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To study the extent of video game addiction and effect of intervention among adolescents

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Abstract

Background: Video games are extremely popular among children, adolescents and adults and nowadays adolescents are developing into a gaming generation. Excessive use of computer or video games leads to addiction which results in various social and emotional problems.

Objectives: Present study was conducted with three objectives- To study the extent of video game addiction among adolescents, to develop an intervention module for video game addicted adolescents & to test the effectiveness of developed intervention module.

Material and Method: For the present study 200 adolescents (100 male and 100 female) from Gorakhpur city were selected from using purposive random sampling.

Result & Conclusion: In this study it was found that 24.50% of adolescents were addicted to video games, with the results showed that the intervention module was useful for reducing video game addiction in adolescents.

Keywords: Video game, addiction, intervention, adolescents

Introduction

Video games are extremely popular among children, Adolescents and adults and nowadays adolescents are developing into a gaming generation. Video games are always played on a video game system or platform. Excessive use of computer or video games leads to addiction which results in various social and emotional problems. Despite these problems, the video game player is unable to control its excessive use (Lemmens *et al.*, 2009) [1]. The first sign of addiction is an increased need and time to play video games. When someone initially starts playing video games, an hour or two may be enough, but as their addiction progresses, they have to play longer or with more intensity. A video game addicted adolescents becomes irritable and sad when he does not know how to play video games. Along with this, symptoms such as changes in mood, trouble sleeping, laziness in performing daily tasks, changes in food habits and poor academic performance can be seen.

Intervention comes from the Latin intervention, meaning "to interrupt, to interrupt". Interventions may include educational programs, new or stronger policies, and environmental or health promotion campaigns. Interventions that incorporate multiple strategies are usually most effective in generating desired and lasting change. Interventions can be implemented in a variety of settings, including communities, workplaces, schools, health care organizations, faith-based organizations, or the home. Seven potential interventions have been identified with therapeutic approaches such as Cognitive Behavioral Therapy (CBT), Reality Therapy and Group Counseling etc. to reduce video game addiction.

Objectives

1. To study the extent of video game addiction among adolescents
2. To develop an intervention module for video game addicted adolescents
3. To test the effectiveness of developed intervention module

Review of Literature

Thenu and Keerthi (2013) [7] reported that 40% youth find themselves addicted to their television sets, 37% addicted to cell phones, 19% computer and 15% were addicted to video game.

Kino, *et al.* (2013) [5] investigated that short term impact of adolescent's prolonged exposure to violent video game on sleep and they found that prolonged video game may cause clinically significant disruption to adolescent sleep, even when sleep after video-gaming in initiated of normal bed-time.

Wittek, *et al.* (2015) investigated prevalence rates and predictors of video game addiction in a sample of gamers, randomly selected from the National Population Registry of Norway (N=3389). Results showed there were 1.4% addicted gamers, 7.3% problem gamers, 3.9% engaged gamers and 87.4% normal gamers.

Bailey, *et al.* (2010) [2] described that video game experience may also be negatively related to cognitive control, the ability to maintain goal-directed information processing in the face of distraction or competing response alternatives.

Konijin, *et al.* (2007) [6] investigated that the relationship between violent video games and players aggression when players identify with violent game characters. Dutch adolescent's boys with low education ability were randomly assigned to play a realistic or fantasy violent or non violent video game. These participants used noise level loud enough to cause permanent hearing damage to their partners, even though their partners had not provoked them. These results showed that identifying with violent video game characters makes players more aggressive.

Materials and Methods

Samples: For the present study 200 adolescents (100 male and 100 female) from Gorakhpur city were selected from using purposive random sampling.

Tools used in the study

1. Lemmens Game Addiction Scale

Lemmens Game Addiction Scale was used for measured to Game Addicted respondents. The Game Addiction Scale (Lemmens *et al.*, 2009) [1] was 21 questions and contains seven items that measure symptoms of video game addiction

over the past six months. These are: How often during the last six months: 1. Did you think about playing a game all day long? (Salience), 2. Did you spend increasing amounts of time on games? (Tolerance), 3. Did you play games to forget about real life? (Mood modification), 4. Have others unsuccessfully tried to reduce your game use? (Relapse), 5. Have you felt bad when you were unable to play? (Withdrawal), 6. Did you have fights with others (e.g., family, friends) over your times spent on games? (Conflict), 7. Have you neglected other important activities (e.g., school, work, sports) to play games? (Problems).The items on the Game Addiction Scale are rated on a 5-point Likert scale: 1 (never), 2 (rarely), 3 (sometimes), 4 (often) and 5 (very often). As suggested by the authors of the scale, an item was considered endorsed when a respondent scored 3 or higher. The cut-off for addiction was in the present study set to a minimum score of three on at least four of the seven items. The reliability for this scale is 0.84 in Cronbach's Alpha.

2. Goswami & Singh Intervention Module

Self developed intervention module for video game addicted adolescents have been chosen

Result

Extent of Video Game addiction

Table 1: Video Game Addiction among Adolescents

Gender	Addicted	Percentage	Not addicted	Percentage
Male	30	30	70	70
Female	19	19	81	81
Total	49	24.50	151	75.50

The above table shows that 30% male and 19% female were addicted to video game. Various studies have examined the extent of video game addiction all over the world but the reported data were different. In this study it was found that 24.50% of the adolescents were addicted to video games and the extent/intensity was higher in previous studies conducted.

Table 2: Summary Table of Video Game Addiction as a Function of Pre-Post Intervention Condition and Gender

Source of Variation	df	MS	F
Condition	1	251.30	9.28**
Gender	1	44.19	1.63
Condition*Gender	1	2.28	.084
Error	224	27.08	
Total	228		

Note: * $p < 0.05$, ** $p < 0.01$

Table 3: Mean and SD of Video Game Addiction as a Function of Pre-Post Intervention Condition and Gender

Condition	Gender	M	SD
Pre Intervention	Male	10.96	6.38
	Female	9.88	5.48
	Total	10.50	6.01
Post Intervention	Male	8.64	4.61
	Female	7.95	3.69
	Total	8.35	4.23

Table 2 presents the summary of Video Game Addiction as a Function of Pre-Post Intervention Condition and Gender .The effect of Pre-Post Intervention Condition [$F = (1,224) 9.28, p < .01$] was found to be significant for Video Game Addiction but the effect of gender [$F = (1,224) 1.63, p > .05$] and interaction effect was not found to be significant [$F = (1,224) .084, p > .05$] for Video Game Addiction. The respective Mean suggested that Pre Intervention

Condition score was higher compared to Post Intervention condition for Video Game Addiction (Table 3).

Discussion

This study found that 24.50 percent of teenagers were addicted to video games. A need-based intervention module was developed by researcher for addicted video gamers and that intervention module was applied to addicted adolescents.

Then after 6 months, again to see the result of that intervention module, the video game addiction test was again applied to the addicted video gamer, which showed significant changes at the addiction level.

The finding of the present study was supported by Han, *et al.* (2010) ^[4] they found that Bupropion reduced cravings for online video game play, total game play time and cue-induced brain activity. Similarly, Yang and Hao (2005) ^[8] investigated that the effect of the seven interventions among 52 adolescents in China. They found that Internet Addiction scores and length of time online significantly decreased after three months of the treatment.

Conclusion

In this study it was found that 24.50% of adolescents were addicted to video games, of which 30% were males and 19% were females. This suggests that men are more addicted to video games than women, with the results showed that the intervention module was useful for reducing video game addiction in adolescents.

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