

The Extent of Exposure to Violent Videogames as a Risk Factor for Youth Aggression

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ABSTRACT

Exposure to violent videogames has been widely believed to have negative impacts on youths, especially in enhancing youth aggression, where many past studies have yielded results claiming a positive correlation between the two. However, more recent studies have indicated a lack of significance of such correlation, resulting in discrepancies between the results. Therefore, this study aims to explore the extent to which VVE is a risk factor for youth aggression through examining and evaluating past literature, where differences and limitations in methodology are discussed. Results have found that, despite some weak effects of VVE in enhancing youth aggression, it is not the determining factor; when all relevant social and environmental factors of youth aggression are taken into consideration, the effect of VVE becomes insignificant. Implications of this study could be extended to aid relevant policymaking regarding violent videogames or the reduction of youth violence.

Keywords: Videogames, Violent Videogame Exposure (VVE), Youth aggression, Youth violence.

1. INTRODUCTION

Since the development of digital technology and the emergence of videogames, there has been an ongoing debate about whether videogames, especially those involving violence, may be harmful to the wellbeing of the players. A widely accepted consensus proposes that violent videogames enhance violence in real life, especially in the younger generations as they may be more susceptible to encouragements of violence in videogames [1]. This consensus may be supported by the Social Cognitive Theory [2], which highlights the importance of observational learning in influencing people's behaviour. The theory suggests that behavioural outcomes, such as an increase in violent tendencies, may arise from personal learning and cognition in a certain context. In the violent videogame context, personal cognition such as moral disengagement [3], in which individuals detach from moral principles, may be enhanced, resulting in increased violent behaviour. Due to the great popularity of violent videogames amongst youths, the extent to which such games influence youth aggression is an important area of research as the results may aid the making of related governmental and educational

policies, reducing the potential harm of violent videogames on youth wellbeing. However, there are discrepancies in the results of studies in this area, where some suggest a link between violent videogames exposure (VVE) and increased youth aggression, and some conclude no significant effect of VVE on youth aggression. Therefore, this current paper aims to review relevant literature and evaluate the extent to which VVE is a risk factor for youth aggression, where, for the purpose of this paper, violent video games would be video games involving violence on any device (Nintendo, Play Station, mobile phone etc.) and youth would be considered as all individuals below the age of 18.

2. EVIDENCE FOR THE EFFECT OF VVE ON YOUTH AGGRESSION

Numerous past research had suggested a correlation between VVE and increasing levels of aggression. A review of several short-term experimental studies [4] had revealed an association between greater exposure to violent videogames and increases in aggressive behaviour and cognition, highlighting the negative effects of VVE. However, due to the small sample of articles and the short-term nature of them, the study was

criticised for limited reliability as results may not be generalisable to conclude long-term negative effects of VVE. Nonetheless, a more recent meta-analysis yielded similar results [5], concluding that VVE contributes to increasing aggressive behaviour and cognition and decreasing empathy and pro-social behaviour, which supported the previous study. In this analysis, Anderson et al. included a wider range of studies, and selected with more restrictive methodology criteria, ensuring the quality of the studies included and enhancing the reliability of the meta-analysis results. A cross-cultural comparison was also included, where studies with samples from western countries were compared to samples from the Japanese population, where a similar conclusion was drawn despite less susceptibility to VVE in the Japanese sample, suggesting that cultural differences in the VVE's influence on aggression may be limited. Furthermore, the analysis included longitudinal studies, since the results were in accordance with the previous review analysing short-term experiments, it is reinforced that VVE influences youth violent behaviour and cognition in both the long and short term. Therefore, through this thorough analysis, previous criticisms may be considered invalid, hence the suggested robustness of the correlation between VVE and enhanced violent behaviour and cognition may be undermined. On the other hand, this cross-cultural meta-analysis [5] was still criticised by multiple review articles [6, 7] for its methodological limitations, where harsher study selection criteria, despite being claimed to reduce publication bias, was found to select for the significance of results. Thus, the reliability of the meta-analysis by Anderson et al. and the robustness of the results yielded may be questionable. Nevertheless, an indication of the link between VVE and youth aggression was provided from these research [4, 5], raising awareness for the potential negative effects of violent videogames on youth wellbeing.

Moreover, VVE was found to affect several factors, such as moral disengagement and dehumanisation, leading to increased violent behaviour in youth.

2.1. Enhanced dehumanisation

A previous study [8] had found a correlation between VVE and enhanced dehumanisation perception in both intergroup and interpersonal contexts, where players of violent videogames may be more likely to deny the humanness of others. This may in turn lead to more violent behaviour as the aggressor may perceive the victim as less human. However, since dehumanisation was measured by assigning human or non-human traits to a certain group of people, the perceived victims, the data collected may not reflect or translate to violent behaviour in real life.

2.2. Enhanced Moral Disengagement

Nonetheless, VVE was also found to correlate with greater moral disengagement [3], where youth exposed to a violent videogame are more likely to diffuse their responsibility (e.g., I should not be blamed for what my friends and teammates have done) or compare the situation advantageously (e.g., verbal bullying is at least better than physical bullying) in an immoral real-life context. Such moral disengagement may lead to more youth violent behaviours or intentions, which supports the idea that VVE enhances youth aggression.

2.3. Enhanced Accessibility of Violent Thoughts

Similarly, in a meta-analysis comparing the social outcomes of violent and prosocial videogames [9], VVE was found to significantly increase the accessibility of violent thoughts, decreasing prosocial outcomes whereas prosocial games had the opposing effect, which was in line with other research, suggesting that VVE may induce negative influences on youth and increase their violent behaviour.

Additionally, violence learnt from videogames may be extended to social connections of the videogame players as well as themselves [10], where individuals, who do not play violent videogames, reported more violent thoughts and intentions when they are socially connected to a violent videogame player. This may be extended to further connections of the individual influenced by their socially connected violent videogame player, in which enhanced aggression may spread, beyond the social network of the player, to their friends' friends. This is an alarming phenomenon, as the contagious characteristic of the enhanced violence due to VVE would affect the amount of societal aggression. Therefore, considering the negative impacts of violent videogames, it may be sensible for governments or education organisations to limit VVE to reduce violence.

On the other hand, there are limitations to the research indicating negative influences of VVE, as most experiments in this field were conducted with correlational designs, thus the conclusions drawn may only reflect a correlational link between VVE and aggression, rather than a causal one. Hence, the direction of the correlation remains unclear, where it could be interpreted as VVE inducing violent intentions or that individuals with violent intentions are more likely to play violent videogames. Furthermore, due to ethical considerations, experiments and meta-analysis evaluated collected self-reported data, where participants provided subjective ratings of factors such as their violent intentions and moral disengagement, which may be biased. There is also no solid behavioural evidence to suggest increased aggression in violent

videogame players as the increase in violent intentions may not translate to violent behaviour in real life. In addition, most studies yielded significant but weak correlation between VVE and aggression [10], which may suggest some extent of overinterpretation of the data to fulfil publication purposes, leading to publication biases. Therefore, the actual negative impacts of VVE on youth aggression may be limited and overestimated and more research may be required to determine the extent that VVE enhances aggression in youth.

3. EVIDENCE AGAINST THE EFFECT OF VVE ON YOUTH AGGRESSION

In contrast to research based on self-reporting, a study on those who carried out aggressive criminal offences [11] indicated that the influence of media, concluding videogames, do not provide sufficient motivation for aggression in real life. This evidence may be considered more solid than self-reporting, as physical behaviour is analysed instead of subjective perceptions. Nonetheless, only violence to the criminal offence extent was evaluated, and minor violence cases may be neglected, therefore the insignificant correlation between VVE and youth violence may be concluded for major aggressive events but not extended to minor ones. Hence, further research is still required to determine the effect of VVE on aggression inadequate of criminal offences.

Additionally, youth aggression or aggressive intentions in violent videogames may not be extended to real life situations. Moral justification, displacement and diffusion of responsibilities are common features of violent videogames, as they induce moral disengagement, where one considers that moral standards do not apply to oneself in gaming situations to reduce the sense of guilt in carrying out an immoral action [12]. Such moral disengagement is perceived as the mediator of violence in violent videogames [13]; as players do not experience moral condemnation when carrying out aggression in the games, they are more likely to act aggressively. However, in real life contexts, features such as moral justification are absent, hence moral disengagement may not be achieved and violence may not be encouraged. This is supported by a study which examines the role of guilt in violent videogame players [14]. In the experiment, moral disengagement factors were removed from a violent videogame, where participants were implicitly encouraged to apply moral standards to their behaviour in the videogame and results found that the participants felt more irritated and guilty about their virtual violence. This may reinforce that VVE does not provide enough incentive for players to carry out violence in real life due to the lack of moral disengagement features. Similarly, a different experiment [15] indicated that the absence of moral

disengagement features significantly lower the players' enjoyment and enhance their guilt and disgust, leading to subsequently reduced aggression, which reinforces the idea that aggression in virtual games may not be mirrored in real life. However, since the removal of moral disengagement features does not prohibit virtual violent behaviours, the unwillingness of violent videogame players to act aggressively in real life may not be concluded and more research would be required to reinforce the suggestion that VVE does not lead to increased aggression.

4. OTHER FACTORS CONTRIBUTING TO YOUTH AGGRESSION

Youth aggression is multidetermined [16], where it could be influenced by a wide range of genetic and environmental factors including VVE. However, when considering it in a broader perspective, and comparing the effect of VVE to other factors on youth aggression, VVE may no longer seem significant.

4.1. Home Environment

Domestic violence is the largest predictor of youth aggression [17], where youth that had been physical abused early in life are more likely to be arrested as adolescents for violent crimes. This may provide an indication that there are more profound factors contributing to youth aggression than VVE, although no definite conclusion can be drawn from this study due to a lack of comparison between the effect of domestic violence and VVE on youth aggression. In a past cross-sectional study [18], the effect of environmental factors, such as family relationship and home environment, on youth aggression was compared to VVE, and family-related environmental factors were found to be stronger predictors of youth violence than VVE. When considering the extent VVE lead to youth aggression, a statistically significant but weak correlation was found between VVE and increased violence, which reinforces the consensus that VVE may result in enhanced youth aggression. However, when other environmental factors were included in the correlation analysis, the significance of VVE disappears, indicating that VVE is not a meaningful predictor of youth violence and that other environmental factors such as family relationships are more significant.

4.2. Family Relationships

Moreover, better relationships with parents were associated to reduced risk of youth violence, irrespective of whether the individual plays violent videogames, which emphasises the lack of significance of VVE on youth aggression. Nevertheless, this study relied on self-reported data, thus results may be limited by the honesty and interpretation of the participants, yet

this limitation is minimised by the anonymity of data collection, where participants may be more likely to reveal honest personal information knowing that their input would be anonymous. Furthermore, due to the correlational design of the study, no causal link can be concluded between family relationships and youth aggression and thus, despite limited significance, VVE cannot be excluded from being a contributing factor towards youth aggression. Further analysis of the type of people who chooses to play violent videogames would be required to indicate a potential causal relationship, in which the common characteristic of violent videogame players should be examined and whether they have a predisposed violence tendency should be determined.

Similarly, a longitudinal study [19] supports the insignificance of VVE as a predicting factor of youth aggression. The study was conducted across two years, analysing the extent of violence elicited from VVE. Results had found that, when controlling for other social and environmental factors, the effect of VVE on youth violence becomes insignificant, and that it would take around 27 hours of violent videogame play per day for any noticeable changes in aggression among the players, yet it would be impossible to achieve this amount of game playing. Additionally, since the study is longitudinal, the insignificance of short-term and long-term effects of VVE on youth aggression may be concluded. Therefore, the researchers argue that previous significant results previously collected could be due to limited control variables which may induce bias in the data, and may be due to inflated effect sizes, potential overinterpretation or possible publication bias. Nonetheless, the data of this study are based on self-reported responses and hence may be subjected to the bias of the participants. Therefore, caution should be taken when interpreting the results and definite conclusions or overinterpretation of causal relationships should be avoided. Despite its limitations, this study still provided evidence against the effect of VVE on enhancing youth aggression, suggesting that other social and environmental factors may be more significant in contributing to youth aggression.

5. CONCLUSION

This paper has evaluated a range of literature on VVE as a potential risk factor of youth violence. After examining studies for and against the effect of VVE on enhancing youth violence, an insignificant effect of VVE on youth aggression may be concluded. Literature supporting the negative impact of VVE on youth wellbeing often yielded marginally significant results, which may have been subjected to overestimation due to publication bias. Furthermore, these studies commonly collect subjective verbal indications of violent intentions and physical violence that are not

observed, therefore, since increased violence intentions may not translate to physical violent behaviour, the conclusion that VVE enhances aggression in youth may not be reliably drawn. On the other hand, the evidence against the relationship between VVE and youth aggression seems more robust, in which youth arrested for violent criminal offences indicated that VVE is insufficient for motivating aggression. More predictive factors of youth aggression were also examined against VVE and since the effect of VVE became insignificant when controlling for other predicting social and environmental factors, VVE may not be an effective contributing factor to youth aggression. Instead, environmental factors, such as family relationship and domestic violence, seem to be the greatest predictor for youth violence.

Nonetheless, despite the identified correlation between VVE and other environmental factors on youth aggression, no causal relationship could be drawn, and the direction of the correlation remains unclear. Therefore, future research could attempt to further explore the relationship between youth aggression and factors such as VVE: whether the weak correlation between VVE and youth aggression was down to the nature (potential predisposed violent tendencies) of the people attracted to violent videogames or to the aggression enhanced by exposure to violent videogames. Moreover, the implications of this research would be that, to reduce aggression amongst youth, government and education organisations do not need to inhibit youth access to violent videogames but should focus on establishing healthy parent-child relationships through introducing educational workshops to raise awareness of the importance of family relationships and provide support for youth experiencing domestic violence.

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