

# Realistic vs. Fictional Violence in Entertainment Media: Relative Effects on Youth's Aggression

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## Abstract

This study aims to examine effects of media violence on youth's aggression, and to compare realistic and fictional violence. A survey research using self-administered questionnaires was conducted with 546 teen students in Bangkok. The Linear Regression analyses and Pearson's Correlation revealed that youth's amount of exposure to media violence positively contributed to their aggression. Verbal aggression was highest, followed by emotional and physical one respectively. Respondents had medium level of aggression and slightly negative attitude toward media violence. Their attitude was positively correlated with their violence exposure, but a stronger predictor of their aggression than violence exposure. Realistic violence was more powerful predictor than fictional violence.

*Keywords: Media violence, Realistic violence, Fictional violence, Youth's aggression*

## 1. Introduction

Recent surveys show an extensive presence of violence in mass media. A large amount of children and youth spend a lot of time consuming those media. Large-scale longitudinal studies reveal that frequent exposure to violent media in childhood contributes to aggression (e.g., physical assault and spouse abuse) later in life (Anderson, Berkowitz, Donnerstein, Huesmann, Johnson, Linz, Malamuth and Wartella, 2003). Albeit this alarming evidence, children and youth continue to be major target audiences of entertainment media. Violent content in entertainment media can be categorized as 'realistic' (e.g., crime film) or 'fictional' (e.g., fighting game). Although past studies in Thailand (Laeheem and Baka, 2009; Wattanawaitunechai, Pongpullponsak and Kiattikomol, 2006) reported consistent findings regarding effects of media violence on youth's aggression, they did not examine the relative effects of these two types of violent content. In addition, other western studies merely examined their relative effects in television (Atkin and Wood, 1976). To provide additional empirical evidence in this research domain, this study focuses its examination on the relative effect of 'realistic' versus 'fictional' violence in entertainment media on youth's aggression in Thai context.

## 2. Objectives

1. To investigate whether youth's exposure to media violence is a significant predictor of their aggression.
2. To investigate whether youth's attitude toward media violence is a significant predictor of their aggression.
3. To examine the relative effects of 'realistic' versus 'fictional' violence in media on youth's aggression.

## 3. Literature Review and Research Hypotheses

Review of research findings on impacts of media violence suggests that exposure to violence in entertainment media (e.g., television, film, video game, music) increases the likelihood of audiences' aggression in both immediate and long-term contexts (Sparks and Sparks, 2002). Based on Anderson et al. (2003), psychologists define aggression as any behavior intended to harm another individual. Among three forms of aggression--physical, verbal, and emotional, behaviors of greatest concerns involve physical aggression, which ranges in severity from less serious acts (e.g., pushing) to more serious acts (e.g., physical assaults). Verbal aggression generally refers to saying hurtful things to another person. Emotional aggression is defined as projecting aggressive emotions (e.g., anger) to others.

How exposure to media violence increases aggression can be well explained by various theories. Short-term effects are produced by observational learning and imitation, arousal and excitation, and priming aggressive scripts and cognitions whereas long-term effects are produced by observational learning, automatization of aggressive schematic processing, and desensitization or emotional habituation (Bandura, 1994; Anderson et al., 2003). Based on the theoretical rationale and consistent findings discussed above, the first hypothesis is proposed:

**HP#1:** Youth's exposure to violence in entertainment media positively contributes to their aggression.

A meta-analysis of 88 attitude-behavior studies reveals that attitudes significantly and substantially predict future behavior (Kraus, 1995) leads to the development of the second hypothesis.

**HP#2:** Youth's attitude toward media violence positively contributes to their aggression.

Observational-learning theory suggests that youth who perceive a violent scene as realistic are highly likely to have aggressive ideas primed by the observed violence, to imitate the character, or to acquire various aggressive scripts and schemas (Anderson et al., 2003). In addition, several evidences suggest that audiences' aggression is more likely to be increased by relatively realistic portrayals of violence than those presented in a more fictional or fantastic fashion (Atkin, 1983; Berkowitz and Alioto, 1973; Feshbach, 1972; Geen, 1975; Hapkiewicz and Stone, 1974). 'Realistic' violence is defined as violence that is presented by mass media in a realistic or true-to-life fashion whereas 'fictional' violence is defined as violence that is portrayed by mass media in

a non-realistic or fictitious fashion. It is the 'media portrayal of violence' rather than 'audiences perception of violence' that is a criterion for categorization. Accordingly, the third hypothesis is proposed:

**HP#3:** 'Realistic' violence contributes to greater youth's aggression than does 'fictional' violence.

## 4. Research Methodology

### 4.1 Study Design

To investigate whether and how exposure to violence in entertainment media and attitude toward media violence may influence youth's aggression, a survey in the form of a self-administered questionnaire was conducted within a two-week period (December 2009) in Bangkok, Thailand with 546 high-school and vocational students.

### 4.2 Sample

Students from both Thai and international schools in Bangkok were selected as research participants due to a growing number of Thai youths enrolling in international school and the fact that they provide a more comprehensive representation of youths in the digital age who are typically exposed not only to the domestic entertainment media, but also to the international one. Among 27 schools, 66% is Thai school while 34% is international school. 66.1% of the school is privately owned whereas 33.9% is publicly owned. The majority of schools provide general education (82.6%) whereas (17.4%) provide vocational education. The participants comprise of both Thais and foreigners with various socioeconomic backgrounds. They were recruited without extra credit for participation. A total of 546 students participated in the survey. The ages range from 12 to 18 years, with a median and mean of 15 years old. The sample comprised of more females (57.1%) than males (42.9%). In terms of parents' marital status, most of their parents are married and staying together (78.8%), followed by married but separated (8.1%) and divorced (7.9%). Most of the major caretakers (74.4%) are both father and mother, followed by mother (13.0%), father (4.9%), and relatives (4.8%). The majority of their father (48.9%) and mother (44.5%) holds a bachelor's degree or higher. Approximately half of the sample (56.4%) has household income less than 80,000 Baht per month.

### 4.3 Procedure

Prior to the data collection, the questionnaires were translated from English into Thai, and then translated back into English. Thai version was used with samples enrolling in Thai schools whereas English version was used with those enrolling in international schools. To ensure the validity and reliability of measurement, the instrument was pretested with 30 high school students. Few questions were adjusted according to the pretest results prior to their actual use. At the beginning of the survey, an envelope containing a consent form and a questionnaire was distributed to each research participant. Participants were asked to read and sign the consent form, which stated explicitly the real objective of the research (to investigate the audience's reaction to mass media). Confidentiality and anonymity were promised. Then, they were asked to

carefully read the instructions and questions in the questionnaires. All participants were then asked to truthfully determine their thoughts and feelings toward media violence, and their exposure to different genres of violent content. Finally, questions regarding demographic information were asked. The questionnaires were administered by the research assistants at the selected schools. The survey took approximately 15 minutes to complete. The data were gathered anonymously and were used to determine relative effects of 'realistic' versus 'fictional' violence on youth's aggression.

#### 4.4 Measures

The survey questionnaire consisted of questions with a scale or a multiple-choice format. The first part of the questionnaire asked ten questions regarding the audience's attitudes toward media violence. The second part contained 16 items assessing participants' aggression and non-aggression during the past year. The third part measured the participants' level of exposure to media violence. The last part of the questionnaire asked general demographic questions.

**Attitude toward media violence:** Participants were asked to indicate their attitudes toward ten forms of violence portrayed by both Thai and foreign mass media targeting youth. Each question was answered on a 5-point scale, ranging from 1 (*very bad*) to 5 (*very good*). High scores represent favorable attitudes whereas low scores represent non-favorable attitudes ( $\alpha = .90$ ). Based on the total score of 50, scores of less than 25 are considered negative attitudes.

**Exposure to realistic violence:** Participants were also asked to determine their average level of exposure to six genres of entertainment media (drama, action/kungfu, war, homicide/crime, revenge/betrayal, and passion/erotic) usually presenting realistic violent content. Realistic portrayal of media violence, not the audiences' perceived realism, is a key criterion of categorizing drama as 'realistic' violence. The scores range from one (*0 or less than 1 hour per week*) to five (*more than 6 hours per week*). High score means high exposure whereas low score means low exposure ( $\alpha = .76$ ).

**Exposure to fictional violence:** Participants were also asked to determine their average level of exposure to five genres of entertainment media (adventure, sci-fi, fantasy, ghost/horror, and fighting games) usually presenting fictional violent content. The score, ranging from one (*0 or less than 1 hour per week*) to five (*more than 6 hours per week*), determined each participant's level of exposure to fictional violence. High score represents high exposure whereas low score represents low exposure ( $\alpha = .70$ ).

**Exposure to media violence:** Scores from both types of violence were combined ( $\alpha = .82$ ). Based on the total score of 55, 0-18.33 is considered low, 18.34-36.67 is medium, and 36.68-55 is high exposure.

**Physical aggression:** Participants were asked to indicate how frequently during the past year they imitated three forms of physically violent behaviors from mass media. Each question was answered on a 5-point scale, ranging from 1 (*never*) to 5 (*regularly*) ( $\alpha = .72$ ).

**Verbal aggression:** Participants were asked to indicate how frequently during the past year they imitated three forms of verbally violent behaviors from mass media. Each question was answered on a 5-point scale, ranging from 1 (*never*) to 5 (*regularly*) ( $\alpha = .76$ ).

**Emotional aggression:** Participants were asked to indicate how frequently during the past year they imitated three forms of emotionally violent behaviors from mass media. Each question was answered on a 5-point scale, ranging from 1 (*never*) to 5 (*regularly*) ( $\alpha = .71$ ).

**Total aggression:** Physical, verbal, and emotional aggression scores were combined ( $\alpha = .85$ ). Based on the total score of 45, 0-15 is considered low level, 16-30 is medium level, and 31-45 is high level of aggression.

**Demographics:** 10 items measuring participants' demographic characteristics included gender, age, ownership of educational institution, academic area, academic major, parents' marital status, major caretaker, father's education, mother's education and household income.

## 5. Results

The analyses of descriptive statistics indicate that participants in general demonstrated a medium level of exposure to media violence and slightly negative attitude toward media violence. Their exposure to 'fictional' violence was slightly lower than 'realistic' violence. Participants reported medium level of total aggression. Verbal aggression was the highest, followed by emotional and physical one. Details of descriptive statistics were reported in Table 1.

Table 1: Means and Standard Deviation of Variables

Variables	Total Scores	Mean	SD	N
Attitude toward media violence	50	21.69	7.24	546
Exposure to realistic violence	30	14.64	4.87	546
Exposure to fictional violence	25	14.00	4.36	546
Exposure to media violence	55	28.64	8.24	546
Physical aggression	15	5.76	2.48	546
Verbal aggression	15	7.27	2.83	546
Emotional aggression	15	6.58	2.73	546
Total aggression	45	19.61	6.77	546

The analyses of inferential statistics yield the following findings based on the three research objectives.

**1<sup>st</sup> Objective:** To investigate whether youth's exposure to media violence is a significant predictor of their aggression. The result of the Linear Regression analysis using exposure to violence as the predictor reveals that youth's exposure to violence significantly predicts their aggression,  $R^2 = .10$ ,  $F_{(1, 544)} = 59.90$ ,  $p < .001$  with significant beta-values for aggression,  $\beta = .32$ ,

$t_{(544)} = 7.74, p < .001$ . In addition, Pearson's Correlation analysis yielded a consistent result,  $r = .32, p < .01$ . Therefore, HP#1, youth's exposure to violence in entertainment media positively contributes to their aggression, is supported.

**2<sup>nd</sup> Objective:** To investigate whether youth's attitude toward media violence is a significant predictor of their aggression. The result of the Linear Regression analysis using attitude toward media violence as the predictor reveals that youth's attitude toward media violence significantly predicts their aggression,  $R^2 = .16, F_{(1, 544)} = 107.07, p < .001$  with significant beta-values for aggression,  $\beta = .41, t_{(544)} = 10.35, p < .001$ . In addition, Pearson's Correlation analysis yielded a consistent result,  $r = .41, p < .01$ . Therefore, HP#2, youth's attitude toward media violence positively contributes to their aggression, is supported.

**3<sup>rd</sup> Objective:** To examine the relative effects of 'realistic' versus 'fictional' violence in media on youth's aggression. The result of the Linear Regression analyses using exposure to 'realistic' and 'fictional' violence as the predictors reveal that youths' exposure to 'realistic' violence significantly predict their aggression,  $R^2 = .12, F_{(1, 544)} = 73.12, p < .001$  with significant beta-values for aggression,  $\beta = .34, t_{(544)} = 8.55, p < .001$ , to higher extent than their exposure to 'fictional' violence,  $R^2 = .04, F_{(1, 544)} = 25.33, p < .001$  with significant beta-values for aggression,  $\beta = .21, t_{(544)} = 5.03, p < .001$ . In addition, Pearson's Correlation analysis of exposure to 'realistic' violence,  $r = .34, p < .01$  and that of exposure to 'fictional' violence,  $r = .21, p < .01$ , yield consistent results. As a result, HP#3, 'realistic' violence contributes to greater youth's aggression than does 'fictional' violence, is supported.

Table 2: Summary of Regression Statistics Indicating Predictors of Total Aggression

Predictors	N	$R^2$	$\beta$	$t$	$df$	$p$
Attitude toward media violence	546	.16	.41	10.35	544	.001
Exposure to realistic violence	546	.12	.34	8.55	544	.001
Exposure to fictional violence	546	.04	.21	5.03	544	.001
Exposure to media violence	546	.10	.32	7.74	544	.001

## 6. Discussion

Thailand is a collectivist country that highly values social harmony (Hofstede, 2001). As any forms of aggression and violence generally deteriorate social harmony, finding regarding participants' slightly negative attitude toward media violence is not surprising. However, growing up with extensive presence of violence in media sphere is likely to explain why the participants hold slightly rather than highly negative attitude toward media violence. As expected, t-test analysis revealed that participants with positive attitude toward media violence ( $\bar{x} = 23.16, p < .001$ ) reported significantly higher aggression than those with negative attitude ( $\bar{x} = 18.34, p < .001$ ).

According to Regression statistics (see Table 2), attitude toward media violence was a stronger predictor than exposure to media violence. However, judgments about the relative importance of these predictors are difficult since they are positively correlated ( $r = .15, p < .001$ ). Cohen (1988) proposed that correlation of 0.5 and higher is large, 0.5-0.3 is moderate, and 0.3-0.1 is small. It can be interpreted that youth's exposure to media violence ( $r = .32$ ) and youth's attitude toward media violence ( $r = .41$ ) were positively and moderately correlated with their aggression. It should be noted that correlation of exposure to media violence and aggression was slightly weaker than correlation of attitude toward media violence and aggression. Consistent findings from different analyses confirm the reliability of this study.

t-test also reveals gender difference such that males ( $\bar{x} = 23.30, p < .001$ ) had significantly more positive attitude than females ( $\bar{x} = 20.50, p < .001$ ). This is consistent with previous findings in studies on TV and computer-video game violence, indicating that males are more strongly attracted to and enjoy violent entertainment media than are females (Barnett et al., 1997; Cantor and Nathanson, 1997; Comstock, 1995; Gentile and Anderson, 2003; Griffiths, 1997; Hudson and Wright, 1997; Valkenburg and Janssen, 1999).

Based on Regression analyses, given that the level of exposure to media violence accounted for 10 to 12% of the variance in aggression indicates its statistical importance. One-way ANOVA indicated that participants with different exposure level of media violence had significantly different degree of aggression. High exposure participants reported highest aggression ( $\bar{x} = 23.35, p < .001$ ), followed by medium exposure participants ( $\bar{x} = 19.06, p < .001$ ), and low exposure ones ( $\bar{x} = 17.05, p < .001$ ). These results are consistent with findings from previous studies indicating that the more frequently youth are exposed to media violence, the greater is the likelihood they will behave aggressively and have aggressive thoughts (Anderson and Bushman, 2002; Bushman and Anderson, 2001). As expected, t-test analysis of gender and exposure to media violence indicates that males' exposure ( $\bar{x} = 30.76, p < .001$ ) was significantly higher than females' exposure ( $\bar{x} = 27.02, p < .001$ ).

Furthermore, t-test analysis of gender and aggression also reveals that male participants ( $\bar{x} = 21.40, p < .001$ ) significantly engaged in total aggression to higher extent than female ones ( $\bar{x} = 18.27, p < .001$ ). This holds true for all three forms of aggression-physical, verbal, and emotional. This can be explained by observational-learning theory suggesting that audiences' gender can influence the extent to which they identify with the depicted aggressive characters, which may in turn influence learning and enactment of the observed aggression (Anderson et al., 2003). Possible factors that contribute to these gender differences include the frequency of depicting a particular gender as aggressive characters, the different kinds of aggression engaged by different gender, and the higher number of depiction of aggressive males over the years. As expected, verbal aggression ( $\bar{x} = 7.27$ ) was found to exceed emotional ( $\bar{x} = 6.58$ ) and physical aggression ( $\bar{x} = 5.76$ ). More social condemnation and punishment for physical aggression than other forms of aggression is likely to contribute to less physical aggression than other types of aggression.

## 7. Limitations

The sample of this study exclusively comprised of students in Bangkok. Therefore, the findings cannot be generalized to all youth in Thailand, especially those in rural areas and outside the school system. As samples' nationality was not officially measured, comparative effects of media violence on Thai and foreign youths cannot be made. The respondents' self-report measure of exposure to violent entertainment media rather than their actual exposure was used. An error can possibly be occurred due to the estimation. Although this study examined the effects of violence in passive visual media (television and film) and interactive visual media (computer game), different media genres such as music, video clip, and social media were not examined. This study used survey research, which cannot control the potential effects of individual differences such as sensation seeking, neuroticism, psychoticism, and of social factors such as violence in family or in schools. Furthermore, there was no baseline for dependent variable since respondents' level of aggression one year earlier was unknown. The causal relationship between youth's exposure to media violence and their aggression should be more confidently determined by an experimental research.

## 8. Conclusions

Past research findings together with results yielded by this research make it clear that frequent exposure to media violence positively contribute to aggression. Antisocial behavior and aggression have been considered one of the most powerful predictors of problems in adolescence and adulthood (Parker and Asher, 1987). Therefore, it is necessary to educate the general public about the real risk of media violence exposure to children and youth, and to make parents realize the importance of monitoring their children's exposure to media violence, especially realistic violence, as a way to mitigate these adverse effects. However, it should be noted that multiple rather than single factors cause aggression. Effect of media violence is best viewed as one of several potential variables that shape aggression.

## 9. Suggestions

This study should be replicated using different samples, including youth in both urban and rural areas, and those who do not currently enroll in any school system. Due to possible error from estimated violence exposure, future studies should use diary or electronic measurement for recording the respondents' actual exposure. As youth around the world has been major targets of music and online media, the influence of violence depiction in music video and video clips posted on popular sites (e.g., youtube) and social media (e.g., facebook) should be also investigated. News media nowadays increasingly contain 'realistic' violence, research on how and to what extent news media portray 'realistic' violence should be conducted. In addition, future research should compare the effects of other types of media depictions or content with the effects of violent depictions on aggression. Examining the role of individual differences as moderator would increase understanding about the impact of media violence. Using multiple research methodologies

to study the effects of media violence would also enhance confidence in the validity of the conclusions drawn.

As 'realistic' violence was found to be a much stronger predictor of aggression than 'fictional' violence, it is more deserving of research concern and political and social action than are 'fictional' violence. Producers of entertainment media should be aware of this result and carefully portray this type of violence in media targeting children and youth. This study suggests some avenues for preventive intervention such as implementing media campaigns to create the public's awareness of the potential negative impacts of media violence on youths and children, or supporting self-regulations among entertainment media producers and broadcasters.

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