Methodology case studies example

Entertainment, Video Games

Video Game Violence and its effects on children

Abstract

This was a single subject case study to evaluate the effects of video games on children. In this study, a case of 14- year- old boy was evaluated to check whether the problems he faced were the result of long- term exposure to video games. The 14- year- old boy was administered with sedatives and anticoagulants to treat deep vein thrombosis. He underwent FMRI scans, cognitive inhibition- counting test and emotional interference tests designed to see his brain activity and response to different stimulus. The FMRI scans and the results of the tests were recorded and compared with the baselines and levels of a normal boy of his age. Relative to the baseline and the normal boy's response, the 14- year- old boy's behavioural distress was more when he played violent games. However, the behavioural distress was comparatively low or closer to the baseline values and a normal boy of his age results. The outcomes from this case study points out that playing violent video games for longer periods can have long- term effects on brain functioning. This change in brain activity can result in behavioural changes in children and result in aggression.

Keywords: violent video games, aggression, Venous Thrombosis, Mental stress in children

Video Game Violence and its effects on children

Introduction

Video games have been improving its standards with the advancement of technology such that it is now a realist, life like experience and fast paced

from being a two dimensional game. Just due to its fast growing pace, from 1980's onwards, the context of video games being beneficial or hazardous for kids and adolescents has been the hottest and the most controversial topic of discussion. Surveys have shown that some people feel that video games are beneficial for their kids as it helps in stimulating cognition and motor reflexes while some claimed that it is harmful as its addictive and encourages anti- social behaviour and attention deficit disorder in kids as it includes violent contents in it . It is largely believed that media act where an individual is actively involved in playing violent video games is at a greater risk of getting psychologically affected than the media act (non- violent video games, TV, movies, etc.) where the individual is passively involved (Gentile & Bushman, 2012; Willoughby, Adachi, & Good, 2012). This active participation in the violent video games might be the viable cause of mediating violence as the participant has experienced it even if it was unreal. This desensitizes the participants and they start mixing up the unreal and the real. Approximately, 9 % of the children, adolescents and few adults in Singapore have reported of being " pathological gamers" – addicts who waste hours playing violent video games, and due to which schoolwork and social skills are getting affected. Market survey projects that 90% of the video games that are E10+ rated mature rated or teen rated contains violence in them. Approximately, 70 % of fourth to twelfth graders group reported that they play “ Mature”-rated games (which are meant for seventeen and above), and they contain the largely graphic violence. Repeated exposure to video games on aggressive behaviour can be induced by altering aggressive cognitions or affects . Studies indicate that aggressive

cognitions and aggressive behaviours are the common traits of playing excessive violent video game. Douglas from Iowa State University commented that what they eat affects children bodies; similarly, what they do affects their brain. Studies have shown that kids, adolescents and some grown- ups chose the type of video games based on their understanding of their personality, but in some cases games also define their personalities at times. This is because children fail to distinguish between the real and the fake world and thereby tend to imply all their experiences in their real lives. Aggressive nature, emotional outbursts and psychological arousals are the short- term effects whereas the gaining of offensive knowledge structure leads to an aggressive personality, which is a long- term effect . Gentile surveyed 3034 children and adolescents from 12 Singaporean primary and secondary schools to check the role of parental involvement and their influence on their children violent nature due to repeated exposure to violent games. The study results showed that the children thinking and their behaviour became increasingly aggressive due to repeated exposure to video games. This change in behaviour lead to changes in aggressive cognitions and this happened irrespective of age, sex, initial aggressiveness and parental involvement. There are evidences, which indicate that children who had lower aggression initially tend to have 16 % more aggression in them after repeated exposure to violent video games than the children who had higher aggression initially who showed 10 % increase in aggression after playing. Surveys have reported that the time spent on playing video games have also drastically increased among teenagers and youth. Due to this, the physical activity and socializing among the children who are addicted to

video games have also decreased leading to many medical problems such as obesity, psychological distress, vision impairment, venous thrombosis, etc. There have been cases reported of players dying due to pulmonary embolism . Such addictive individuals should start giving importance to more physical activities, breaks and hydration at regular intervals. Few studies reported less aggressiveness in children who were more empathetic, but their capacity of empathy did not alter the extent to which they were at risk. Childhood is the developmental phase of every individual's life and is thus very important. During this phase whatever a child learns or witnesses will become and continue in their future life. Therefore, the negative effects that a child experiences in his early stage will also have an impact on their adulthood. Thus, in this research paper I wish to investigate whether video games in reality breeds violent and aggressive behaviours in kids and adolescents.

A 14- year- old boy was brought to the clinic, who had severe pain in his left leg along with a swelling. Upon investigation, the parents informed that the boy was addicted to video games and used to play them for long hours. He was anti- social in nature and often showed aggressive traits upon denial. Before the pain started, the boy was playing his play station, sitting upright with his legs stretched out. He often played them for 7 - 8 hours at a stretch without getting off the bed. Two days back he complained of leg pain but the family had ignored it. He had developed the pain, which was associated with calf swelling and Erythema. He kept playing it for 2 more days ignoring the pain. The boy never had the history of such pain or any trauma on his left leg, surgery or any venous thrombosis. The parents informed that no one in

their family suffered from venous thrombosis. The ultrasound reports confirmed that he had deep venous thrombosis. The thrombosis has extended from the common iliac vein to the distal femoral vein and proximal long sapheneous vein. Upon investigation, a swelling in his left leg and dilated superficial veins were observed. The boy in severe pain still wanted to play video game and upon refusal, he became aggressive and started throwing things away. The physician gave sedatives to calm him down and treat his left leg venous thrombosis. The psychiatrist was informed who further evaluated the case because of his abnormal behaviour.

Design and Measures taken:

Results

Recovering from Deep Vein Thrombosis

The participant was taken well care of by the physicians who were able to correctly diagnose the problem. They had administered enoxaparin , heparin and urokinase to treat the deep vein thrombosis. The medications worked well and the boy recovered from his swelling and pain. The thrombophilia screen was also negative.

Evaluating the FMRIs results

The FMRI was done along with cognitive inhibition- counting test and emotional interference test in before and after the boy was allowed to play violent and non- violent video games respectively. The result showed that after playing the violent video game, his left inferior frontal lobe showed less activation during the emotional interference test. The anterior cingulate cortex also showed little activity during the cognitive inhibition- counting

test, compared to the normal boy of his age and his own baseline values for FMRI. After 2 days when he was allowed to play the non- violent video game, the result of the FMRI was better than the results obtained when he was allowed to play the violent video game. The changes in the executive regions of his brain had shown considerable recovery. The changes were closer to the FMRI of a normal kid of his age.

Conclusion

This case study points out the fact that playing video games can not only trigger psychological and behavioural problems but can also cause physical damages in the body. With the advancing popularity of video games among children and youth, physical activities are getting limited resulting in obesity, deep vein thrombosis like diseases. Playing video games for prolong periods can aggravate mental stress which in turn can increase the risk of developing venous thrombosis due to seated immobility for longer hours. The outcomes from this case study points out that playing violent video games for longer periods can have long- term effects on brain functioning. This change in brain activity can result in behavioural changes in children and result in aggression. Thus, in conclusion, I believe children should be restrained from playing video games for longer hours and physical activity should be encouraged. The playing of violent video games should be avoided in order to prevent children from getting anti- social and aggressive in nature.

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