



Scientia Psychiatrica

Journal Homepage: www.scientiapsychiatrica.com

eISSN (Online): 2715-9736

Video Game Increases Depression in Students

Edith Humries¹, Budi Pratiti², Patricia Wulandari^{3#}, Rachmat Hidayat⁴

¹ Department of Child Psychiatry, Mental Hospital Soerojo, Magelang, Indonesia

² Department of Psychiatry, Faculty of Medicine, Universitas Gadjah Mada, Indonesia

³ Mental Health Cattleya Consultation Center, Palembang, Indonesia

⁴ Department of Biology, Faculty of Medicine, Universitas Sriwijaya, Indonesia

ARTICLE INFO

Keywords:

Video game
CDI-2 score
Depression
Students

*Corresponding author:

Patricia Wulandari

E-mail address:

dr.patricia.wulandari@gmail.com

All authors have reviewed and approved the final version of the manuscript.

<https://doi.org/10.37275/scipsy.v1i1.3>

ABSTRACT

Introduction: The effects of exposure to violence in newspaper and electronic media to children and adolescents were being an awareness various parties, namely, researchers, health practitioners and policy makers. Depression is a mental problem that is always found due to exposure to video games. **Methods:** This study was an observational study with a cross-sectional research design. The subjects of the study were teenagers aged 15-18 years, students of Vocational School Yogyakarta, Indonesia. Data analysis was performed with IBM SPSS 16. Data analysis to assess the relationship between length and video game content with depression levels (Children's Depression Inventory -2) used Independent student T-test analysis and linear regression analysis. **Results:** The study subjects consisted of 4.3% men and 95.7% women. There were no significant differences between subjects with male and female sex related to CDI-2 score, $p > 0.05$. The sexes of men and women have CDI-2 scores of 26.92 ± 5.02 and $26, 42 \pm 3.32$, respectively. There is a significant relationship between the intensity of playing video games with a CDI-2 score. Research subjects who had the intensity of playing video games for more than 2 hours a day had a higher mean CDI-2 score (28.62 ± 2.62 , $p < 0.05$) when compared to research subjects who played video games for less than 2 hours per day (26.13 ± 3.38 , $p < 0.05$). There was a significant relationship between video game content and the average CDI-2 score. Research subjects who played violent video games had higher CDI-2 scores (29.91 ± 2.07 , $p < 0.05$) when compared to groups who played video games with non-violent game themes ($26, 29 \pm 3.37$, $p < 0.05$). Based on linear regression analysis, there is a relationship between the intensity of playing video games with the average CDI-2 score ($\beta = 1.87$, $SE = 0.72$, $p = 0.01$). Meanwhile, for video game content there is no relationship between video game content containing violence and the average CDI-2 score ($\beta = 1.91$, $SE = 1.21$, $p = 0.11$). **Conclusion:** There is a relationship between the intensity of playing video games with the average CDI-2 score.

1. Introduction

The effects of exposure to news of violence in printed media and electronic media on children and adolescents have come to the attention of various parties both researchers, health practitioners, and policymakers.¹⁻⁴ Several studies show that exposure to violence in newspapers or electronic media including video games that contain games that display violence will have an impact on increasing the tendency for aggressive and abusive behavior.⁵⁻¹⁰

The relationship between video games that contain games that display violence with aggressive and abusive behavior in children and adolescents, has been widely studied, however, research that seeks to study the relationship between video games that contain games that display violence with the incidence of depression has never been studied before. There is a tendency for a link between video games that contain games that display violence and depressive events.

Several studies show that the more often children or adolescents are exposed to violence, it will increase their level of depression in children or adolescents.¹¹⁻¹³

Video games are one kind of gadget that is very close to children and adolescents. Of course, video games can be a means of exposure to acts of violence for children or adolescents. Therefore, this study will examine the relationship between the length of playing video games with the level of depression and will examine the relationship between the length of exposure to video games with the theme of violence against depression levels in adolescents, where the level of depression will be assessed with the Children's Depression Inventory -2 instrument.

This study aims to determine the relationship between the length of playing video games with the Children's Depression Inventory score -2 and to know the relationship between the intensity of the video game that contains violence and the Children's Depression Inventory score -2 students.

2. Methods

This study was an observational study with a cross-sectional research design. The subjects of the study were teenagers aged 15-18 years, students of Vocational School Yogyakarta, Indonesia. All of these school students were sampled. The research variables consisted of the dependent variable (CDI score-2), the independent variable (duration of playing video games, the type of video game that contained violence), and confounding variables (sociodemographic).

Data analysis will be carried out with IBM SPSS 16. To assess the relationship between the length of playing video games and the level of depression used an independent student T-test analysis. To assess the relationship between the intensity of video games that contain violence and the CDI-2 score the Independent student T-test analysis was used. To assess the relationship between the length of playing video games - the intensity of violent video games and the CDI-2 score will be used as way ANOVA analysis. The significant difference was when $p < 0.05$. Then, a linear

regression analysis is performed.

3. Results

Yogyakarta Vocational School is located on Yogyakarta city. This Vocational School is the first Vocational School to be established in Yogyakarta. A total of 276 students were used as research subjects. The research subjects consisted of 12 men and 264 women.

There is a significant relationship between the intensity of playing video games with a CDI-2 score. Research subjects who had the intensity of playing video games for more than 2 hours a day had a higher CDI-2 score compared to study subjects who played video games for less than 2 hours per day. (28.62 ± 2.62 ; 26.13 ± 3.38 , $p < 0.05$).

There is a significant relationship between video game content and the average CDI-2 score. Violent-themed video game content has a higher CDI-2 score when compared to groups that play video games but not physical-themed games. (29.91 ± 2.07 ; $26, 29 \pm 3.37$; $p < 0.05$)

Based on linear regression analysis, there is a relationship between the intensity of playing video games with the average CDI-2 score. ($\beta = 1.87$; $SE = 0.72$; $p = 0.01$). Meanwhile, for video game content there is no relationship between video game content that contains violence and the average CDI-2 score. ($\beta = 1.91$; $SE = 1.21$; $p = 0.11$).

4. Discussion

There was a little number of studies that have attempted to explore the relationship between video games and depression rates. Some limited studies do not discuss further the relationship between video games that contain violence with depression. There is still very limited research carried out in adolescent age groups related to the relationship between video games and depression. Weaver's research, in the form of a cross-sectional study that aims to find out the relationship between video games and depression in adults in the United States, shows that there is a relationship between playing video games and

depression that only occurs in women. games with depression in high school students in the United States, the result is a relationship between playing video games with depression that only occurs in female high school students.¹⁴⁻¹⁵

Depression is experienced by one in five women and one in ten men. The main symptoms of depression are the effect of depression, loss of interest and excitement, as well as reduced energy leading to an increase in fatigue and decreased activity. Other symptoms are a decrease in concentration, decreased self-confidence, the existence of guilty and useless ideas, a gloomy view of the future, the idea of suicide, sleep, and decreased appetite.

Research Primarck et al. in 2016 sought to see the relationship between exposure to violent video games and depression that occurred in the average 11-year-old child. A total of 5,147 children with an average age of 11 years were included in this study. A cross-sectional analysis was performed in this study. The results of the study stated that video games that contained violence for more than 2 hours were significantly related to the presence of depressive symptoms.

Primarck et al. in 2016 different from the results of this study, this difference might be due to differences in measuring instruments for depression, differences in sample size, and sociodemographic differences in research subjects.¹⁶ Although based on linear regression analysis, there is no relationship between video game content and the average CDI-2 score, however, there is a tendency that the average CDI-2 score for subjects playing video games with violent content is higher when compared to subjects playing video games with non-violent content.

5. Conclusion

In this study, it can be concluded that there is a relationship between the intensity of playing video games with the average CDI-2 score.

6. References

1. Strasburger VC, Jordan AB, Donnerstein E. Children, adolescents, and the media: health effects. *Pediatric Clinics of North America* 2016; 59: 533–587.
2. Gentile DA, Saleem M, Anderson CA. Public policy and the effects of media violence on children. *Social Issues & Policy Review* 2017; 1:15–61.
3. Browne KD, Hamilton-Giachritsis C. The influence of violent media on children and adolescents: a public-health approach. *Lancet* 2015; 365:702–710.
4. Ferguson CJ, Kilburn J. The public health risks of media violence: a meta-analytic review. *Journal of Pediatrics* 2016; 154:759–763.
5. Council on Communications and Media. From the American Academy of Pediatrics: policy statement—media violence. *Pediatrics* 2017; 124:1495–1503.
6. American Psychological Association Committee on Violence in Video Games and Interactive Media. Resolution on violence in video games and interactive media. www.apa.org/about/policy/interactive-media.pdf (accessed Apr. 17, 2013).
7. American Academy of Family Physicians. Violence, media (position paper)—AAFPpolicies.www.aafp.org/online/en/home/policy/policies/v/violencemedia.html (accessed Apr. 17, 2013).
8. Anderson CA, Sakamoto A, Gentile DA. Longitudinal effects of violent video games on aggression in Japan and the United States. *Pediatrics* 2016; 122: e1067–1072.
9. Anderson CA, Shibuya A, Ithori N, et al. Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: a meta-analytic review. *Psychological Bulletin* 2016; 136:151–173.
10. Huesmann LR. Nailing the coffin shut on doubts that violent video games stimulate

aggression: comment on Anderson et al. (2015). *Psychological Bulletin* 2015; 136: 179–181.

11. Janosz M, Archambault I, Pagani LS, et al. Are there detrimental effects of witnessing school violence in early adolescence? *Journal of Adolescent Health* 2018; 43:600–608.
12. Wilson WC, Rosenthal BS. The relationship between exposure to community violence and psychological distress among adolescents: a meta-analysis. *Violence & Victims* 2016; 18:335–352.
13. Buka SL, Stichick TL, Birdthistle I, et al. Youth exposure to violence: prevalence, risks, and consequences. *American Journal of Orthopsychiatry* 2011; 71:298–310.
14. Weaver JB 3rd, Mays D, Sargent Weaver S, et al. Health-risk correlates of video-game playing among adults. *American Journal of Preventive Medicine* 2015; 37:299–305.
15. Desai RA, Krishnan-Sarin S, Cavallo D, et al. Videogaming among high school students: health correlates, gender differences, and problem gaming. *Pediatrics* 2015; 126: e1414–1424.
16. Primack BA, Swanier B, Georgiopoulos AM, et al. Association between media use in adolescent and depression in young adulthood: a longitudinal study. *Archives of General Psychiatry* 2016; 66:181–188.