RESEARCH ARTICLE/ARAŞTIRMA MAKALESİ

The relationship between violence at video games and the consumer's trait anger and anger expression styles of various variable

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Abstract

It can be said that games designed with the theme of violence are the risk factor for the appearance of aggressive attitudes and behaviours. In this case, it has become important to understand the extent of the psychological effects of media contents on consumers.

The level of consumption of violent video games in which age range and the level of trait anger-anger style is aimed to reveal.

The sample of the study consisted of 286 students. Of the participants, 147 (51.4%) were female and 139 (48.6%) were male. Boys (33.3%;n=39) and high school students (33.7%;n=28) play violent video games more frequently. The level of trait anger was found to be higher in the participants (high school level participants) who played games. The level of outward anger (university level participants) of the game-playing participants were found to be high.

Keywords: Violence, Media, Video Games, Crime, Aggression

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1. INTRODUCTION

With the rapid change of developing technology, which has become a part of our lives in our era, the media is changing fast too.

Recently, due to the COVID-19 pandemic, the time spent at home has been prolonged and accordingly, being online and playing games has become the only way to socialise and learn. Technological and digital devices offer important opportunities for children to learn, have fun and stay connected.

However, the same tools can also increase their exposure to multiple risks. Online / offline media content, which has gained diversity rapidly in recent years, contains various threats (UNICEF, 2020). Media content containing elements such as sexuality, alcohol or drug use, and violence, is harmful content that threatens the rights, safety and mental health of the individual (Ateş and Saluk, 2018).

Exposure to violence in the media, including television, film, music and video games, poses a significant risk to the health of children and adolescents. Much of the media exposure of children and young people occurs through video games. (Council on Communications and Media, 2009)

Video games, which were considered as entertainment that was condemned to extinction in the past, now maintain their place in popular culture. So much so that gaming platforms (computers, consoles, tablets, mobile phones) are becoming increasingly diverse and easily accessible. Video games have become one of the most important entertainment mediums for growing children today. (Fournis and Abou, 2014)

This dramatic growth in popularity of video games is cause for concern, given the popularity of video games combined with the fact that more than 50% of these games available on the market contain some form of violence (Sheese and Graziano, 2005; Giumetti, 2007).

Given that almost all young people in developed countries now play video games, the possible risk factors and adverse effects of these popular recreational activities are affecting many chil-dren and young people. One of the risk factors of these video games is the use of the violence in them. Results of research using various methods indicate that video games based on the theme of violence cause aggression in consumers. (Lenhart, 2015; Przybylski and Weinstein, 2019)

The view supported by organisations working on this topic, such as the American Academy of Pediatrics (AAP) and the American Academy of Child and Adolescent Psychiatry (AACAP), is that exposure to violent media (including video games) can contribute to real-life violent behaviour and harm children. (APA, 2015)

1.1. Concepts of Violence, Aggression and Anger

Violence has many types and is multifaceted and multidimensional. The concept of violence also includes aggression. It contains many emotions such as aggression, anger, fear, intolerance and enmity. It is a type of behaviour that individuals collectively or individually apply from the past to the present (Polat, 2021).

1.2. Violent Video Games

Media that intentionally shows someone attempting to hurt others is considered violent (Anderson & Bushman, 2001). Considering the concept of 'violent video games' from previous scientific researches: video games are defined as games in which the characters in the game display real or probable (including threatening content) behaviours that are physically and psychologically harmful to themselves or other elements/characters intentionally and willingly (Dolu, Büker and Uludağ, 2010). It is possible to see these behaviour patterns in the content of games in different categories (Karabulut).

Research on games and their content has been increasing over the past years. The result of a meta analysis study by researchers Anderson et al. (2003) the experimental research unequivocally shows that youth's odds of engaging in violent behaviour and thinking aggressive thoughts in the short term are increased when they are exposed to media violence. The cross-sectional surveys regularly show that kids are more likely to act violently and have aggressive thoughts when

they are exposed to media violence more frequently. Even when many other potential factors are statistically controlled, longitudinal research consistently demonstrates that early exposure to media violence is a predictor of later aggressiveness in adolescence and young adulthood.

Video games are being played by kids for longer and longer periods of time, and many of them are violent. The danger of youngsters playing these activities being hostile towards others may be raised since they are active players rather than passive viewers (Anderson et al., 2003).

Gentile and Anderson (2003) and Anderson and Dill (2000) explained the role of video games in the transformation of consumers into violent active individuals with 6 items. As following:

1.2.1. Identification with an aggressor increases the likelihood of imitating the aggressor.

In many violent video games, one has to take the perspective of a particular character. This is most evident when players are required to feel as if their characters are in the video game. An example of this is a "first-person shooter" starring games. Thus, the player is forced to identify with a violent character. This identification with the aggressive character will increase the likelihood of imitating aggressive actions. The First Person Shooter (FPS) game is considered to be one of the most attractive games that provides a realistic environment for players to measure their behaviour, emotions and interests (Quvaider, 2023). A study was conducted with the participation of university students on the increasing realism of the video game. The level of realism of video games was compared in two dimensions as 2D and 3D. It was found that the group exposed to playing 3D violent games reported relatively more anger. According to the result, when the participants feel like they are in the game (First person shooter), the effect of violent games on children increases. Also, emphasised that anger was about 10% higher in the small screen-2D condition, 15% higher in the large-screen 2D condition, and 55% higher in the large-screen 3D condition (Lull and Bushman, 2016).

1.2.2. Active participation increases learning

Research on learning shows that when one is actively involved in something, they learn much more than simply watching it. Violent video games, by their very nature, require active participation in acts of violence. In supporting studies, it has been stated that playing video games actively increases the tendency of adolescents to violence more than passively watching the images of violence reflected on the screen (Carnagey and Anderson, 2004; Polman, 2008).

1.2.3. Experiencing an entire sequence of actions.

Violent video games require players to regularly repeat each of the offensive steps. This helps to teach the necessary steps to perform a successful attack action. For example, having many steps when learning how to kill someone. It shows the necessity of deciding who to kill, get a gun, get the ammunition, load the gun, follow the victim, point the gun and pull the trigger. According to Anderson and Bushman (2001) situational input variables, such as recent exposure to violent media, have an effect on an individual's current internal state, which is reflected by cognitive, emotional, and arousal variables. By demonstrating how to be aggressive, stimulating aggressive cognitions (such as previously taught aggressive scripts and aggressive perceptual schemata), raising arousal, or inducing an aggressive emotional state, violent media enhance aggressiveness.

1.2.4. Violence is continuous.

Violence in violent video games is usually consistent. Players must be constantly alert against hostile enemies and constantly choose and perform aggressive behaviour. These behaviours expose players to a constant stream of violent (and often bloody) scenes accompanied by cries of pain and suffering in a context incompatible with empathy or guilt.

1.2.5. Repetition increases learning.

In violent video games, players often spend too much time repeating the same aggressive actions (for example, shooting a person). Also, games

are often played repeatedly, so it gives a great deal of practice to repeat violent acts. This not only increases individuals' learning, but also makes these actions habitual to the point of automaticity.

1.2.6. Rewards increase imitation.

Violent video games often reward players for participating in the game. Motivation in the player is basically provided in three points. First, rewarding aggressive behaviour (for example, gaining extra points and lives) during a video game. This reward increases the frequency of aggressive behaviour in the game. Second, rewarding aggressive behaviour completed in a video game teaches more positive attitudes towards the use of force as a way of resolving conflicts. Third, the rewards found while playing video games provide motivation for the player not to leave the game.

1.3. Statistics of Violence and Video Games

The Pew Research Center reported in 2008 that 97% of 12- to 17-year-olds play some type of video game, and two-thirds of them play action and adventure games that tend to contain violent content (Lenhart, 2008).

After reviewing research results based on more than 130,000 participants, the authors concluded, based on these analyses, that violent video game playing was positively associated with aggressive behaviour, aggressive cognition, and aggressive affect, as well as negatively associated with empathy and prosocial behaviour for victims of violence. (Anderson et.all., 2010; Huesmann, 2010)

In the result of Presscott et al's meta-analysis study, with more than 17,000 participants, there was a small increase in real-world physical aggression among adolescents and pre-teens who play violent video games.

In many of the games; items containing violence and sexuality are frequently included. Studies examining the contents of digital games reveal that 89% of these games include at least one kind of violent element, more than half of them contain physical violence and death content, and many games also contain elements of sexual and ethnic discrimination. (Dolu, Büker and Uludağ, 2010)

It can be said that games designed with the theme of violence are the risk factor for the appearance of aggressive attitudes and behaviours. In this case, it has become important to understand the extent of the psychological effects of media contents on consumers. Children and teenagers, especially those in college, are at risk from violent video games.

2. METHODOLOGY

2.1. Sample

The sample of the study consisted of 286 students. Of the participants, 147 (51.4%) were female and 139 (48.6%) were male. The average age of the participants was calculated as 20.5 (S= 5.3). 112 (39.2%) of the participants were 18 years of age or younger, while 174 (60.8%) were over 18 years of age.

2.2. Data Collection Tools

Personal Information Form: A personal information form was created and used by the researchers in order to determine the socio-demographic characteristics of the participants (age, gender, whether they play video games, how often they play violent games, how long they have been playing video games). This review may give an idea to the researcher that there may be a cause-effect relationship; but it certainly cannot be interpreted as cause and effect.

Trait Anger and Anger Style Scale: Anger Trait (SL Anger) and Anger Expression Style (Anger Style) scales were used to measure the participants' anger expression style. The Trait Anger and Anger Style Scale, which is widely used in literature, was developed by Spielberger et al. in 1983. The first 10 questions of the scale include questions about "trait anger". There are 24 questions and 3 sub-dimensions about anger expression style: anger in, anger out and anger control. The scale consists of 34 questions of four-point Likert type (doesn't describe at all-describes a little-describes quite well-describes completely).

2.3. Operation

Data were collected both face-to-face and via Google Forms survey method. Permission to participate in the research was obtained through the Informed Consent Form from both the participants and the parents of the participants under the age of 18. Participants completed Personal Information Form, Trait Anger and Anger Style Scale.

2.4. Data Analys

IBM SPSS 25 (The Statistical Package for the Social Sciences) was used for data analysis. Within the scope of the research, descriptive, reliability, normality and correlation analyzes were performed. Pearson Correlation Analysis test was performed because it was found to show normal distribution in the normality test.

3. RESULT

3.1.Socio-Demographic Characteristics

The gender of the participants was 51.4% (n=147) female and 48.6% (n=139) male.

40.9% (n=117) were high school students and 59.1% (n=169) were university students. 62% (178) stated that they have played at least a few times in their life, 37.8% (n=108) have never played a game. (Table 1)

The genders and playing habits of the participants were examined. 32.8% of those who played a few times were female, 7.7% were male; 49.2% of those who play from time to time are female and 30.8% are male; 14.8% of those who play frequently are female, 28.2% are male; 33.3% of those who play almost every day are men and 3.3% are women. Frequency of playing and gender were evaluated. It is seen that the frequency of playing is higher in male participants. (Tablo 2)

3.2. Comparison of the Education Level (High-School, University) and Playing Habits of The Participants Who Stated That They Played Games

The playing habits of high school and university students were examined. 9.6% of those who played a few times are high school, 22.1% are university; 49.2% of those who play from time to time are female and 30.8% are male; 14.8% of those who play frequently are female, 28.2% are male; 33.3% of those who play almost every day are men and 3.3% are women. (Table 3)

Table 1. Socio-Demographic Characteristics.

Gender (N=286)				Age (N=286)				Playing/not playing video games			
Woman		Man		High-School		Unıversıty		Yes		No	
N	%	N	%	N	%	N	%	N	%	N	%
147	%51.4	139	%48.6	117	%40.9	169	%59.1	178	%62.2	108	%37.8

Table 2. Comparison Of The Gender And Playing Habits Of The Participants Who Stated That They Played Games.

	Gender (178)			
	Woman (61)		Man (117)	
	N	%	N	%
How often violent video games are played				
Several times	20	%32.8	9	%7.7
From time to time	30	%49.2	36	%30.8
Often	9	%14.8	33	%28.2
Almost every day	2	%3.3	39	%33.3
How long have you been playing video games				
1-2 year	30	%49.2	11	%9.4
3-5 year	16	%26.2	25	%21.4
More than 5 years	15	%24.6	81	%69.2

The frequency of playing among high school and university students was evaluated. University students mainly preferred to play from time to time. High school students mainly preferred to play almost every day. (Table 3)

3.3. Findings on the Examination of Student's Trait Anger Levels, Anger-in, Anger-out, and Anger-control Scores According to School Level

When Table 4 is examined, it is concluded that student's trait anger, anger-out and anger-control scores do not show a significant difference according to school level, but a significant difference was observed in anger-in scores according to school level. When this significant difference was examined, it was found that high school student's anger-in scores (Mean =18.2321) were higher than university students (x =17.1606).

3.4. Findings on the Examination Of Student's Trait Anger Levels, Anger-Internal, Anger-External and Anger-Control Scores According to Gender

When Table 5 is examined, it is concluded that student's anger-in, anger-out and anger-control scores do not show a significant difference according to gender, but a significant difference was observed in trait anger scores according to gender. When this significant difference was examined, it was found that male student's trait scores (Mean =22.0719) were higher than female students (x =20.3265).

Table 3. Comparison Of The Education Level (High School, University) And Playing Habits Of The Participants Who Stated That They Played Games.

| | | School Level (178) | | | |
| | | High-School (83) | | University (95) | |
		N	%	N	%
How often violent video games are played					
Several times		8	%9.6	21	%22.1
From time to time		23	%27.7	43	%45.3
Often		24	%28.9	18	%18.9
Almost every day		28	%33.7	13	%13.7
How long have you been playing video games					
1-2 year		25	%30.1	16	%16.8
3-5 year		13	%15.7	28	%29.5
More than 5 years		45	%54.2	51	%53.7

Table 4. Students Trait Anger Levels, Anger-İn, Anger-Out, And Anger-Control Scores According To School Level.

Group		N	Mean	Ss	t	Df	P
Trait Anger	High-School	112	24.9107	6.69214	8.305	190.979	.001
	University	174	18.7001	5.05508			
Anger-in	High-School	112	18.2321	3.85078	2.097	284	.037
	University	174	17.1606	4.43677			
Anger-out	High-School	112	19.4375	6.93702	6.255	152.197	.001
	University	174	14.9770	3.70432			
Anger Control	High-School	112	20.8929	5.04994	4.185	284	.001
	University	174	23.3506	4.71844			

p<.05*, p<.001**

3.5. Findings on the Examination of Students' Trait Anger Levels, Anger-internal, Anger-external and Anger-control Scores According to Whether They Play Video Games or Not

When Table 6 is examined, a significant differentiation was observed in students' trait anger, anger-in and anger-out scores according to whether they played video games or not, while no significant differentiation was observed in anger control scores according to whether they played video games or not. When the students' trait anger scores and whether they played video games or not were analyzed, it was determined that the trait anger scores of the students who played video games (x = 22.6067) were higher than the scores of the students who did not play video games (x = 18.8148). When anger-in scores were analyzed, it was determined that anger-in scores of students who played video games (x =18.3539) were higher than the scores of students who did not play video games (x =16.3056). (Also

see table 3) Similarly, when anger outward anger scores were analyzed, it was determined that the anger-out scores of the students who played video games (x =17.8371) were higher than the anger-out scores of the students who did not play video games (x =14.8889).

In summary;

• Boys and high school students (13-17) play violent video games more frequently.

• The level of trait anger was found to be higher in the participants (high school level participants) who played games.

• The level of outward anger (university level participants) of the game-playing participants was found to be high.

• Anger control levels were similar between those who played and those who did not.

In this study, the scale developed to measure

Table 5. Students Trait Anger Levels, Anger-Internal, Anger External And Anger-Control Scores According To Gender.

Group		N	Mean	Ss	T	Df	P
Trait Anger	Woman	147	20.3265	5.71128	2.280	264.603	.023
	Man	139	22.0719	7.11259			
Anger-in	Woman	147	17.5442	4.44021	.148	284	.884
	Man	139	17.6187	4.03857			
Anger-out	Woman	147	15.6190	4.30090	3.432	235.346	.001
	Man	139	17.8921	6.59456			
Anger Control	Woman	147	22.1020	4.75358	.997	284	.320
	Man	139	22.6906	5.22653			

p<.05*, p<.001**

Table 6. Students Trait Anger Levels, Anger-Internal, Anger-External And Anger-Control Scores According To Whether They Play Video Games Or Not.

Group		N	Mean	Ss	t	df	P
Trait Anger	Playing	178	22.6067	6.61554	5.224	257.127	.011
	Not playing	108	18.8148	5.50980			
Anger-in	Playing	178	18.3539	4.05102	4.065	284	.000
	Not playing	108	16.3056	4.26123			
Anger-out	Playing	178	17.8371	6.17461	4.882	282.454	.017
	Not playing	108	14.8889	4.03103			
Anger Control	Playing	178	22.5955	5.03147	.902	284	.368
	Not playing	108	22.0463	4.92255			

p<.05*, p<.001**

trait anger and anger expression style was used. When the scale is examined under two main headings;

1. Trait anger is about what the person feels emotionally in general and how much anger one experiences.

2. Anger expression style subscales consist of three subscales: anger under control, anger-out and anger-in.

The factors to be considered in the evaluation of scale scores are as follows:

• High scores from Trait Anger indicate a high level of anger,

• High scores on the Control Anger scale indicate that anger can be controlled,

• High scores on the Anger-Out Scale indicate that anger is easily expressed,

• High scores on the Anger-Inside scale indicate that anger is suppressed.

4. DISCUSSION

Experimental, correlational, and longitudinal research have all found that playing violent video games can dramatically increase aggressive feelings, thoughts, and behavior over the course of both the short and long terms.

4.1. The Relationship Between Consumption Time and Anger

Children are active players of digital games and aggressive behaviours associated with digital games are often discussed in relation to them. In our study, 59.1% (n=169) of the participants were high school students aged 13-17. The rate of those who play almost every day is 33.7% (n=28). According to the Chinese game industry report, children are seen in the risk group. It has been determined that there are 654 million internet video players in China, and more than 70% of these players are secondary school students. It is seen that these middle school students devote at least 1-2 hours a day to the game. Predominantly preferred games are those with violent content. (Li, Du and Gao, 2020)

The view that disruptive behaviour and anger is related to playing was defended and the time spent was seen as an important factor. (Weinstein,2010; koon 2005) When the relationship between the playing time and anger and destructive behaviour was examined, it was seen that there was a significant relationship. Whether it is violent or not, as the time spent in the game increases, it causes adolescents to develop anger and destructive behaviour. (Begum, 2019)

This situation does not only cause anxiety at the level of addiction. The study of Anderson and Bushman (2001) indicated that aggression is at least momentarily increased by brief exposure to violent video games. In the short run, playing violent video games might make you more aggressive by making you think more aggressively. Playing violent video games might make a person more aggressive by making you feel more irate or hostile.

Studies have shown that brief exposure to violent video games increases aggression, at least momentarily. In the short term, playing violent video games can make you think more aggressively than usual, making them more aggressive. In a study conducted by Grant (2012), the relationship between violent video games and situational anger was examined. Evidence has been found that after 20 minutes of playing violent video games, people experience an average increase in aggression, hostility, and anger over a short period of time. According to Zhang's (2021) experimental study, it was revealed that aggressive cognition and aggressive behaviour increased in children (n=300) who were exposed to a violent video game for a short time. The relationship between aggressive cognition, especially for boys, between violent video games and aggressive behaviour was found to be remarkable.

4.2. The Relationship of Game Type and Frequency of Play With Ange

There are studies that reveal that the type of game and the frequency of playing affect the level of aggression. In our study, it was seen that high school students who play games have higher both inner-anger and outward-anger scores

than those who do not. In the study conducted by Ulusoy (2007), the relationship between the use of information technologies and aggression in 526 adolescents was examined. It has been determined that the aggression levels of the adolescents who use computers and the internet are higher than those who do not. The important point is that the aggression scores of the adolescents who play war and strategy games were found to be higher than the others. In other words, he concluded that the type of game affects the level of aggression. In addition, as a result of the research, it was determined that the level of aggression of the students who said that they played computer games with an arrangement was higher.

In the study, which was conducted to examine the process, determinants and consequences of playing violent video games over a 10-year period, mild, moderate and high-violence video games and their players were examined. Groups that play high-intensity and moderate-intensity video games were found to be more likely to be male. In addition, children in the high severity group were more likely to become depressed. (Coyne and Stockdel, 2021)

According to the research conducted with the experimental group (group playing violent games) and control group (group playing skill games), anger score is significantly higher in those who play violent video games. (Evcin, 2010)

5. SUGGESTION

Children believe that they may learn that aggressiveness may be used to try to resolve interpersonal disputes by seeing violent individuals. This method of dispute resolution can become well established and simple to recall from memory as a consequence of mental rehearsal and frequent exposure. Here are some suggestions to avoid this:

• The effects of violent video games remain a public concern. Boys and the 13-17 age group should be seen as a special group for trait anger and anger style intervention.

• It is important that the content of entertainment tools, such as video games, is presented to the consumer in an appropriate way.

• Awareness studies for child and adolescent consumers should be carried out by parents and teachers.

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