

People's Cognition of the Influence of Violence in Video Games

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ABSTRACT

As a highly popular form of entertainment, the impact of games on the whole human group is a topic worthy of exploration. The frequency of violent elements is not low in the initial games, later video games, and even today's virtual reality games. In addition, the audience of many games is all ages. The games have a particularly objective impact on children and adolescents. Therefore, in a fairly long time span, many psychologists have conducted various studies on the impact of violent games on people. However, the issue of the influence of violent elements on people generally exists as an additional item of the overall study, which is only an additional condition, and a separate and more detailed study is rarely carried out on this aspect. This article is to discuss people's cognition of the influence of violent factors in games. It mainly uses a way of questionnaires, and discusses the simple distinction of the overall population. The results show that people who are exposed to games generally do not think that the violent elements of the game itself will have a great impact, but people who do not play games have a cognition that is consistent with the research on the impact of violent elements in games.

Keywords: *violent game, recognition, education, violence, entertainment.*

1. INTRODUCTION

Today technology has progressed to the point where video games play an important role in society. People are exposed to it at a younger age than before. It's thought that violent video game exposure is associated with aggression. Precious research and experiments in the area of whether violent video games cause violence are mixed.

Some research shows these games may not cause violence directly[1]. Brief exposure to violent games does not cause aggressive behavior. The summary was tested by an experiment providing violent video games of 2 level. The results indicate that when game stimuli are carefully controlled, the effects of 15 minutes of violent and difficult game play on aggressive behavior may be small and indistinguishable from zero. Another study focused on this factor and gave a further summary: the more you play, the more aggressive you become[2]. Aggressive behavior and hostile expectations increased over days for violent game players, but not for nonviolent video game players, and the increase in aggressive behavior was partially due to hostile expectations. Most of the research shows violent games cause bad influence.

They concentrate on different aspects. Violent video games also make behaviors and capabilities different.

However, in the available literature, little research has been done on the cognition of the impact of violent games. It is not unimportant that, according to TPB(theory of planned behavior), people's judgments about the possible impact of behavior can affect the person's choice to complete the action. TPB is a theoretical model developed by Ajzen, an American psychologist, on the basis of TRA (theory of rational action)[3]. Fishbein et al. proposed TRA for the first time in 1975[4]. The theory posits that an individual's behavior is driven directly by behavioral intention when he performs a behavior, and the will depends on his attitude and subjective norms about the behavior. Among them, attitudes are individual's positive or negative overall evaluation of the implementation of a certain behavior; subjective norms are social pressure perceived by an individual when deciding whether to implement a certain behavior or not. Aizen extends the TRA theory and proposes the TPB theory, which adds a variable that predicts behavioral intentions, that is, the cognition of behavioral control. This cognition is people's perception of the ease and usefulness of an action they are interested in, and it makes better predictions and explanations for

putting the behavior into practice. This paper uses a questionnaire to collect data and analyze the data on human perceptions of the possible effects of violent games.

Studying the influence of violent elements in games on players can make the facts themselves have a correct understanding of game developers, governments, educators, etc., so as to complete the supervision of the game and guide the players. However, the cognition of the conclusion by the research population can also help to understand the direct guidance and understanding of players through the Internet, popular science books, videos, and other channels.

2. METHODOLOGY

2.1. Hypothesis

By the statistics of the top sellers in the last decade on Steam, a video game digital distribution service and storefront, it can be found that although the proportion of games containing violent elements has not changed much, the violent elements in them are becoming more reasonable, and extreme violence content is constantly decreasing. According to the results, it can be inferred that people have a reasonable understanding of the impact of violent elements in games on people themselves.

2.2. The questionnaire survey

The purpose of the questionnaire is to explore the participants' cognition of the influence of violent elements on people, and it was published online due to the epidemic. The questionnaire contains a total of 18 questions. Each person answered an average of ten questions, which included respondents' age, gender, and their definitions of violence in games. The questions do not differentiate between age and gender, so the data can be used to explore possible associations between the final results and age and gender. Considering the different life experiences of different groups of people, the questionnaire starts to divide the interviewed groups into three categories: those who have more exposure to games, those who have little exposure to games, and those who don't touch games.

The questions set in the questionnaire will also be differentiated according to the different groups of people. For people who are exposed to games, the question setting will be based on the respondents' gaming experience. The content of the questionnaire starts with the game content that the respondents often experience, followed by the frequency of violent elements in the respondents' game experience, and finally the respondents' understanding and experience of the impact of violent elements.

For people who are less exposed to gaming, the question setting will be based on respondents' perceptions of possible gaming populations. The content of the questionnaire begins with the respondents' general understanding of the game, followed by their observations of the influence of the people around them, and finally their guesses about the possible adverse effects of the game. All the questions should be objective, which means that the questionnaire can't imply any opinion on the subject. Besides multiple-choice questions, some descriptions of their feelings and behaviors by the subjects or even random interviews with them is necessary, which also supports the analysis.

3. RESULTS

A total of 84 questionnaires were returned. The respondents who were willing to fill in the questionnaires were concentrated in the 18-20 and 21-23 age groups, accounting for 41.03% and 56.41% of the returned questionnaires, respectively. The ratio of male to female respondents was 1.167:1.

3.1. The different cognitive level of the groups with different degrees of exposure to the game

The questionnaires were used to rate the degree of impact on the respondents' perceptions, from low to high corresponding to a score of 1-5, and the table 1 below corresponds to the scores corresponding to the three groups. The result shows that all those who chose the game with a high frequency did not think that the violent elements in the game would have an impact on their lives, while a small number of those with a low frequency thought that they might have an impact, and those who were not exposed to the game thought to varying degrees that they would have an impact on their lives.

Table 1. The impact scores of different groups

	High frequency	Low frequency	Not touch
Score	1	1.38	4

3.2. The frequency of violent games and the frequency of violent scenes in memories

The questionnaire classified the frequency of violent games and the frequency of violent scenes in memories into five levels, and the data of these two topics were cross-analyzed to obtain the results shown in the figure. The horizontal coordinates indicate the frequency of violent elements, divided into five levels, with different colors indicating the frequency of violent scenes by legend. As the frequency of violent elements increases, people are also more likely to have violent scenes in their memories. This means that the frequency of playing video games may increase the appearance of violent scenes in the mind.

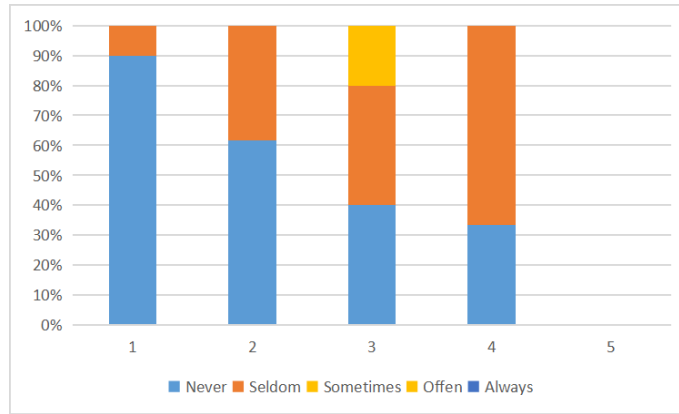


Figure 1 The cross-tabulation results of the frequency of violent games and the frequency of violent scenes in memories

3.3. The frequency of recalled violent scenes and the frequency of having the desire to imitate violent behavior

The questionnaire classified the frequency of recalled violent scenes and the frequency of having the desire to imitate violent behavior into five levels, and the data of these two topics were cross-tabulated to obtain the results

shown in the figure. The horizontal coordinates indicate the frequency of recalled scenes of violence, divided into five levels, with different colors indicating the frequency of having the desire to imitate violent behavior by legend. Combined with the result 3.1, the questionnaire corroborates part of Hoff’s conclusion that video-gaming duration can have an effect on physical violence[5].

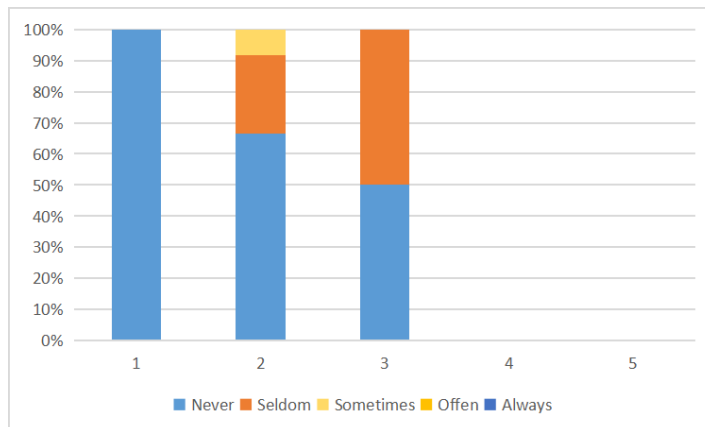


Figure 2 The cross-tabulation results of the frequency of recalled violent scenes and the frequency of having the desire to imitate violent behavior

4. DISCUSSION

Based on the results of 3.1, the more frequently people are exposed to the game, the less likely they are to believe that the game has an adverse effect. This is in line with the theory of planned behavior[6], which states that a person’s level of perception of the adverse effects of violent games determines whether he actively plays such games at a certain frequency. A large body of research in the field has shown that violent games directly or indirectly have adverse effects on people. Firstly, people who have a higher frequency of games in which violent elements appear more often may be more aggressive in reality. People who tend to like violent games will behave more aggressively than those who do not[7]. Secondly, having the experience of playing a violent role in a video game can influence one’s judgment of violent crime, and

people are more likely to accept real-life criminals if the role played and the activities carried out are similar to those in real life[8]. Furthermore, engaging in violent video game play diminishes perceptions of our own human qualities[9]. Both results of 3.2 and results of 3.3 can support the above points.

4.1. Theoretical implications

The research in this paper adds to the gap in previous research in that people’s perceptions of the possible adverse effects of games can in turn affect the degree to which people are affected. The findings of this paper also provide a basis for future research, which can take into account the variable of people’s perceptions of the possible negative effects of games in future research on the effects of violent games on people. Since people are exposed to different information about games at different

times, and the types and contents of games are changing with time, the impact of violent games on people is a topic that needs to be explored for a long time. Both the extended research and the empirical research in this paper should follow the changes of the times and constantly adjust to repeat the experiments so that the conclusions can keep pace with the times.

4.2. Practical implications

In recent years, as the adverse effects of violent games on youth have been gradually understood by the public, the government and related platforms have tightened rules for reviewing and regulating game content. Games can help people relieve stress, but at the same time, they may also have a negative impact on them[10], so a proper knowledge of violent games is necessary. Through the correct knowledge of the effects of violent games on people, it can help the government and related platforms to further adjust the rules. With this data, educators can also help people better face the advantages and adverse effects brought by games. The developers of games can also make good games within a reasonable range in a more focused way.

5. CONCLUSION

To explore people's cognition of the influence of violent factors in games, this article designs a questionnaire and analyzes the data samples from the Internet. Compared with the previous conjecture, which is that people have a reasonable understanding of the impact of violent elements in games on people themselves, in reality, not all groups of people have the same perception of the impact produced by violent games. The more frequent the exposure to games, the less they are perceived as having an impact on their lives. There is no clear causal relationship between the two, but rather a correlation.

This paper currently has many shortcomings. Due to the epidemic, it is not possible to empirically study the effects of violent games on people, and therefore reasonable verification of the hypothesis conditions is missing. Although a large amount of literature is referenced, the conclusions may be time-sensitive and the same experiments may change in the course of technological development. Future empirical studies and extended studies can be combined to present a more comprehensive and improved result.

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REFERENCES

- [1] Hilgard, J., Engelhardt, C. R., Rouder, J. N., Segert, I. L., & Bartholow, B. D. Null effects of game violence, game difficulty, and 2D: 4D digit ratio on aggressive behavior. *Psychological science*, 30(4) (2019) pp. 606-616.
- [2] Hasan, Y., Bègue, L., Scharnow, M., & Bushman, B. J. The more you play, the more aggressive you become: A long-term experimental study of cumulative violent video game effects on hostile expectations and aggressive behavior. *Journal of Experimental Social Psychology*, 49(2) (2013) pp. 224-227.
- [3] Ajzen, I. The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2) (1991) pp. 179-211.
- [4] Fishbein, M., & Ajzen, I. *Belief, attitude, intention, and behavior: An introduction to theory and research*. Philosophy and Rhetoric, 1977, 10(2).
- [5] Hoff, R. A., Howell, J. C., Wampler, J., Krishnan-Sarin, S., & Potenza, M. N. Differences in associations between problematic video-gaming, video-gaming duration, and weapon-related and physically violent behaviors in adolescents. *Journal of psychiatric research*, 121, 2020, pp. 47-55.
- [6] Ajzen, I. The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2) (1991) pp.179-211.
- [7] Groves, C. L., Plante, C., & Lishner, D. A. The interaction of contextual realism and fantasy tendency on aggressive behavior following violent video game play: An indirect test of violent content effects. *Computers in Human Behavior*, 98, 2019, pp. 134-139.
- [8] Lee, K. M., Peng, W., & Klein, J. Will the experience of playing a violent role in a video game influence people's judgments of violent crimes?. *Computers in Human Behavior*, 26(5), (2010) pp. 1019-1023.
- [9] Bastian, B., Jetten, J., & Radke, H. R. Cyberdehumanization: Violent video game play diminishes our humanity. *Journal of Experimental Social Psychology*, 48(2) (2012) pp. 486-491.
- [10] Garakani, A., Hoff, R. A., Krishnan-Sarin, S., & Potenza, M. N. Gaming to relieve tension or anxiety and associations with health functioning, substance use and physical violence in high school students. *Journal of psychiatric research*, 140, 2021, pp. 461-467.