

Extent of PUBG Addiction in South India: Influence of Select Demographic Factors

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ABSTRACT

Today, Internet gaming addiction is widespread across the world irrespective of the developmental stage of individuals. The present study attempts to find out the extent of PUBG addiction among respondents who play PUBG game. The sample consisted of a total of 323 individuals playing PUBG of which 289 were males and 34 were female students from various backgrounds and from various cities in South India. The respondents completed PUBG addiction test (PAT) developed by D'Souza, Manish and Deeksha (2019) in one session. PAT measured addiction in 7 factors— disengagement, lack of control, excessive use, obsession, distress, escapism and over enthusiasm & impulsive use. The data were analysed using Chi-square test for the extent of usage of PUBG by male and female students and Cramer's v tests were used to find out the association between levels of PUBG addiction and select demographic factors. Results revealed that an alarming 29.7% of the sample selected was addicted to PUBG, and 7.4% of the sample studied was definitely addicted. Gender had significant influence over PUBG addiction; female students had higher addiction towards PUBG than male students. Respondents who were unemployed were more addicted to PUBG than students and respondents who were employed. Higher the usage of smart phone, more was the PUBG addiction among the selected sample.

Keywords: *PUBG addiction*

Today, PUBG being an online multiplayer Battle Royale game has enormous popularity all over the world. This game is played by individuals from all developmental spans, and even gender is not spared. Unfortunately, few people who regularly play this game are addicted, which has brought a lot of concern regarding addiction to PUBG and its ill effects. PUBG being an interesting and curious game, addiction to PUBG can lead to some mental and physical health problems, which many people are unaware of (www.scoopwhoop.com). There are several side effects that PUBG has on one's mental and physical health that PUBG players should be aware of and cautioned too. Few of the negative side effects are documented as of now are—Aggression, gaming addiction, reduced social activity, poor

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physical and mental health, disruption in sleep pattern, inability to complete the other routine, and so on. Addiction to PUBG game is also linked with drug addiction, blurred vision, lack of personal hygiene, migraines, headaches and spondylitis. (www.newsnation.in/technology/tech-news, 2019). A study by Park, Chun, Cho, and Kim (2018), revealed that gaming causes same effect as substance use. Neural substrate of cue-induced gaming urge/craving in online gaming addiction is similar to that of the cue-induced craving in substance dependence. This puts more light on why it is addictive and what makes it crave. Yuan et al (2018) suggest that cortical thickness abnormalities in few parts could be the underlying pathophysiology of addiction. This has led to impairment in few cognitive functions. Another study suggests that there is direct correlation between internet gaming addiction and the alteration of connection of brains structural network similar to brain damage (https://press.rsna.org/timssnet/media/pressreleases/14_pr_target.cfm?ID=2052). As revealed by a recent Facebook post in Malaysia, husband left his four months pregnant wife and child to play PUBG to avoid any distraction (www.news18.com/news/tech, 2019).

As of June 19th, 2018, there are 400 million PUBG players everywhere throughout the world. Maybe a couple of the actualities uncovered by Shah (2018), showed that PUBG Mobile's season two started in May 2018 and from May to mid-August, 130 million players over 200 nations sought the Chicken Dinner. The most number of players originated from USA, India and Indonesia. PUBG Mobile crossed 100 million downloads on iOS and Android prior this month, just five months after its release. Players secured a general running separation of 2,154,947,134,605,703,216 kms practically which is comparable to circumventing the earth 54 billion times.

In India PUBG addiction was found to be quite rampant. Recently one of the Institutes in Chennai has sent a notice and indicated that PUBG game is “spoiling the entire atmosphere of the campus and has turned into addiction. A chief superintendent of Vellore Institute of Technology (VIT's) men's hostel stated, “It has come to our notice that a few students are playing online games like ‘PUBG’ which is not permitted. This, despite our repeated instructions against playing online games inside the rooms which disturbs fellow roommates and spoiling the entire atmosphere of the hostel. It is strictly warned that playing online games and betting for such games are prohibited in VIT. Hence, defaulters will be dealt with severely under VIT code of conduct. Students are asked to concentrate on physical games or sports and give more importance to their career growth” (www.newsnation.in/technology/tech-news/pubg-addiction-and-its-side-effects-of-playing-online-games-article-209010.html).

The present study is aimed to find out the extent of usage of PUBG game in Indian scenario. A thorough search in the literature did not yield fruitful results. Hence, the authors planned to study the extent of PUBG addiction among individuals who play PUBG game. The other interest of the authors was that whether PUBG game addiction/usage influenced by demographical factors.

METHOD

Sample

The authors selected 323 respondents who were playing PUBG game (289 male and 34 female respondents) randomly from various cities of South India, most of which were students, followed by employed and unemployed ones. Their age varied from 13 to 43 years, with the average age of 21.12±3.41 years.

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Tool employed

- **PUBG Addiction Test (PAT): D'Souza, Manish & Deeksha (2019)**

To measure extent of PUBG addiction, PAT, developed by D'Souza, Manish and Deeksha in the year 2019 consisting of 34 statements was employed. PAT measured PUBG addiction of the individual in 7 components, which included 7 factors- disengagement, lack of control, excessive use, obsession, distress, escapism and over enthusiasm & impulsive use. PAT should be answered in 5-point Likert scale, like strongly disagree to Strongly agree. The scores range from 5 to 1, assigned like – Strongly agree (5), agree (4), can't say (3), disagree (OW), and strongly disagree (1). To find out the reliability, the Cronbach's reliability test was done and the alpha value obtained for the total inventory was 0.912 and for various components varied from .501 to 0.822. Further, when the item to total scores correlations were performed; all the correlation coefficients obtained through Pearson's product moment correlation techniques were found to be highly significant, indicating that the PAT has high reliability and validity. Even the correlation coefficients obtained between components were found to be highly significant. High scores on the PAT indicate higher addiction to PUBG game.

Procedure

The authors collected data through both manual forms and Google forms. Though the intention was to collect from 400 PUBG players, they could get only 323 completed PAT questionnaires. The respondents were assured the confidentiality and were asked to answer all the questions honestly. The respondents were given proper instructions and explained the questions in case of doubts. Only 323 completely filled questionnaires were collected by the respondents. Once the data were collected, they were scored and fed to the computer. The data were analysed using Chi square test and Cramer's V tests. Table 1 provides the results of the distribution of levels of addiction by various demographic factors and results of test statistics.

Table 1, Distribution of the respondents on levels of PUBG addiction by various demographic factors and results of test statistics

Variable			PUBG usage				Test statistics
			Low	Average	Addict prone	Definitely addict	
Overall	F		24	179	96	24	$X^2=202.19$; P=.001
	%		7.4%	55.4%	29.7%	7.4%	
Age groups	<18	F	2	16	13	6	CV=.290; p=.001
		%	5.4%	43.2%	35.1%	16.2%	
	19-21	F	17	92	58	4	
		%	9.9%	53.8%	33.9%	2.3%	
	22-25	F	5	59	19	9	
		%	5.4%	64.1%	20.7%	9.8%	
	26+	F	0	12	6	5	
		%	0.0%	52.2%	26.1%	21.7%	
Gender	Male	F	21	168	84	16	CV=.232; p=.001
		%	7.3%	58.1%	29.1%	5.5%	
	Female	F	3	11	12	8	
		%	8.8%	32.4%	35.3%	23.5%	
Current position	Student	F	20	142	81	17	CV=.207; p=.031
		%	7.7%	54.6%	31.2%	6.5%	

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Variable			PUBG usage				Test statistics
			Low	Average	Addict prone	Definitely addict	
	Employed	F	3	33	10	3	CV=.295; p=.001
		%	6.1%	67.3%	20.4%	6.1%	
	Unemployed	F	1	4	5	4	
		%	7.1%	28.6%	35.7%	28.6%	
Smartphone usage (in hours)	<3	F	8	41	13	3	
		%	12.3%	63.1%	20.0%	4.6%	
	3-6	F	12	78	41	3	
		%	9.0%	58.2%	30.6%	2.2%	
	6-9	F	2	28	23	6	
		%	3.4%	47.5%	39.0%	10.2%	
	9+	F	2	32	19	12	
		%	3.1%	49.2%	29.2%	18.5%	
Internet usage (in hours)	<3	F	7	49	17	4	CV=.221; p=.072
		%	9.1%	63.6%	22.1%	5.2%	
	3-6	F	10	69	45	4	
		%	7.8%	53.9%	35.2%	3.1%	
	6-9	F	4	24	16	6	
		%	8.0%	48.0%	32.0%	12.0%	
	9+	F	3	37	18	10	
		%	4.4%	54.4%	26.5%	14.7%	

RESULTS

Overall PUBG addiction:

On the whole we find that a majority of 55.4% of the selected sample were average users of PUBG, followed by 29.7% of them were addict prone, 7.4% of each of them were either definitely addicts or low end users. Chi-square test revealed a significant difference between frequencies of various levels of PUBG addiction ($X^2 = 202.19$; $p = .001$), confirming that majority of the sample were average users of PUBG.

Age and PUBG addiction:

A significant association was observed between extent of usage of PUBG and age groups ($CV = .290$; $p = .001$). From the table it is clear that those who were in the age group of <18 and above 26 years had higher addiction to PUBG compared to rest of the age groups.

Gender and PUBG addiction:

A significant association was observed between gender and PUBG addiction too ($CV = .232$; $p = .001$), revealing that female respondents had higher levels of addiction towards PUBG compared to male respondents.

Current position:

When the PUBG addiction levels were verified against the position of respondents, a significant association was observed between positions and PUBG addiction ($CV = 0.207$; $p = .031$), revealing respondents who were unemployed and students had higher addiction than respondents who were employed.

Smartphone usage and PUBG addiction:

A significant association was observed between extent of smart phone usage and PUBG addiction ($CV = 0.295$; $p = .001$), revealing that PUBG addiction was high with the respondents who spent more time on smartphones.

Internet usage and PUBG addiction:

A non-significant association was observed between Internet usage and levels of PUBG addiction ($CV=.221$; $p=.072$) revealing that number of hours of usage of internet did not have significant impact on PUBG usage.

DISCUSSION

Major findings of the study

1. An alarming 29.7% of the sample selected was addict prone to PUBG, and 7.4% of the sample studied was definitely addicts
2. Gender had significant influence over PUBG addiction; female students had higher addiction towards PUBG than male students
3. Respondents who were unemployed were more addicted to PUBG than students and respondents who were employed.
4. Higher the usage of smart phone, more was the PUBG addiction among the selected sample.

The major aim of the study was to find the prevalence of PUBG addiction among Indian PUBG players. It was found that 7.4% of the players were addicted and 29.7% of them were in the risk of becoming addicts, which is a serious issue and requires some remedial measures to decrease the PUBG addiction. There are no specific studies regarding PUBG addiction either in India or elsewhere regarding the prevalence of PUBG addiction. According to another exploration done by Jana for Quartz, PUBG has met all requirements to be known as the most mainstream online game in year 2018. It has beaten its rivals and accomplished vote of 61.9 percent of 1,047 Indian respondents to wind up the most favoured online versatile diversion. Free Fire turned into the second most famous after PUBG with a 21.7 percent vote and Epic Games' Fortnite which has been reliably exceeding PUBG regarding income and players around the world, came in at third with 8.5 percent vote (www.bgr.in/gaming/62-percent-indians-play-online-mobile-games-prefer-pubg-over-other-battle-royale-game).

Another concern which has derived from the present study was individuals in the younger age groups were more addicted to PUBG than individuals in higher age groups. Most of these individuals were below 21 years. Definitely addiction to PUBG at this late adolescent stage is would affect their academics as they spend lot of time this game. Further, there could be many negative psychological effects arising due to PUBG addiction, which are not scientifically documented yet. As expected, students and unemployed respondents were more addicted to PUBG than individuals who were employed. Extent of smartphone usage too had influence on PUBG addiction, more usage led to more addiction.

Surprisingly the results show that female subjects have more addiction to PUBG than male subjects. One of the reason could be there were less female PUBG players answered PAT. Recent survey conducted by Mediakix, revealed that female subjects are more involved in mobile gaming than male subjects (<https://hypebeast.com/2018>). Study by Ko et al (2005) showed quite contrary results were gaming addiction was more or male Taiwanese adolescents than female adolescents. Hussain and Griffiths (2008) in their study on Gender Swapping and Socializing in Cyberspace found that more people preferred to socialize through online than offline and also 57% of the gamers had gender swapping in gaming as they felt female characters had more positive social attributes in the 'male' dominated gaming world.

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As such PUBG addiction has negative effects both psychologically and physically, it is high time now to stop this addiction, as the school authorities, teachers and parents feeling the heat of it. In India, Gujarat government has issued a notice to school authorities to ban students from playing PUBG game (www.timesnownews.com/technology-science, 2019). Associated Management of English Medium Schools in Karnataka (KAMS) will purportedly issue a warning to parents so as to request that they confine the time spending by their children on playing the PUBG diversion (<https://www.timesnownews.com/technology-science/article>, 2019).

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WEB RESOURCES

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Conflict of Interest

The authors carefully declare this paper to bear not conflict of interests

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