

Research Article

A Study to assess the Internet Gaming Disorder (IGD) among Adolescent Students of Kashmir

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DOI: <https://doi.org/10.24321/2348.2133.202008>

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How to cite this article:

Majeed M, Dar MA, Kour P, Shaban N. A Study to assess the Internet Gaming Disorder (IGD) among Adolescent Students of Kashmir. *Ind J Holist Nurs* 2020; 11(4): 26-31.

Date of Submission: 2020-12-09

Date of Acceptance: 2020-12-27

A B S T R A C T

Background: Gaming is a legitimate leisure activity worldwide; however, there are emerging concerns that vast numbers of gamers are becoming addicted. In 2013, the American Psychiatric Association (APA) classifies Internet Gaming Disorder (IGD) as a condition warranting more clinical research ahead of formalising it as a mental disorder. Proposed as a behavioural addiction, Internet Gaming Disorder (IGD) shares many similarities in both physical and psychological manifestations with substance use disorder, including cerebral changes on functional magnetic resonance imaging. Among the gaming population, adolescents demonstrate far more addictive internet gaming use in terms of screen hours, craving, and negative impacts on health, which have, in isolated incidents, also caused death.

Worldwide addiction to gamers among adolescents is becoming a serious concern. This study was conducted to assess the occurrence of IGD among adolescent students in a selected Higher secondary school of Kashmir.

Methodology: Quantitative methodology with a cross-sectional research design study was conducted among adolescent students of a selected higher secondary school. 220 students were included in the study by non-probability convenience sampling technique. English version of IGD-20 test was used to assess the problem. Statistical analysis used descriptive statistics that were represented with frequencies and percentages. $P < 0.05$ was considered as statistically significant.

Results and Conclusion: An overall occurrence of IGD was 15.7% among adolescent students and it was higher among male students than female students, which was found statistically significant with a p value of < 0.049 .

Keywords: Internet Gaming Disorder, IGD, Gaming Disorder, Occurrence, Adolescent Students

Introduction

Internet Gaming Disorder (IGD) comprises a behavioural pattern encompassing persistent and recurrent engagement

with both online and offline games, leading to significant impairment or distress over a twelve months period.¹

With the popularity of high-tech devices (computer, tablet,

and smartphone), and internet use in recent years, playing online or offline games has become a popular activity, especially among young people. People usually play games for entertainment, excitement, challenge seeking, emotional coping, and for escaping from reality to virtuality to full fill their unsatisfied needs or motivations.²

Although some studies have demonstrated some beneficial effects of playing games on physical and psychological health,^{3,4} most of the research on internet gaming has focused on the negative effects on gamers. It has been suggested that excessive gaming behaviour is associated with reduced sleep time, limited leisure activity, insomnia,⁵ attention problems, poor academic performance,⁶ anxiety, depressive symptoms, deterioration of interpersonal relationships and youth violence or crimes.²

The most active adopters of internet and modern technologies have been adolescents and young adults, reflecting the fact they have grown up in an environment with a well-developed internet. According to World Health Organization (WHO), out of 7.2 billion people worldwide, over 3 billion are younger than 25 years, making up 42% of the world's population. Around 1.2 billion of these young people are adolescents aged between 10 and 19 years.⁷ India has the largest adolescent population in the world, 253 million, and every 5th person is between 10 to 19 years of age.⁸

Rohillia (2018) conducted an investigation to study the prevalence of gaming addiction among adolescent students of Chandigarh, India and found that among males 62.35% were normal gamers and 37.64% were problem gamers whereas 89.32% of the females were normal gamers and 10.68% were problem gamers.⁹

Despite the rising game related figures in India, there is a paucity of knowledge regarding the prevalence of IGD in India. Cases of IGD in India are being surfaced only through suicidal, homicidal cases or severe psychosocial impairments, and the same is true for our region. Successful prevention depends on the knowledge of the cause and the identification of risk factors and risk groups. Based on the studies and articles reviewed, it is evident that internet gaming disorder is taking the form of an emerging disorder among adolescents. DSM-5 and ICD-11 also agree on the need for research in the said area. Apart from that, the researcher's own observations, watching young adults busy and occupied with their smartphones, playing games and wasting their career building days, motivated the researcher to take up the current study to assess the extent to which pathological gamers exist in our region as no such study has been conducted till now.

Material and Method

Ethical clearance was obtained from the Institutional Ethics

Committee prior to the start of the study. Permission was taken from the school authorities after explaining the importance of the study. Data were collected after obtaining consent from study participants.

This study was carried on a sample of 220 adolescent students studying in the selected higher secondary school of Sopore, Baramulla, Kashmir. The sample was selected through a non-probability convenience sampling technique. The inclusion criteria were as follows:

- Adolescent students who were studying in classes 9th, 10th, 11th, and 12th,
- Adolescent students who were available at the time of the study,
- Adolescent students who willingly participated in the study

The exclusion criteria were as follows:

- Adolescent students who were not available during data collection,
- Adolescent students who were not willing to participate

Duration of Study: Four weeks

The data collection was made through online administration of data collection tool, which consists of the following three parts:

Part A: This Included the items related to demographic variables: gender, education of father, education of mother, occupation of father, occupation of mother, type of family, residence, and socioeconomic status of family.

Part B: This Included two items, one for screening gamers among adolescent students and the second item was related to the time spent by the gamer class of adolescent students in playing games per week.

Part C: This was filled only by the gamer class of adolescent students. It included a standardised 20-item IGD-20 test scale for assessing the occurrence of IGD. The scale consisted of 20 items represented by 6 factors (salience, mood modification, tolerance, withdrawal, conflict, relapse) of Internet gaming disorder which were to be scored on five-point scale, viz. 1-strongly disagree, 2-disagree, 3-uncertain, 4-agree, 5-strongly agree. The total score ranged from 20 to 100. The gamers were classified into 5 classes as per the total score obtained, the first and second classes represented casual gamers and regular gamers respectively, who scored below the mean average of IGD-20 test scale. These two classes being were distinguished on the basis of time spent by the gamers in playing games per week. The third and fourth class represented low risk engaged gamers, and high risk engaged gamers respectively, scoring above the mean average score in IGD-20 test. The high risk engaged gamers scored much higher on conflict and relapse factors, while the low risk engaged gamers scored higher

in salience, mood modification, tolerance, and withdrawal factors. The fifth class represented the disordered gamers that scored above cut-off (71).

Data analysis was done by SPSS software v.16.0. Descriptive statistics were represented with frequencies and percentages. $P < 0.05$ was considered as statistically significant.

Result

The findings of the study are discussed as follows.

Table 1. Socio-demographic Profile of the Study Group

Socio-demographic Profile of the Study Group		Frequency (f)	Percentage
Gender	Male	121	56
	Female	99	44
Education of father	Illiterate	7	3
	Middle pass	25	12
	Higher secondary	43	19
	Graduation	77	35
	Post-graduation	68	31
Education of mother	Illiterate	20	9
	Middle pass	37	17
	Higher secondary	81	36
	Graduation	54	25
	Post-graduation	28	13
Occupation of father	Govt. Employee	166	76
	Self-employed	54	24
	Unemployed	0	0
Occupation of mother	Employed	81	37
	Unemployed	139	63
Type of family	Joint	62	28
	Nuclear	158	72
Residence	Town	99	45
	Village	121	55
Socio-economic status of family	Upper class	116	53
	Upper middle class	46	21
	Middle class	31	14
	Lower middle class	17	7
	Lower class	10	5

Table 1 reveals that 121 (56%) students were male and 99 (44%) were female. The education status of fathers of 35% of the students was graduation, that of 31% was post-graduation, 19% was higher secondary, 12% was middle pass, and 3% was illiterate. The education status of mothers of 36% of the students was up to higher secondary, 25% was graduation, 17% was middle pass, 13% was post-graduation, and 9 % was illiterate. The occupation of father of 76% of the students was Govt. employee and 24% were self-employed, and the mothers of 63% of the students were unemployed while that of 37% were employed. 72% of the students were living in nuclear families and 28% were living in joint families. 55% of the students belonged to villages while 45% were from towns. Majority of the students (53%) belonged to upper class families, followed by upper middle class families (21%), 14% were from middle class families, 7% were from lower middle class families, and 5% belonged to lower class families.

Table 2. Distribution of Adolescent Students as per their Gaming Behaviour

Gaming Behaviour	Frequency (f)	Percentage
Gamers	216	98
Non-gamers	04	2
Total	220	100

Table 2, shows that 98% of the students were gamers i.e., they had played video games in the last 12 months, and 2% are were non-gamers i.e., they had not played any kind of video game in the last 12 months.

Table 3. Distribution of Gamer Class of Adolescent Students as per the Time Spent in Playing Games per Week

Hours of Game Play/ Week	Frequency (f)	Percentage
Less than 7 hours	116	54
7 to 20 hours	74	34
20 to 40 hours	20	9
More than 40 hours	6	3
Total	216	100

Table 3, shows that 54% of the students played games for less than 7 hours/ week, 34% played games for about 7 to 20 hours/ week, 9% played for 20 to 40 hours/ week, and 3% played games for more than 40 hours per week.

Table 4, shows that 36.1% of the gamers were casual gamers, 16.7% were regular gamers, 8.3% were low-risk gamers, 23.1% were high-risk gamers, and 15.7% were disordered gamers.

Table 4. Frequency and Percentage Distribution of Gamer Class of Adolescent Students as per IGD 20 Test Score

Gamer Classes	Frequency (f)	Percentage
Casual gamers	78	36.1
Regular gamers	36	16.7
Low-risk engaged gamers	18	8.3
High-risk engaged gamers	50	23.1
Disordered gamers	34	15.7
Total	216	100

Table 5, shows that the mean \pm SD was 39.73 ± 8.55 for casual gamers, 43.11 ± 8.23 for regular gamers, 60.50 ± 4.51 for low-risk engaged gamers, 62.46 ± 4.98 for high-risk engaged gamers, and 78.59 ± 5.30 for disordered gamers.

It was found that out of 216 students playing games, 34 were meeting the criteria of internet gaming disorder, and among them, 21 were males and 13 were females.

Table 5. Descriptive Statistical Table showing Mean and SD of IGD-20 Test Score among Gamer Classes

Gamer Class	Mean \pm SD	f
Casual gamers	39.73 ± 8.55	78
Regular gamers	43.11 ± 8.23	36
Low-risk engaged gamers	60.50 ± 4.51	18
High-risk engaged gamers	62.46 ± 4.98	50
Disordered gamers	78.59 ± 5.30	34
Total		216

The data presented in Table 6 indicates that there was a statistically significant association between Internet gaming disorder (IGD) and the demographic variable, of gender ($p = 0.049$), whereas no significant association was found between internet gaming disorder and other demographic variables like education of father ($p = 0.544$), education of mother ($p = 0.295$), occupation of father ($p = 0.983$), occupation of mother ($p = 0.863$), type of family ($p = 0.475$), residence ($p = 0.937$), and socioeconomic status of family ($p = 0.761$).

Table 6. Association of Internet Gaming Disorder (IGD) with Selected Demographic Variables

Disordered Gamers		Mean	SD	N	P value	Result
Variables	Options					
Gender	Male	77.19	4.00	21	0.049	Significant
	Female	80.85	6.47	13		
Education of father	Illiterate	79.00	1.83	4	0.544	Not Significant
	Middle Pass	76.00	5.29	3		
	Higher Secondary	80.33	6.43	3		
	Graduate	79.75	6.06	16		
	Post Graduate	76.38	4.44	8		
Education of mother	Illiterate	79.67	6.41	6	0.295	Not Significant
	Middle Pass	75.40	3.71	5		
	Higher Secondary	81.50	4.44	8		
	Graduate	77.91	5.17	11		
	Post Graduate	77.00	6.38	4		
Occupation of father	Govt. Employed	78.60	5.51	25	0.983	Not Significant
	Self-employed	78.56	5.00	9		
	Unemployed					
Occupation of mother	Employed	78.38	5.69	13	0.863	Not Significant
	Unemployed	78.71	5.19	21		
Type of family	Joint Family	79.33	6.01	15	0.475	Not Significant
	Nuclear Family	78.00	4.76	19		
Residence	Town	78.50	5.71	14	0.937	Not Significant
	Village	78.65	5.15	2		

Socio economic status of family	Upper class	79.00	5.62	14	0.761	Not Significant
	Upper middle class	77.00	6.55	8		
	Middle class	78.50	4.32	6		
	Lower middle class	77.00	4.24	2		
	Lower class	81.25	4.11	4		

Discussion

Occurrence of Internet Gaming Disorder

The study found that overall 12 month occurrence estimate of Internet Gaming Disorder (IGD) was 15.7% among adolescents.

Similar results were published by Lopez, Honrubia, Griffiths (14.6%).¹⁰ In contrast to this, lower prevalence rates (3.50%) were reported by Undavalli, Rani, Kumar (3.50%).¹¹

The adolescents of our Union Territory are drawn towards mobile phones and computers because of the less availability of recreational sources available to them. Apart from that, frequent shutdowns and harsh winters confine people to their homes where they do not find any recreational source apart from computers and mobile phones. The high occurrence of IGD in the present study might be attributed to that.

Gender

The occurrence of IGD was high among male students as out of the total adolescent students meeting the criteria of Internet Gaming Disorder (IGD) and categorised as disordered gamer class, 62% were male and only 38% were females. This was found to be statistically significant with a p value of < 0.049.

Majority of the studies reported similar findings of high rates among males like Muller KW, Janikan M, Dreier M (3.1%),¹² and Undavalli, Rani, Kumar (8.8%).¹¹

From the studies, it is evident that gender acts as an important non-modifiable risk factor for IGD. Males tend to play more games than females as video games are marketed more towards boys than females and there are not many games that attract females. Male students have easy and early accessibility to gaming gadgets like mobile phones and computers as compared to female students.

Parent's Education

Higher education among parents was observed as a factor among adolescents with IGD, as out of 34 students who presented with IGD, the fathers of 47.05% of the students were graduate, 23.5% were post-graduate, 8.82% were educated up to higher secondary, 8.82% were middle pass, and 11.76% were illiterate. With regard to mother's education, maximum (32.3%) were graduate, 11.76% were post-graduate, 23.52% were educated up- to higher

secondary, 14.70% were middle pass, and 17.64% were illiterate. The result was not statistically significant with a p value < 0.544 for the education of fathers and p value < 0.295 for the education of mothers.

The chances of using modern technology and gadgets increase with increased literacy level at home. So, this might be the reason for this finding.

Parent's Occupation

Among 34 students who presented with IGD, fathers of 73.5% of the students were govt. employees, and 26.5% were self-employed. Spending quality time with children, and supervising their activities is difficult for a working parent. This was found statistically insignificant with p value < 0.983 for occupation of father and p value < 0.863 for occupation of mother. Contrary to this, majority of the students i.e., 62.0% with IGD had unemployed mothers and only 38% of students had mothers who were employed.

Type of Family

In the present study, majority of students with IGD i.e., 55.88% hailed from nuclear families and 44.11% belonged to joint families. The results were found statistically insignificant with p value < 0.475.

Lack of interaction among family members of nuclear families, lack of supervision, and easy access to gadgets may be the reason.

Residence

Majority of participants with IGD were from villages (58.82%) and the rest (42.18%) were from towns. The result was not statistically significant with p value < 0.937.

The availability of outdoor recreational activities may be more in towns as compared to villages. Hence the young adults of villages tend to stay at home and are drawn towards multi-media.

Socio-economic Status

In the present study, it was found that the majority of students i.e., 41.17% with IGD belonged to upper class families, 23.5% belonged to upper middle class families, 17.64% belonged to middle class families, 5.88% belonged to upper lower families, and 11.76% belonged to lower class families, which was not found to be statistically significant with p value < 0.761.

Availability of smartphones and computers in upper class families from a very young age may be a factor responsible for IGD.

Conclusion

The study found that the overall occurrence of Internet Gaming Disorder (IGD) was 15.7% among adolescent students. The occurrence of Internet Gaming Disorder (IGD) was significantly associated with Gender gender ($p < 0.05$), whereas no significant association was found with other demographic variables like education of father, education of mother, occupation of father, occupation of mother, type of family, residence, and socioeconomic status of family.

Source of Funding

The author received no financial support for the research, authorship, and/ or publication of this article.

Conflict of Interest: None

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