



A CORRELATIONAL STUDY TO ASSESS THE IMPACT OF ONLINE GAMING ON ANXIETY AND VIOLENT BEHAVIOUR AMONG ADOLESCENTS IN THE SELECTED SCHOOLS IN TILAKWADA TALUKA

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ABSTRACT

The rapid growth of online gaming among adolescents has raised concerns regarding its influence on mental health and behavioural outcomes. Excessive engagement in online games may contribute to anxiety and violent behaviour, affecting adolescents' psychosocial development and academic functioning.

INTRODUCTION

The internet game is developed that is got to play accidentally or deliberately through the online platform or another network mode. It is described as participatory gaming consoles with the primary goal of entertainment. Kids and adolescents are great fans of playing online games. Mobile phone games allow players to interact with virtual settings in 2D or 3D, subject to the limits and circumstances of each game. Internet gaming, like every digital medium, can be divided into categories. This classification is based on a variety of factors, including how the game should be played and how it interacts with other players. There are also many types of internet matches being played from around worldwide, such as activity, adventures, combat, platformer, race, role-playing, shooting, simulations, athletics, and management. The issues about using these videogames have grown as a result of the constant demand for improvement in games online and their strategies.

OBJECTIVES

1. The purpose of this study was to see how internet gaming affected stress in teenagers from different schools.
2. To assess the impact of online gaming on violent behaviors among adolescents of selected schools.
3. To find correlation between anxiety and violent behavior related to online gaming among adolescents of selected schools.
4. To find association between demographic variables and anxiety related to online gaming among adolescents of selected schools.
5. To find association between demographic variables and violent behavior related to online gaming among adolescents of selected schools.

RESEARCH METHODOLOGY

A quantitative descriptive survey design was adopted for the study. A total of 400 adolescents from selected schools of Tilakwada Taluka were selected using a non-probability purposive sampling technique. Data were collected using a structured online gaming addiction scale, Beck's Anxiety Inventory, and a violence behaviour assessment scale. The reliability of the tools was established through the test-retest method ($r = 0.82, 0.84$, and 0.83 respectively). Descriptive and inferential statistics, including Karl Pearson's correlation coefficient and chi-square test, were used for data analysis.

RESULTS AND DISCUSSION

SECTION-1: description of selected socio-demographic variables of participants

SR. NO	DEMOGRAPHIC DATA	CATEGORY	FREQUENCY F	PERCENTAGE %
1	Age in years	13 – 14 years	114	28.5
		14 – 15 years	153	38.2
		15 - 16 years	133	33.2
2	Gender	Male	233	58.2
		Female	167	41.8
3	Course of study	8 th STD	120	30
		9 TH STD	180	45
		10 TH STD	100	25
4	Religion	Hindu	198	49.5
		Christian	103	25.8
		Muslim	63	15.8
		Others	36	09
5	Education of father	Illiterate	76	19
		Primary school	127	31.8
		10th grade	24	06
		12th grade	46	11.5
		≥Diploma and Degree	100	25
		Post Graduation	27	6.8
6	Education of mother	Illiterate	59	14.8
		Primary school	120	30
		10th grade	86	21.5
		12th grade	64	16
		≥ Diploma and Degree	49	12.2
		Post Graduation	22	5.5
7	Occupation of Father	Agriculture	37	9.2
		Business	109	27.2
		Government / Private employee	148	37
		Coolie	78	19.5
		Other	28	07
8	Occupation of Mother	House wife	163	40.8
		Agriculture	104	26
		Business	73	18.2

SR. NO	DEMOGRAPHIC DATA	CATEGORY	FREQUENCY F	PERCENTAGE %
		Government / Private employee	38	9.5
		Coolie	13	3.2
		Other	09	2.2
9	Place of residence	Rural	169	42.2
		Semi urban	189	47.2
		Urban	42	10.5
10	Parents Income /Month	Below 10,000/-	108	27
		10,001- 20,000/-	119	29.8
		20,001- 30,000/-	68	17
		Above 30,000	105	25.2
11	Do you have your own mobile with internet facility	Yes	251	62.8
		No	149	37.2
12	Do you play online games	Yes	329	82.2
		No	71	17.8
13	Mode of playing online games	Computer	118	29.5
		Mobile	198	49.5
		Tablet	84	21
14	Duration of playing online games	Less than 1 year	255	63.8
		2-3 years	50	12.5
		More than 3 years	24	06
		Not using	71	17.8
15	Time spent for online games (Per day)	Less than 1 year	208	52
		1-2 hours	154	38.5
		3-4 hours	23	5.8
		Not using	15	3.8

Table1: The present study included 400 school-going adolescents aged 12–16 years with a history of online gaming. The majority of participants were aged 14–15 years (38.2%), followed by 15–16 years (33.2%) and 13–14 years (28.5%). Female participants constituted a higher proportion (58.2%) compared to males (41.8%). Most students were studying in the 9th standard (45%), with the remaining participants distributed across 8th (30%) and 10th standards (25%).

Nearly half of the participants belonged to the Hindu religion (49.5%), and most resided in semi-urban (47.2%) or rural areas (42.2%). With respect to parental characteristics, a substantial proportion of fathers were engaged in government or private employment (37%), while most mothers were homemakers (40.8%). The educational status of parents predominantly reflected primary-level education. A majority of families reported a monthly income below ₹20,000.

Regarding access to technology and gaming behaviour, more than half of the participants owned a mobile phone with internet access (62.8%). A large majority (82.2%) reported playing online games, predominantly using mobile phones (49.5%). Most participants had been engaged in online gaming for less than one year (63.8%) and spent less than one hour per day on online gaming activities (52%).

SECTION II: To Assess the Impact of Online Gaming on Violent Behaviors Among Adolescents of Selected Schools.

Description of findings related to level of anxiety among participants frequency and percentage distribution of participants according to level of anxiety

N=400

Level of anxiety		
Mild anxiety	Moderate anxiety	Potentially concerning level of anxiety
f (%)	f (%)	f (%)
384(96%)	16(4%)	00

The data presented in the Table 2 shows level of anxiety of participants, it reveals that, Majority 384(96%) of participants were had mild level of anxiety and 16(4%) of participants were had moderate level of anxiety.

Description of findings related to level of violence behavior among adolescents' students' frequency and percentage distribution of participants according to their level of violence behavior

N=400

Level of violence behavior		
Mild level f (%)	Moderate level f (%)	Severe level f (%)
275 (68.8%)	115 (28.8%)	10 (2.5)

Table 3 Majority 275(68.8%) of participants were had mild level of violence, 115(28.8%) participants were moderate level of violence behavior and remaining 10(2.5%) of participants were had severe level of violence behavior

SECTION III: To Find Correlation Between Anxiety and Violent Behavior Related to Online Gaming Among Adolescents of Selected Schools.

correlation between online game addiction and anxiety and its domains by Karl Pearson's correlation coefficient method

Variables	Correlation between online game addiction and anxiety			
	Mean	R-value	t-value	p-value
Online game addiction	14.21	0.017	13.05	0.000*
Anxiety	10.25			

Table 4 shows the correlation between online game addiction and violent behavior among adolescents using Karl Pearson's correlation coefficient method. The mean score for online game addiction was 14.21, while the mean score for violent behavior was 20.41. The calculated R-value of 0.02 indicates a very weak positive correlation between online game addiction and violent behavior.

The t-value of 13.18 with a p-value of 0.000 shows that the correlation is statistically significant at $p < 0.05$, even though the strength of the association is minimal. This implies that as online game addiction increases, violent behavior also shows a slight tendency to increase, but the relationship is extremely weak in magnitude. However, the statistical significance suggests that the finding is unlikely to be due to chance.

SECTION IV: To Find Association Between Demographic Variables and Anxiety Related to Online Gaming Among Adolescents of Selected Schools.

Socio-Demographic variables	Levels of online game addiction		Chi square value	P value
	Mild	Moderate		
Age (in yrs)				
a) 13-14	100	14		
b) 14-15	129	24	2.43	0.297
c) 15-16	107	26		
Gender				
a) Male	200	33	1.40	0.237
b) Female	136	31		
Course of study				
a) 8 th std	107	13	3.41	0.182
b) 9 th std	147	33		
c) 10 th std	82	18		
Religion				
a) Hindu	162	36	3.22	0.358
b) Muslim	91	12		
c) Christian	51	12		
d) Other	32	4		
Education of father				
a) Illiterate	62	14	2.40	0.790
b) Primary school	111	16		
c) 10 th grade	21	3		
d) 12 th grade	38	8		
e) Diploma or degree	81	19		
f) Post graduation	23	4		

Socio-Demographic variables	Levels of online game addiction		Chi square value	P value
	Mild	Moderate		
Education of mother				
a) Illiterate	49	10	1.84	0.870
b) Primary school	103	17		
c) 10 th grade	71	15		
d) 12 th grade	56	8		
e) Diploma or degree	39	10		
f) Post graduation	18	4		
Occupation of father				
a) Agriculture	33	4		
b) Business	92	17		
c) Government / private employee	120	28		
d) Coolie	67	11		
e) Other	24	4		
Occupation of mother				
a) House wife	135	28	2.82	0.727
b) Agriculture	87	17		
c) Business	62	11		
d) Government / private employee	35	3		
e) Coolie	10	3		
f) Other	7	2		
Place of residence				
a) Rural	140	29	0.32	0.852
b) Semi urban	160	29		
c) Urban	36	6		
Parents income / month				
a) Below 10,000	92	16	1.55	0.670
b) 10,000-20,000	103	16		
c) 20,001-30,000	56	12		
d) Above 30,000	85	20		
Do you have own mobile with internet facility				
a) Yes	212	39	0.10	0.743
b) No	124	25		
Do you play online games				
a) Yes	274	55	0.71	0.400
b) No	62	9		
Mode of playing online games				
a) Computer	98	20	0.67	0.715
b) Mobile	165	33		
c) Tablet	73	11		
Duration of playing online games				
a) less than 1 year	209	46	6.53	0.04*
b) 2-3 year	47	3		
c) >3 years	18	6		
d) Not using	62	9		
Time spent for online games				
a) Less than 1 hour	176	32	3.98	0.263
b) 1-2 hours	125	29		
c) 3-4 hours	20	3		

Socio-Demographic variables	Levels of online game addiction		Chi square value	P value
	Mild	Moderate		
d) More than 4 hours	15	0		

The information presented in the **Table 5** demonstrates that, the calculated chi square value for association between levels of online games addiction among adolescents' students with their socio demographic variables is found to be significant statistically at 0.05 levels for socio demographic variables of duration of playing online games and is not found statistically significant for other selected socio demographic variables. Therefore, the findings partially support the null hypothesis H_{01} , inferring that participant's level of online games addiction is significantly associated with duration of playing online games of participants.

SECTION V: To Find Association Between Demographic Variables and Violent Behaviour Related to Online Gaming Among Adolescents of Selected Schools.

Socio-Demographic variables	Levels of online game addiction		Chi square value	P value
	Mild	Moderate		
Age (in yrs)				
a) 13-14	110	4	4.79	0.04*
b) 14-15	143	10		
c) 15-16	131	2		
Gender				
a) Male	223	10	0.12	0.72
b) Female	161	6		
Course of study				
a) 8 th std	115	5	3.48	0.17
b) 9 th std	170	10		
c) 10 th std	99	1		
Religion				
a) Hindu	188	10	1.13	0.76
b) Muslim	100	3		
c) Christian	61	2		
d) Other	35	1		
Education of father				
a) Illiterate	71	5	9.33	0.09
b) Primary school	125	2		
c) 10 th grade	24	0		
d) 12 th grade	46	0		
e) Diploma or degree	93	7		
f) Post graduation	25	2		
Education of mother				
a) Illiterate	57	2	4.40	0.49
b) Primary school	117	3		
c) 10 th grade	84	2		
d) 12 th grade	59	5		
e) Diploma or degree	46	3		
f) Post graduation	21	1		
Occupation of father				
a) Agriculture	35	2		
b) Business	103	6		
c) Government / private	141	7		

Socio-Demographic variables	Levels of online game addiction		Chi square value	P value
	Mild	Moderate		
employee			3.70	0.44
d) Coolie	77	1		
e) Other	28	0		
Occupation of mother				
a) House wife	156	7	4.58	0.46
b) Agriculture	100	4		
c) Business	72	1		
d) Government / private employee	35	3		
e) Coolie	13	0		
f) Other	8	1		
Place of residence				
a) Rural	162	7	0.11	0.94
b) Semi urban	182	7		
c) Urban	40	2		
Parents income / month				
a) Below 10,000	104	4	1.65	0.64
b) 10,000-20,000	113	6		
c) 20,001-30,000	67	1		
d) Above 30,000	100	5		
Do you have own mobile with internet facility				
a) Yes	241	10	0.000	0.98
b) No	143	6		
Do you play online games				
a) Yes	313	16	3.59	0.049*
b) No	71	0		
Mode of playing online games				
a) Computer	111	7	2.39	0.30
b) Mobile	193	5		
c) Tablet	80	4		
Duration of playing online games				
a) less than 1 year	243	12	3.81	0.28
b) 2-3 year	47	3		
c) >3 years	23	1		
d) Not using	71	0		
Time spent for online games				
a) Less than 1 hour	198	10	1.94	0.58
b) 1-2 hours	148	6		
c) 3-4 hours	23	0		
d) More than 4 hours	15	0		

The data presented in **Table 6** represents the association between level of violence behavior with socio-demographic characteristics of interest. It demonstrates that there had been a statistically significant

relationship among levels of violent crime and having a mobile computer with internet access, but not in other socio demographic characteristics. As a result, the data sustainable methods the null hypothesis H03, implying that individual's degrees of violent behavior are strongly connected with chosen personal factors of respondents who have access to an internet-enabled cellular telephone.

Online Gaming Addiction

Descriptive statistics were computed to determine the level of online gaming addiction among adolescent students ($N = 400$). The mean online gaming addiction score was 14.21 ($SD = 5.09$), with a median score of 14 and a mode of 9. The observed scores ranged from 4 to 35, indicating generally low levels of addiction among the participants.

Based on the classification of addiction levels, the majority of participants ($n = 336$, 84%) exhibited mild online gaming addiction, while 64 participants (16%) demonstrated a moderate level of addiction. None of the participants were categorized as having severe online gaming addiction.

Anxiety Levels

Anxiety levels were assessed using Beck's Anxiety Inventory. The mean anxiety score among participants was 10.25 ($SD = 5.16$), with a median and mode of 10. The anxiety scores ranged from 0 to 32, reflecting predominantly mild anxiety levels.

Most participants ($n = 384$, 96%) reported mild anxiety, whereas a small proportion ($n = 16$, 4%) experienced moderate anxiety. No participants were found to have potentially concerned levels of anxiety.

Violent Behaviour

Violent behaviour was evaluated using a standardized violence behaviour assessment scale. The mean violence behaviour score was 20.41 ($SD = 10.12$), with a median score of 19 and a mode of 13. The scores ranged from 0 to 54, indicating varying levels of violent behaviour among the participants.

The majority of participants ($n = 275$, 68.8%) demonstrated mild levels of violent behaviour, followed by 115 participants (28.8%) with moderate levels, and 10 participants (2.5%) who exhibited severe violent behaviour.

RESULTS

The findings revealed that the majority of participants had mild anxiety (96%) and mild levels of violent behaviour (68.8%). A very weak but statistically significant positive correlation was observed between online gaming addiction and anxiety ($r = 0.017$, $p < 0.05$), as well as between online gaming addiction and violent behaviour ($r = 0.02$, $p < 0.05$). Significant associations were found between duration of online gaming and anxiety, and between access to internet-enabled mobile devices and violent behaviour.

DISCUSSION

Although the correlations between online gaming addiction, anxiety, and violent behaviour were weak, their statistical significance indicates a meaningful relationship. Prolonged gaming duration and easy access to internet-enabled devices appear to play an important role in influencing adolescents' psychological and behavioural outcomes.

CONCLUSION

The study concludes that online gaming addiction is significantly associated with anxiety and violent behaviour among adolescents. Preventive strategies, awareness programs, and early interventions are essential to promote healthy gaming habits and protect adolescents' mental health.

KEYWORDS

Online gaming, adolescents, anxiety, violent behaviour, internet addiction, nursing research.