



Usage of Electronic Games and Self Reported Behavioural Problems Among School Going Children

Anu K James

Student (MSc) Father Muller College Of Nursing Kankanady Mangalore – 577002

Ms. Seema S Chavan

Asst. Professor Dept. Of Pediatric Nursing Father Muller College Of Nursing Kankanady Mangalore – 577002

ABSTRACT

One of the drastic changes in our social environment seen in the 20th and 21st centuries has been the saturation of our day to day life by electronic gadgets, television, movies, videos, video games, cell phones, internet; computers have assumed central roles in our children's lives. Here the researcher identified the usage of electronic games and self reported behavioural problems and the correlation between these two among school going children. An exploratory descriptive design was used. The participants were about 710 in number selected by screening tool. Data was collected by administering rating scales prepared by the researcher. In the present study proved that school going children are more interested to play electronic games, they had moderate usage of electronic games and moderate level of behavioural problems and it depicts that there is a strong positive correlation between the usage of electronic games and self reported behavioural problems. The psychiatric / paediatric nurses have to play a vital role in enabling effective identification and management of behavioural changes in school going children. This can be facilitated by motivating the nurses to learn about identification and management of usage of electronic game and the adverse effects.

KEYWORDS : Electronic games, usage, behavioural problems, school going children.

TABLES AND FIGURES

Table 1: Frequency and percentage distribution of subjects according to their baseline characteristics.

N = 710

Sl no	Baseline variables	Frequency (f)	Percentage (%)
1	Age in years		
	a) 11 years	172	24.2
	b) 12 years	164	23.1
	c) 13 years	194	27.3
	d) 14 years	180	25.4
2	Gender		
	a) Male	511	72
	b) Female	199	28
3	Grade		
	a) 6 th	172	24.2
	b) 7 th	179	25.2
	c) 8 th	179	25.2
	d) 9 th	180	25.4
4	Siblings		
	a) Yes	542	76.3
	b) No	168	23.7
5	Living condition		
	a) With both parents	644	90.7
	b) Only with father	32	4.5
	c) Only with mother	11	1.5
	d) Others/ hostel	23	3.2
6	Occupation of parent		
	a) Both are working	382	53.8
	b) Single parent working	328	46.2

Table 2: Distribution of games based on the usage N= 710

Type of game	Usage of electronic games				Overall usage in Percentage (%)
	Male		Female		
	f	%	f	%	
Action	343	67.12	134	67.31	67.2
Scrolling	315	61.64	106	53.26	52.3
Scrolling shooting	352	68.88	143	71.85	69.6
Scrolling platform	388	75.92	143	71.85	74.8
First person shooter	366	71.62	145	72.86	72
Third person shooter	337	65.94	132	66.31	66.1
Sports	405	79.25	156	78.39	79
Action adventure	392	76.71	156	78.39	77.2
Strategy	373	72.99	152	76.38	73.9
Party	361	70.64	141	70.85	70.7
Fighting	407	79.64	157	78.89	79.4
Flight of flying	382	74.75	149	74.87	74.8
Role playing	364	71.23	148	74.37	72.1
Simulator	375	73.38	142	71.35	72.8
Wrestling	401	78.47	150	75.37	77.6
Adventure	405	79.25	157	78.89	79.2
Plat former	336	65.75	134	67.33	66.2
War	406	79.45	154	77.38	78.9
Racing	429	83.95	169	84.92	84.2
Traditional	338	66.14	141	70.85	67.5
Puzzle	388	75.92	155	77.88	76.5

Table 3:- Domain wise distribution of Mean, SD, and Mean % of self reported behavioural problem scores N=710

Sl no	Domain	Score obtained		Max possible scores	Mean	SD	Mean %
		Max	Min				
1	Aggressive behavioural problems	51	14	55	30.05	7.06	54.63
2	Attention deficit problems	63	13	65	37.38	9.58	57.50
3	Sleep disturbances	30	6	30	17.99	4.88	59.99

Usage of electronic games

Figure 1: Bar diagram showing the distribution of the scores of usage of electronic game Self reported behavioural problems

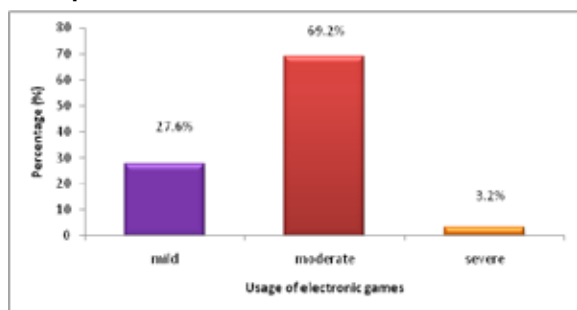


Figure 2: Bar diagram showing the distribution of the scores of self reported behavioural problems

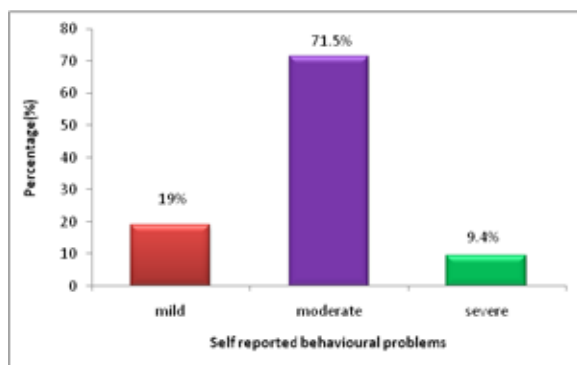
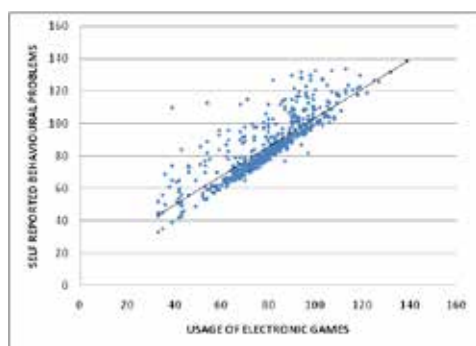


Figure 3: Scattered plot diagram showing the correlation of usage of electronic games and self reported behavioural problems



INTRODUCTION

One of the drastic changes in our social environment seen in the 20th and 21st centuries has been the saturation of our day to day life by electronic gadgets. In this new environment television, movies, videos, video games, cell phones, internet, computers have assumed central roles in our children’s lives

Social consequences are a very real part of gaming addiction. Addicted gamers spend so much time playing that their personal relationships get neglected and sometimes disappear altogether. Among addicted gamers who are married, up to 50 percent report a strain in their marriage as a result of their addiction.

As the level of violence in video games has increased, so has concern for the effects on those who play - especially those who play a lot. Many are quick to point out that most school shootings in recent years have been carried out by avid gamers, and their games of choice were always dark and violent.

A recent Harris Interactive study reports that the number is even higher, with nearly one-third (31%) of males and roughly one in ten females (13%) reporting that they have felt “addicted” to video games [1].

Electronic games have a direct impact on the behavioural pattern of school going children, especially the age group between 10 – 14 years. Today’s children are tomorrows citizens, these small buds place an important role on the building up of today’s family society country and world at large. The investigator from the literature and from personnel experience in pediatric clinical, felt the need and relevance of conducting a study on impact of electronic games on behavioural pattern of adolescents.

DESIGN & METHODS:

An exploratory descriptive survey approach was used to assess the usage of electronic games and self reported behavioural problems among school going children in the age group of 11- 14 years. Study was undertaken after the approval by the Institutional Ethics Committee and the authorities of the selected school. Purposive sampling was used to select the sample. 740 school going children screened by the investigator with the help of screening tool, from that 710 selected for the research. Rating scales were used to assess the usage of electronic games and self reported behavioural problems. The data is analyzed by using descriptive and inferential statistics and is presented in the form of tables and graphs

TOOLS:

- Tool I: Baseline proforma
- Tool II: Electronic game usage assessing rating scale
- Tool III: Self- reported behavioural rating scale

RESULT

SECTION I: DESCRIPTION OF BASELINE CHARACTERISTIC

Table 1 shows the baseline characteristics and percentage of the subjects under the study

SECTION II: DESCRIPTION OF RANGE OF SCORES ACCORDING TO THE CLASSIFICATION

The data presented in figure 1 shows that the majority of subjects have moderate addiction towards electronic game usage (69%)

The data presented in figure 2 shows that majority of subjects have moderate self reported behavioural problems (72%)

SECTION III: ASSESSMENT OF USAGE OF ELECTRONIC GAMES

The data table 2 shows that the score of usage of electronic games. Overall assessment shows that subjects had moderate usage of all the types of games.

The maximum range of score (84.2%) was reported in the usage of racing games, females are more interested to play adventure & fighting games (78.89 %) and males are more interested to play racing games (83.95%)

SECTION IV:-ASSESSMENT OF SELF REPORTED BEHAVIOURAL PROBLEMS

The data table 3 shows that the score of self reported behavioural problems. Overall assessment shows that they have moderate behavioural problems (56.67%). The maxim range of score (59.99%) was reported in the domain of sleep disturbances

SECTION V: CORRELATION BETWEEN THE USAGE OF ELECTRONIC GAMES AND SELF REPORTED BEHAVIOURAL PROBLEMS

Scattered plot diagram shows that the scores of usage of electronic games and self reported behavioural problems in each subjects. Here the correlation value $r = 0.862$ (p value 0.0001) that represents the strong positive correlation.

DISCUSSION

Section – I : Baseline characteristics.

In the present study majority of the subjects 194 (27.3%) and 180 (25.4%) belonged to the age of 13 & 14 years. Similar findings regarding the age group ranging from 8-18 years was noted in a national study conducted on pathological video game use among American youth [2].

Majority of the subjects 511(72%) were males. The present study is supported with a study i.e, home video game playing in school children: a study of incidence and patterns of play, here the findings shows regarding the gender majority were males 429 (52.5 %) [3].

The distribution of subjects based on their educational level the majority were 180 (25.4%) in the grade of 9th, 179 (25.2%) in the grade of both 8th as well as 7th and 172 (24.2%) in the grade of 6th.

In relation to the number of siblings majority 542 (76.3%) of school going children had sibling and the majority of school going children 644 (90.7 %) were living with both the parents and 23 (3.2%) living in hostel / other setups.

With reference to the occupation of parent 382 (53.8 %) were both the parents are working, at the same time 328 (46.2 %) from single parent working condition.

To assess the electronic game players investigator screened 740 school going children in the age group of 11-14 years, with the help of screening questions in the baseline proforma. In that 710 (95.9 %) school going children are playing electronic game, so the investigator took these 710 subjects are the samples of the present study.

In the duration of play, among the 710 subjects 100 % were playing electronic games more than one hour or day. The present study supported with the study of Home video game playing in school children: a study of incidence and pattern of play, here they reported that the most common pattern of play was daily with most of the players playing for between half an hour to one hour per day [4].

Section II: Description of range of scores according to the classification

In the usage of electronic games majority of subjects 491 (69.2%) had moderate usage and the majority of subjects 508 (71.5%) had moderate behavioural problems. The present study supported with an American life project survey more than half percent (53%) of American adults play video games, and about one in five adults (21%) play every day. Adolescent and young adults tend to dominate the gaming scene [5].

Section III: Assessment of usage of electronic games.

The school going children are more interested to play racing games (84.2%) at the same time among 710 subjects 82 (16.04 %) males and 30 (15.07 %) were never played racing games, and the subjects were less interested to play scrolling type games (50.3%).

Among the subjects 588 (82.8 %) were consider as an active electronic game player. At the same time subjects reported that 101 (14.2) were never used computer for playing games, 210 (29.6%) were never used arcade games, but 525 (73.9%) were used consoled video game system like mobile, play station, game cube etc. and 359 (50.5%) were using online java script video games also.

In the duration of play 350 (50.3%) were playing electronic games more than three hours nonstop.

Among the subjects 467 (65.8 %) were interested to play electronic games at gaming / internet café.

Section IV:Assessment of self reported behavioural problems

Self reported behavioural rating scale had 30 items and according to the domains it's divided into 3 sessions.

- 1) Aggressive behavioural problems
- 2) Attention deficit problems
- 3) Sleep disturbances.

Under the aggressive behavioural problems 11 items were there, the mean percentage of the aggressive behavioural problem was 54.43 that indicate the moderate level of aggressive behavioural problems among electronic game players. The present study supported with a Canadian study of the effect of video game competition and violence on aggressive behaviour. The authors found that video game violence was not sufficient to elevate aggressive behaviour compared with a nonviolent video game, and that more competitive games produced greater levels of aggressive behaviour. Based on these results, the authors conclude that competition, not violence, may be the biggest predictor of aggressive behaviour. Researchers also call for further exploration into the mechanisms through which video game competitiveness influences aggressive behaviour, as well as whether this relation holds in the long-term [6].

13 items were there in the domain of attention deficit problem, the mean percentage of the domain was 57.50 this also shows that the moderate attention deficit problems among electronic game players. The present study supported with the research of television and video game exposure and the development of attention problems, here the results indicates that Viewing television and playing video games each are associated with increased subsequent attention problems in childhood. It seems that a similar association among television, video games, and attention problems exists in late adolescence and early adulthood [7].

Under the domain of sleep disturbances 6 items were there, the mean percentage of the domain was 59.99; this shows the moderate sleep disturbances in the electronic game players. The present study supported with another study that study concluded that sleep problems among children noticed by their doctors. According to the study, data from paediatricians on nearly 155,00 patients, ranging in age from infancy to 18 years old, showed that fewer than 4 percent were diagnosed with a sleep problem. The most common diagnoses were sleep disorders that were "not otherwise specified" (1.42%), bedwetting (1.24%), sleep disordered breathing (1.04%) and insomnia (0.05%) [8].

Overall assessment shows that the electronic game players have moderate behavioural problems. The maxim range of score (59.9%) was reported in the domain of sleep disturbance.

Section VII: Correlation between the usage of electronic games and self reported behavioural problems

To correlate the usage of electronic games and self reported behavioural problems among school going children, Karl- Pearson correlation test was used and the correlation value $r = 0.86$ (p value 0.0001) this represents the strong positive correlation between the usage of electronic game and self reported behavioural problems. On the basis of this H_{03} was rejected and the research hypothesis was accepted.

The present study is supported with a research of playing violent electronic games, hostile attribution style, and aggression related norms in German adolescents, this study results shows the significant relationship between exposure to the electronic games and aggressive norms [9].

CONCLUSION:

School going children are more interested to play electronic games, they had moderate usage of electronic games and moderate level of behavioural problems. This study depicts that there is a strong positive correlation between the usage of electronic games and self reported behavioural problems.

ACKNOWLEDGEMENTS:

Ms. Seema .S. Chavan, Asst. Professor, Pediatric Nursing, **Rev. Sr Winnifred D'Souza**, Principal & Professor, Department of Paediatric Nursing, **Mrs. Malarvizhi M.** HOD, Department of Pediatric nursing, **Mrs Bridget D'Silva**, HOD Department of Nursing Research, **Experts, Entire faculty** of Father Muller College of Nursing, **Principal** of Milagres high school, Hampankatta, Mangalore, **Principal** of Paduva high school, Mangalore and to **My parents**.

REFERENCES

1. Boys and video games: a natural attraction? [online] [cited 2013 Aug 22]. Available from: <http://www.video-game-addiction.org/boys-and-video-games.html> |
2. Krahé B , Möller I. Playing violent electronic games, hostile attributional style, and aggression-related norms in German adolescents.[online]. Dept. of Psy.[cited 2013 Oct 22]. Available from: <http://www.sciencedirect.com/science/article/pii/S0140197103000940> |
3. GentileD. Pathological Video-Game Use Among Youth Ages 8 to 18 A National Study. [online][cited 2013 Jan 24]. Available from: <http://pss.sagepub.com/content/20/5/594.short> |
4. Fling S, Smith L., Rodriguez T, Thornton D, Atkins E, Nixon K. Videogames, aggression, and self-esteem: a survey [online]. Social Behavior and Personality: an international journal [cited 2013 Dec 12]. 1992;20(1): 39-45; Available from: <http://www.ingentaconnect.com/content/sbp/sbp/1992/00000020/00000001/art0005> |
5. Never too old for video games?. [online]. [cited 2013 May 23]; Available from: <http://www.video-game-addiction.org/video-game-addiction-articles/never-too-old-for-video-games.htm> |
6. Paul J C. Adachi, The effect of video game competition and violence on aggressive behavior: which characteristic has the greatest influence. psychology of violence | [online] 2010 Oct. [cited 2013 Jan 12]; 1(4) Available from: http://www.theesa.com/facts/research_1011.asp |
7. Edward L, Swing M S, Douglas A, Gentile, Anderson, C, Walsh D. Television and Video Game Exposure and the Development of Attention Problems [online], [cited 2013 Aug 1]. Available from: <http://pediatrics.aappublications.org/content/126/2/214.full#aff-3> |
8. Reinberg S. Too much computer gaming can steal your sleep. [online] 2013:June 9. [cited 2013 Oct 22]. Available from: <http://abcnews.go.com/Health/Healthday/story?id=7783526> |
9. Krahé B , Möller I. Playing violent electronic games, hostile attributional style, and aggression-related norms in German adolescents.[online]. Dept. of Psy.[cited 2013 Oct 22]. Available from: <http://www.sciencedirect.com/science/article/pii/S0140197103000940> |