender is an important variable across age groups requires further investigation using both indirect

and direct memory tasks to determine the true nature of importance that gender has on aggressive behavior.

The third hypothesis under investigation was that college students would exhibit a higher increase in aggressiveness as measured by the word association task versus older adults. Congruent with this hypothesis, results indicate that college aged males exhibited more aggressiveness when compared with older adult males. However, older adult females exhibit more aggressiveness when compared with college aged females. Therefore, the hypothesis is not statistically supported by the results derived from statistical procedures used. The reverse effect on aggressiveness in age groups based upon gender indicates a need for further research focusing on this area. There is a formidable missing link in the chain of research focusing on the increase in aggressive behavior stemming from media violence. Further research is needed to replicate the results found in the current study, as well as to determine the point at which the reverse effect on aggressiveness occurs. A focus directed towards the age at which older adult females begin to exhibit more aggressiveness than college aged females is fundamentally important to the understanding of the effects media violence has on older adults.

Limitations of this study include not using a personality measure to assess aggressive characteristics in individuals, the use of only one indirect measure (i.e., word association task) to determine an increase in aggressive behavior after viewing a violent videotape, and the absence of random sampling. The participants are older adults who participate in a day program within the community or college students who were offered possible extra credit for their participation. Significant differences were noted when comparing the college student sample to the older adult sample concerning education and



marital status. Further research should focus on these areas to ascertain if these differences are important confounding variables.

### *Summary*

Bushman and Anderson (2001) reported that 98% of homes have a television set, and many homes have several television sets. The astounding amount of violence portrayed on television every day is demonstrated by the disturbing trend of violence that has increased significantly in recent years. Since 1975 the magnitude of the effect of media violence on aggression has increased, and indicates no sign of decreasing or leveling off. Not long after the introduction of television in American households, a dramatic increase in violent crime was observed (Felson, 1996). Commensurately, homicide rates have more than doubled since 1950 with recently reported figures at 22 homicides per 100,000 people (Osofsky, 1995). Sundry studies indicate that viewing media violence increases aggression (e.g., Anderson, 1977; Bushman, 1988; Felson, 1996; Wood et. al, 1991), however, our leaders have continued to ignore the mounting evidence. This study supports previous research that media violence increases aggressive behavior by employing the divergent technique of an indirect memory task. Older adults and college students who viewed a violent videotape exhibited an increase in aggressive associations as measured by a word association task when compared to older adults and college students who viewed a nonviolent videotape. The present research establishes the importance of shifting the focus of research to the now booming population of older adults, and the uncertain effect of media violence on this population.





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## APPENDICES



## APPENDIX A

## Demographics

Please answer the following questions about yourself.

Age: \_\_\_\_\_

Ethnic Origin: \_\_\_\_\_ American Indian / Alaskan Native  
\_\_\_\_\_ Hispanic / Latino  
\_\_\_\_\_ Asian / Pacific Islander  
\_\_\_\_\_ White  
\_\_\_\_\_ Black / African American  
\_\_\_\_\_ Other

Gender: \_\_\_\_\_ Male  
\_\_\_\_\_ Female

Level of Education: \_\_\_\_\_ Years

Marital Status: \_\_\_\_\_ Single  
\_\_\_\_\_ Married  
\_\_\_\_\_ Divorced  
\_\_\_\_\_ Widowed  
\_\_\_\_\_ Separated

## APPENDIX B

## SPEED OF ASSOCIATION TASK

This is a task to determine how quickly you can think. In the space after each word, write neatly and clearly the first word or phrase that comes to your mind, no matter what that word or phrase may be. This task is only to determine your speed of association with words, and there are no right or wrong answers. Work straight down the list of words, do not skip any words, and give only one response for each word. It is important that you write clearly because any words that cannot be read will not be counted towards your score. Please do not ask any questions once the test has begun.

**Beginning Time:** \_\_\_\_\_

**Stop Time:** \_\_\_\_\_

**Speed Of Association:** \_\_\_\_\_



1. bloom
2. blow
3. boot
4. box
5. button
6. cardboard
7. clothes
8. club
9. cuff
10. deck
11. dust
12. feather
13. field
14. flavor
15. fur
16. glide
17. glue
18. hammer
19. hit
20. listen
21. mad
22. mean
23. mellow
24. mug
25. nail
26. observe

27. paste
28. pelt
29. plaster
30. playground
31. pound
32. punch
33. read
34. record
35. relax
36. rent
37. shoe
38. slug
39. smack
40. snare
41. snail
42. sock
43. storm
44. strike
45. survey
46. swing
47. tomato
48. trip
49. vacation
50. wall
51. watch
52. wrench

Stop Time: \_\_\_\_\_

## APPENDIX C

## Informed Consent Document

You are about to participate in a study that focuses on the different effects of arousing stimuli on a word association task. ***Please read the following material carefully.*** It describes the purpose of the study, the procedure to be used, risks and benefits of your participation, and what will happen to the information that is collected from you. If you have any questions regarding the right of research participants, please contact the Office of Grants and Sponsored Research, Box 4517, Austin Peay State University, Clarksville, TN 37044, (931) 221-7881.

1. ***The purpose of the study*** is to determine the different effects of arousing stimuli on a word association task.
2. ***The procedures to be used in this study.*** First, you will be asked to fill out a personal information questionnaire. After you have completely answered the information questionnaire you will then be asked to watch a video, approximately 15 minutes in length. The video will be a segment of a popular movie and may contain a violent karate fight scene. After you watch the video, you will be asked to complete a task, measuring your speed of association. When the questionnaire is completed, you will be given a copy of this informed consent and a debriefing form that will explain the research further.
3. ***Risks and benefits of participation.*** There are minimal risks from participating in this study. Extra credit will also be an option depending on your instructor's policy. If your instructors do award extra credit for participating in research, then be sure to obtain the "*certificate of participation*" from the researchers and take it to your instructor.
4. ***After the information or data are collected*** from you, it will be securely stored separately from any identifying data; additionally, electronically stored data will be password protected. To ensure confidentiality, you will be assigned a participant number, which will be the only means of identification. In other words, the identities of all participants will not be known at the time of analysis, and will not be presented at any time during the study. All data obtained will be used only for purposes of instruction and scientific publication, and all data will be confidentially protected. Information will be made public in the form of averages, which makes it impossible to tell who the participants were.

If you have any questions regarding this study, please contact Jennifer Lewis or Dr. Frederick Grieve at 221-7235



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If you have any questions regarding this study, please contact Jennifer Lewis or Dr. Frederick Grieve at 221-7235

## Informed Consent Statement

Please read the statements below. They describe your rights as a participant in this research study.

1. **I agree to participate in the present study being conducted by Jennifer Lewis, who is under direct supervision of Dr. Frederick Grieve. Either of these experimenters can be reached at 221-7235. If I have further questions, I can contact the IRB through the Office of Grants and Sponsored Programs at 221-7881.**
2. **I agree to:**
  1. **Fill out the personal information questionnaire**
  2. **Watch the video of a popular movie that may contain violence**
  3. **Fill out the speed association task**
  4. **Total time involved (approximately 30 minutes)**
3. **I have been informed in writing of the procedures to be followed as well as the risks and benefits to me for participating. I have been given an opportunity to ask questions about my participation.**
4. **I understand that I do not have to answer any item that I choose not to.**
5. **I understand that I may terminate my participation at any time without penalty or prejudice and that I may have all data obtained from me destroyed. Data will be destroyed up until the time of publication; for at that time we are unable to remove data.**
6. **I realize that by signing this form, I willingly consent to participate in this study. I also acknowledge that I have been given a copy of this consent form to keep.**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date



# APPENDIX D

## Debriefing Statement

Thank you for your participation in the research study entitled "The Effects of Media Violence on Aggressive Behavior" which is being conducted by Jennifer L. Lewis, a graduate student of the Psychology Department at Austin Peay State University. The purpose of this study was to determine the effects media violence has on aggressive behavior in college students, as well as older adults. This study proposed that individuals who view the violent videotape excerpt will exhibit an increase in their aggressive tendencies as measured by a word association task versus those individuals viewing a nonviolent videotape excerpt. Second, males will display an increased number of aggressive word associations when compared with females regardless of viewing the violent or nonviolent videotape excerpt. Finally, college students will exhibit a higher increase in aggressiveness as measured by a word association task versus older adults when viewing a violent videotape excerpt. The word association task was disguised as a speed of association task to prevent demand characteristics by the participant.

If you have any further questions about your participation in this research, please feel free to contact Jennifer L. Lewis or Dr. Frederick Grieve in the Psychology Department, Room 307B, Clement (221-7235) between 10 a.m. and 4 p.m. M-F. Thank you again for your participation.



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### **Educational Background**

Austin Peay State University  
M.A. in Clinical Psychology, anticipated May 2002  
Thesis title: *The effects of media violence on aggressive behavior.*

Austin Peay State University  
B.A. in Psychology, December 1999

### **Honors and Awards**

Phi Kappa Phi Honors Society, Austin Peay State University, Inducted Spring 2002  
Awarded Academic Honors Diploma, Austin Peay State University, April 2002  
Awarded Academic Honors, Austin Peay State University, Academic Year 1999-2000  
Awarded Outstanding December Psychology Graduate, Austin Peay State University,  
Fall 1999  
Gamma Beta Phi Society, Austin Peay State University, Inducted Spring 1998  
Dean's List, Austin Peay State University, Fall 1996 – Fall 1999

### **Professional Memberships**

American Psychological Association; Graduate Student Affiliate, 2001-Present

### **Clinical Experience**

- 04/02-05/02 *Internship Experience, Cumberland Hall Partial Program, Hopkinsville, KY.* Responsibilities included the leading and coleading of group, family, and individual sessions with a permanent group of nine adolescents ranging in age from 12 – 17 years old over the course of 400 hours in an outpatient facility.
- 01/2002-04/02 *Internship Experience, Cumberland Hall Psychiatric Hospital, Hopkinsville, KY.* Responsibilities included the leading and coleading of individual, family, and group therapy sessions, involvement in treatment teams, and inservice programs. These responsibilities were maintained with a caseload of between 4 and 16 individuals ranging in age from 4 – 84 years old over the course of 400 hours in an inpatient facility.



## Assessment Instruments Administered

### Intellectual & Achievement Assessments

Peabody Individual Achievement Test, Revised  
Peabody Picture Vocabulary Test, Revised  
Public Safety Writing Sample  
Shipley Institute of Living Scale  
Stanford Binet Intelligence Scale, 4<sup>th</sup> Ed

### UNIT

Wechsler Adult Intelligence Scale, 3<sup>rd</sup> Ed (WAIS-III)  
Wechsler Intelligence Scale for Children, 3<sup>rd</sup> Ed (WISC-III)  
Wechsler Individual Achievement Test, 2<sup>nd</sup> Ed (WIAT-II)  
Woodcock-Johnson Achievement Test, Revised

### Personality Assessments

Bender Gestalt Visual Motor Test (BGMVT)  
Candidate and Officer Personnel Survey (COPS)  
Clinical Interview  
Connors Rating Scales, Revised (CTRS-R)  
Edwards Personal Preference Scale (EPPS)  
House-Tree-Person Projectives (HTPP)  
Incomplete Sentences  
Mini-Mental Status Exam (MMSE)  
Minnesota Multiphasic Personality Inventory, 2<sup>nd</sup> Ed (MMPI-2)  
Minnesota Multiphasic Personality Inventory, Adolescents (MMPI-A)  
Neuroticism, Extraversion, Openness Personality Inventory, Revised (NEO-PI-R)

### Functional Behavior Assessments

Vineland Adaptive Behavior Scale

## Research Experience

- 06/01-Present      Lutz, J. & Grieve, F. G. *Thesis Research, Austin Peay State University, Clarksville TN.* Focus of research dealt with the effects of media violence on aggressive behavior involving college students and older adults.
- 04/99                Krueger, A. M., Mukina, S. L., Lutz, J., Moore, K., Kelley, L., Annicelli, C., Grieve, F. G., & McCarthy, M. A. (1999, April). *Eating Beliefs Questionnaire: Test-retest reliability.* Poster Presented at the annual meeting of the Middle Tennessee Psychological Association, Murfreesboro, TN.
- 08/98-12/99        Undergraduate Research Group, Austin Peay State University, Clarksville, TN. (Data Gathering). *Peceptual Factors of Eating Disorders.* Supervisor: Maureen A. McCarthy, Ph.D.

## Professional Presentation Experience

- 10/01 *2001 Southern Association for Counselor Education and Supervision Conference, University of Georgia, Athens, GA.* Responsibility included preparation of oral presentation titled Together is better: Multidisciplinary peer supervision in beginning counseling practicum.  
Supervisor: Rhonda M. Bryant, Ph.D.
- 04/99 *Undergraduate Research Symposium, Austin Peay State University, Clarksville, TN.* Responsibility included preparation for a poster presentation involving Test-Retest Reliability for Eating Belief's Questionnaire.  
Supervisors: Frederick G. Grieve, Ph.D. & Maureen A. McCarthy, Ph.D.