Research Paper

Medical Science

Impact of Playing Violent Computer Games in Young Generation

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ABSTRACT

Background : Today, due to developing communicative technologies, computer games and other audio-visual media as social phenomena, are very attractive and have a great effect on adolescents. The increasing popularity of these games among adolescents results in the public uncertainties about plausible harmful effects of these games. This study aimed to investigate the effect of playing violent computer games on the level of aggression, depression and anxiety of adolescent students of our state.

Methods : This was a purposive study with 210 young adolescent students of 14-18 years of age. All were male students. Sample was again subdivided in three groups, one who play violent computer games at least 14 hours a week, the other, who play only nonviolent computer games at least 14 hours in a week and the last group who do not play any type of computer game. Each group possesses 70 young students. Three variables, after literature survey, were selected for testing and comparing: viz. aggression, depression and anxiety. Modified overt aggression scale, BDI-II and Trait anxiety scale were used for study purpose.

Findings : The Results of this study indicated that violent computer game players have a significantly higher aggression, depression and anxiety than the students who do not play any computer game. On the other hand, both groups who play computer games, irrespective of violent or nonviolent, have a greater depression level. The three variables are also significantly correlated with each other.

Conclusion : Playing computer games, especially violent computer games lead to anxiety, depression, and aggression in adolescents.

KEYWORDS

Computer games, aggression, depression, anxiety, Adolescents.

Computer games are one of the most exciting activities of human beings in the 20th century.A large number of studies confirmed the correlation between violent computer games and aggressive behavior, aggressive emotions, physiological arousal, and rule-breaking behavior..

Similar findings were reported by many of the recent studies (Prezza, 2004; Leung, 2014). Previous findings repeatedly mentioned the presence of depression in pathological video game players. According to Kuss and Griffiths (2012), due to the excessive use of the Internet and online gaming, opponent processes appear to be set in motion that quickly habituate the addict to be engaged with the Internet, leading to tolerance. Accordingly, decreased neuronal dopamine which is evident in Internet addiction may be linked to commonly reported co morbidities with affective disorders, for example, depression (Morrison, 2010). Previous results from multiple small studies suggest an association between exposure to or playing violent games and negative actions such as aggressive thoughts and aggressive behaviors. In their 2001 meta-analysis, Anderson and Bushman quantified the effects of exposure to violent video games on five variables (aggressive behavior, aggressive cognition, prosocial behavior [i.e., cooperation], aggressive affect, and physiological arousal) and found that short-term exposure to video game violence was significantly associated with temporary increases in aggression among all subjects. In 2004, using an improved methodology, Anderson again concluded that a positive association exists between exposure to video game violence and aggression.

METHOD
SAMPLE:
The Sample consists of 210 young boys who live in different areas of Agartala. Their age ranges from 14-18 years. All of them are reading in different schools of Agartala from VII to class XII. All of them belong from middle socio-economic families. The sample was divided into three 3 groups keeping all the factors constant. The first group comprises of 70 students who play violent computer games at least 14 hours in a week, second group comprises of 70 students who play nonviolent computer games at least 14 hours in a week & third group comprises of 70 students who do not play any computer games. Purposive sampling procedure was taking in all levels of sampling & data collection.

INSTRUMENTS USED:
Modified Overt Aggression Scale (MOAS):
The Modified Overt Aggression Scale (MOAS), (kay et al 1988) was developed to assess four types of aggressive behavior: verbal aggression, aggression against property, auto aggression, and physical aggression. The level of agreement between the raters was high in verbal aggression (intraclass correlation coefficient, ICC = 0.90), physical aggression against others (ICC = 0.90) and for total MOAS score (ICC = 0.93) (Oliver et al 2007). Items are scored on a 5-point scale. Scores range from 0 to 40, with higher scores indicating more aggression.

Beck's Depression Inventory (BDI-II): Propounded by Dr. Aaron T. Beck. , is a 21-question multiple choice answers self-inventory and one of the most widely used instruments for measuring the severity of depression. The test has high internal consistency (a=.91). It is positively correlated with Hamilton Depression Inventory with a Pearson r of .71. One week test retest reliability was found .93 (pearson r). High score indicates higher depression according to this scale.

State-Trait Anxiety Scale:
The test was developed by Spilberger. The two forms of anxiety,state and trait, are separated in the inventory, and both are given their own 20 separate questions with a 4-point frequency scale. In this study only the trait anxiety ,a part of STAI is used to measure the trait anxiety of students, that is 20 questions are used.

PROCEDURE:

Contact was made with each and every subject personally and informed consent was taken from them. Information about him was collected by basic information inventory. Then each and every subject was given the relevant questionnaires and instructed to go through the instructions. After the respondent has understood what he has to do, he is allowed to answer the questionnaire. After the collection of data and appropriate scoring, data were tabulated properly and necessary statistical calculations were done.

RESULT

Table I: Table of Means and standard deviations

Aggressive, Nonagressive Notplayed		Aggression	Depression	Anxiety
1.00	Mean	95.5286	19.1571	46.4571
	N	70	70	70
	Std. Deviation	15.92075	11.31452	6.76882
2.00	Mean	72.5571	18.7286	44.7714
	N	70	70	70
	Std. Deviation	16.42959	11.12110	7.38226
3.00	Mean	52.6571	11.0143	41.6286
	N	70	70	70
	Std. Deviation	10.08785	5.21562	6.67283
Total	Mean	73.5810	16.3000	44.2857
	N	210	210	210
	Std. Deviation	22.68730	10.30262	7.20010

TABLE II: Descriptive table for one- way ANOVA of Aggression, Depression and Anxiety scores of Aggressive computer game players, Non aggressive computer game players and young people who do not play computer games.

		Sum of Squares	df	Mean Square	F	Sig.
aggression	Between Groups	64438.638	2	32219.319	154.612	.000
	Within Groups	43136.486	207	208.389		
	Total	107575.124	209			
depression	Between Groups	2940.000	2	1470.000	15.812	.000
	Within Groups	19244.100	207	92.967		
	Total	22184.100	209			
anxiety	Between Groups	840.800	2	420.400	8.707	.000
	Within Groups	9994.057	207	48.280		
	Total	10834.857	209			

TABLE-III

Multiplecomparisons Table among the variables under study

DISCUSSION

Mean of Aggressive game players is higher than nonaggressive game players and who do not play games,which indicates that aggressive game players possess more aggression in MOAS score. Mean of score of Depression in Aggressive game players is also higher than nonaggressive game players and who do not play games. Mean of score of Anxiety in Aggressive game players is slightly higher than .One way ANOVAs of Aggression, Depression and Anxiety scores of three subgroups was computed to verify whether there is any interactional effect between group and within group exists. The mean square between groups in case of Aggression was found 64438.63 and 43136.484 respectively. In case of Depression, scores are 2940.000 and 19244.100 respectively and in case of Anxiety, values are 840.800 and 9994.057 respectively.The F-ratio 154.612 in case of score of aggression of three groups was found significant at .00 levels. On the other hand F-ratio of depression of three groups was 15.812 and F-ratio of anxiety score of three groups was 8.7.7. Both ratios are significant at .00 levels. So, the result indicates that the difference among the groups in case of all the variables is significant difference. Further analysis was done by post hoc-test (Tukey) to know the particular group difference. Here,Group of Aggressive game players was compared with nonaggressive game players in respect of their score of Aggression. The Mean difference between them was found 22.97 which is significant at .01 level. Group of Aggressive game players was compared with no-game players in respect of their score of Aggression. The Mean difference between them was found 42.87which is significant at .01 level.Group of non-Aggressive game players was compared with no-game players in respect of their score of Aggression. The Mean difference between them was found 19.90 which is also significant at .01 level. The score of Depression of Aggressive game players was compared with the score of non-aggressive computer game players. The Mean difference between the groups was found .42 which is not significant.

The score of Depression of Aggressive game players was compared with the score of people who do not play computer game. The Mean difference between the groups was found 8.42 which is significant at .01 level. The score of Depression of Non-Aggressive game players was compared with the score of people who do not play computer game. The Mean difference between the groups was found 7.71 which is significant at .01 level.

In case of trait anxiety scores the group of students who play violent computer games was compared with students who play nonviolent computer games. The Mean difference between the groups was found 1.69 which implies that there is no significant difference between the groups. In case of trait anxiety scores the group of students who play violent computer games was compared with students who do not play computer games. The Mean difference between the groups was found 4.83 which imply that there is significant difference between the groups in .01 level.In case of trait anxiety scores the group of students who play nonviolent computer games was compared with students who do not play computer games. The Mean difference between the groups was found 3.14 which imply that there is no significant difference between the groups. Inter-Correlation between the variables was computed and it was found that the score of Aggression is correlated with score of depression in .01 level. The value of Pearson product moment correlation is .246. The correlation between score of aggression and anxiety was found .217 and the correlation between anxiety and depression was found .350. All these correlations are significant at .01 level.

The result of the study indicates that youth who play violent computer game possess more aggression than who do not play such violent games. Also the aggression is less in youths who do not play any type of computer game. Depression among the youth who play computer game irrespective of whether violent or nonviolent is more than those who do not play any type of computer game. On the other hand anxiety

of the youth who play violent computer game is significantly higher than the youth who do not play any type of computer game. The correlation between the Aggression, depression and anxiety was computed and it was found that the inter-correlation among the variables is significant.

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