

A Study On Digital Gaming Behavior And Its Associations With COVID-19 Pandemic

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ABSTRACT: *Background:*The novel Coronavirus 2019 (COVID-19) pandemic has changed the daily routine life all over the world. India is devastating the second Wave of COVID-19.To combat, the government of India followed many public health measures such as quarantine, lockdown protocols, social distancing, promoting healthy lifestyles and self-isolation policies etc. As a consequence, the measures have led to occupational and educational disruption and psychological distress among the youth. *Objectives:* The study aims to explore the digital gaming behavior and its association during lockdown period of COVID-19 among the college students. *Methods:* Data collect randomly from the college students who they enrolled in various Arts colleges of Kanyakumari District, Tamilnadu. A total of 80 students constitute as samples. They contacted through Email or College Whatsapp group and requested to share the details. *Results:* the result will analyse their increasing and decreasing digital gaming behavior during the lockdown pandemic situation and also explore the association of components such as hours of gaming per day, changing daily routine, psychological problems with the lockdown period of COVID-19. *Conclusion:* Even though students may think digital gaming can be healthy way to relieve from stress and changing mood especially during lockdown but excessive engagement in digital gaming leads to developing unhealthy daily routine.

Keywords: COVID-19, Gaming behavior, Digital Gaming, Daily routine, Psychological Problems.

1. INTRODUCTION

COVID-19 pandemic situation disrupts the life of different people in different ways. It disturbs the normal activities too. Lockdown, Quarantine, and Stay home these words are familiar to combat the fight against COVID-19. It increased the digital entertainment especially online gaming among the students. In the Indian context, “lockdown” refers to individuals staying at home while completely restricting the movement of the population inside and outside of specific areas except for essential activities (health visits, purchasing for essential items, and providing essential work) (Lippi et al. 2020). It leads psychological distress among the individuals. WinZo Games, an Indian-based gaming company, have reported three times more user engagement and 30% higher traffic in online mobile gaming. Around 35% higher usage has been observed in multi-player modes in comparison with single-user modes, a trend also found elsewhere (Bora 2020). Similarly, Paytm First Games,

an Indian mobile-based online gaming platform, reported an almost 200% increase in the user base during the pandemic, with 75,000 new users (Ahaskar 2020). Gaming has been reported throughout the day, with a peak gaming time from 8pm until midnight (Bora 2020). Research resulted that online game has both positive and negative benefits. Gaming can also help in developing cognitive skills such as reasoning, spatial awareness, and problem-solving (Bowen 2014; Nuyens et al. 2019) but on the contrary, problematic gaming is associated with psychosocial problems such as lack of sleep, low school well-being, concentration problems, impaired life skills, and poor self-control (Männikkö et al. 2020). Extreme engagement in online gaming is also strongly associated with poor academic performance among school-going children and adolescents (Terry and Malik 2018). The World Health Organization (WHO) has seemingly expressed support for the gaming industry's online social media campaign (#PlayApartTogether) that incorporates WHO messaging about coronavirus prevention guidelines in conjunction with encouraging online gaming (Ghebreyesus, 2020; Maden, 2020) although recent WHO mental health information (#HealthyAtHome – Mental Health) recommends balanced screen time and gaming (WHO, 2020).

In India, Most of the college students are experiencing stressful situation for facing first and second wave of COVID-19. This pandemic make the adverse impact on their future academic and carrier prospects. In addition, most of the students at the time of closure of colleges (a few days before the nationwide lockdown) were expected to take their professional course examination. This examination also got postponed indefinitely. This could also be a potential factor impacting the mental health of college students. Thus, the college students were faced with a situation that is ridden with complexities and uncertainties about their future, at least in the short term (Balhara et al. 2021). Even though gaming has been recognized as positive coping factor in life, the excessive gaming leads to developing unhealthy daily routine.

Objectives

The study aims to explore the digital gaming behavior and its association during lockdown period of COVID-19 among the college students.

Materials and Methods

Data are collected from College students having arts subjects constituted the sampling frame for this study by the authors. This project started at the beginning of Second Wave of COVID-19. Consent is sought from the students for participation in the study. Participants are the college students who they enrolled in various Arts colleges of Kanyakumari District, Tamilnadu. A total of 80 students constitute as samples. The structured questionnaire was framed and circulated through Email and College Whatsapp group and requested to share the details. The data were collected online due to the restriction on movements.

2. RESULTS AND DISCUSSION

Socio-demographic details of the respondents

In this study 40.5 percent of the respondents are male and 59.5 percent of the respondents are female. 37.8 percent of the respondents are below the age of 18 and 62.2 percent of the respondents are above the age of 18. Most of the students (62.2%) are from rural areas and 37.7 percent are from urban areas. Among the respondents 62.2 percent are studying Under Graduation, 27 percent are studying Post Graduation, and 10.8 percent are studying other degrees. Most of the (45.9%) respondents' parents' income is below Rs.8000. 97.3 percent of the respondents are getting financial support from either parents or family members.

Majority (81.1%) of the respondents are living in owned house. 24.3 percent of the respondents are spending Rs.500 per month for playing the Digital Gaming.

Digital Gaming Behaviour of the respondents

Most (59.5%) of the respondents prefer to play offline games and 40.5 percent of the respondents prefer to play online games. Majority (78.4%) of the respondents use Mobile phones for playing the Digital Games and other respondents using Personal Computer and other devices. The favourite games played by the respondents are PUBG Mobile (10.8%), Free Fire (18.9%), Clash of Clans (10.8%), Ludo King (40.5%), and Among Us (18.9%). 54.1 percent of the respondents are spending one hour to play Digital Games, 13.5 percent spending 2 hours and 16.2 percent of the respondents are spending more than 3 hours. Most (64.9%) of the respondents are playing Digital Games at least one time per day. 24.3 percent of the respondents agree that they stopped social gathering to play online gaming.

Level of Digital Gaming Behaviour and other variables

This study found that 67.6 percent of the respondents have low level of Digital Gaming Behaviour and 32.4 percent of the respondents have high level of Digital Gaming Behaviour. This study found that 54.1 percent of the respondents have low level of problems in relationship with parents and 45.9 percent of the respondents have high level of problems in relationship with parents during COVID-19 Pandemic. This study found that 56.8 percent of the respondents have low level of Changes in Daily Routine and 43.2 percent of the respondents have high level of Changes in Daily Routine during COVID-19 Pandemic. This study found that 54.1 percent of the respondents have low level of Psychological problems and 45.9 percent of the respondents have high level of Psychological problems during COVID-19 Pandemic.

Significance of socio-demographic variables over the Digital Gaming Behaviour

T test result shows that $P > 0.05$, hence there is no significant difference between male and female respondents regarding their Digital Gaming Behaviour. There is no significant difference between the respondents with different age groups regarding their Digital Gaming Behaviour. There is no significant difference between rural and urban respondents regarding their Digital Gaming Behaviour. There is no significant difference ($F=0.898, p>.05$) among UG, PG and other qualified respondents with regard to their Digital Gaming Behaviour. There is no significant difference ($F=2.300, p>.05$) among the respondents with different parental income regarding their Digital Gaming Behaviour.

Significance of socio-demographic variables over the Changes in Daily Routine

T test result shows that $P > 0.05$, hence there is no significant difference between male and female respondents regarding the Changes in Daily Routine. There is no significant difference between the respondents with different age groups regarding the Changes in Daily Routine. There is no significant difference between rural and urban respondents regarding the Changes in Daily Routine. There is no significant difference ($F=0.235, p>.05$) among UG, PG and other qualified respondents with regard to their Changes in Daily Routine. There is no significant difference ($F=0.417, p>.05$) among the respondents with different parental income regarding their Changes in Daily Routine.

Significance of socio-demographic variables over the Psychological problems of the students

Table shows that $P > 0.05$, hence there is no significant difference between male and female respondents regarding the Psychological problems. There is no significant difference between the respondents with different age groups regarding the Psychological problems. There is no significant difference between rural and urban respondents regarding the Psychological problems. There is no significant difference ($F=0.235$, $p>.05$) among UG, PG and other qualified respondents with regard to their Psychological problems. There is no significant difference ($F=0.417$, $p>.05$) among the respondents with different parental income regarding their Psychological problems.

Relationship among the Digital Gaming Behaviour, Problems in relationship with Parents, Changes in Daily Routine, Psychological problems

S. No	Factors	Digital Gaming Behaviour	Problems in relationship with Parents	Changes in Daily Routine	Psychological problems
1	Digital Gaming Behaviour	1			
2	Problems in relationship with Parents	$r = .431^{**}$ $P < .01$ (.00)Sig	1		
3	Changes in Daily Routine	$r = .402^*$ $P < .05$ (.01)Sig	$r = .658^{**}$ $P < .01$ (.00)Sig	1	
4	Psychological problems	$r = .349^*$ $P < .05$ (.03)Sig	$r = .599^{**}$ $P < .01$ (.00)Sig	$r = .755^{**}$ $P < .01$ (.00)Sig	1
5	Number of hours spending on Digital Gaming	$r = .950^{**}$ $P < .01$ (.00)Sig	$r = .344^*$ $P < .05$ (.03)Sig	$r = .655^{**}$ $P < .01$ (.00)Sig	$r = .406^*$ $P < .05$ (.01)Sig

*.Correlation is significant at the 0.05 level (2-tailed). Sig.-Significant, NS-Not Significant, **.Correlation is significant at the 0.01 level (2-tailed).

The above table shows that $P < .01$, hence there is a significant relationship between Digital Gaming Behaviour and the Problems in relationship with Parents. There is a significant relationship between Digital Gaming Behaviour and the Changes in Daily Routine. There is a significant relationship between Digital Gaming Behaviour and the number of hours spending on Digital Gaming. The above table shows that $P < .01$, hence there is a significant relationship between Changes in Daily Routine and the Problems in relationship with Parents. There is a significant relationship between Changes in Daily Routine and the Psychological problems of the students. The above table shows that $P < .01$, hence there is a significant relationship between Changes in Daily Routine and the number of hours spending on Digital Gaming. There is a significant relationship between the problems in relationship with Parents and the Psychological problems of the students. There is a significant relationship between the number of hours spending on Digital Gaming and the Psychological problems of the students.

Regression analysis for factor influencing the Psychological problems of students

Table: Factor influencing the Psychological problems of students

Variables	B	S.E	Beta	t value	Sig
Constant	4.256	3.351		1.270	.212
Changes in Daily Routine during COVID-19 Pandemic	1.035	.152	.755	6.806	.000

R = .755, R² = .570, Adjusted R² = .557

Above table shows that the Multiple correlation coefficient $R = .755$. It shows that there is a strong relationship between the Changes in Daily Routine with Psychological problems of students. The Coefficient of determination $R^2 = .570$ which indicates that Changes in Daily Routine during COVID-19 Pandemic explained 57 percentage of variance in the Psychological problems faced by the students during COVID-19 Pandemic. The Adjusted $R^2 = .557$, which indicates that irrespective of number of independent variables and sample size the level of the Psychological problems faced by the students during COVID-19 Pandemic can be predicted up to 57 percentage.

3. SUGGESTIONS

Most (64.9%) of the respondents are playing Digital Games at least one time per day. 54.1 percent of the respondents are spending one hour to play Digital Games, 13.5 percent spending 2 hours and 16.2 percent of the respondents are spending more than 3 hours. It shows the severity of the Digital Gaming Behaviour among the students. Hence awareness about the Internet addiction can be given to those students.

24.3 percent of the respondents agree that they stopped social gathering to play online gaming. It shows that they slowly become addicted to the online games. Hence proper psychological support can be given to those students to come out of that behaviour. This study found that 45.9 percent of the respondents have high level of problems in relationship with parents during COVID-19 Pandemic. The training on relationship management can be given to the students and family counselling also can be given to all family members.

This study explored that 43.2 percent of the respondents have high level of Changes in Daily Routine during COVID-19 Pandemic. The training on Life skills (10 skill sets) suggested by World Health Organization (WHO) can be given to the students to manage their life efficiently. This study verified that 45.9 percent of the respondents have high level of Psychological problems during COVID-19 Pandemic. Moreover this research evidenced that Changes in Daily Routine during COVID-19 Pandemic highly influence the Psychological problems faced by the students during COVID-19 Pandemic. Psychotherapies can be applied to those who have high level of psychological problems.

4. CONCLUSION

This study aimed to explore the digital gaming behavior and its association during lockdown period of COVID-19 among the college students. It found that there is a significant relationship among the Digital Gaming Behaviour, Problems in relationship with Parents, Changes in Daily Routine, Psychological problems. Moreover this research evidenced that Changes in Daily Routine during COVID-19 Pandemic highly influence the Psychological problems faced by the students during COVID-19 Pandemic. Hence appropriate intervention

strategies need to be adapted to control the Psychological problems faced by the students during COVID-19 Pandemic before it will reach the alarming stage

4. REFERENCE

- [1] Ahaskar, A. (2020). How gaming industry is fighting the battle against Covid-19. Live Mint, April 1. Retrieved June 24, 2020, from: <https://www.livemint.com/news/india/how-gaming-industry-is-fighting-the-battleagainst-covid-19-11585748266505.htmlp>
- [2] Balhara YP, Kattula D, Singh S, Chukkali S, Bhargava R. Impact of lockdown following COVID-19 on the gaming behavior of college students. *Indian J Public Health* [serial online] 2020 [cited 2021 May 12];64, Suppl S2:172-6. Available from: <https://www.ijph.in/text.asp?2020/64/6/172/285596>.
- [3] Bora, G. (2020). For Indian gaming startups, Covid-19 lockdown is a boon for business. *The Economic Times*, April 13. Retrieved June 24, 2020, from: <https://economictimes.indiatimes.com/smallbiz/startups/newsbuzz/for-indian-gaming-startups-covid-19-lockdown-is-a-boon-forbusiness/articleshow/75115595>
- [4] Bowen, L. (2014). Video game play may provide learning, health, social benefits, review finds. *Monitor on Psychology*, 45(2). <https://www.apa.org/monitor/2014/02/video-game>
- [5] Ghebreyesus, T. A. (2020). Thank you @RaymondChambers for mobilizing the gaming industry to feature @WHO advice on #COVID19 to their users. We must all #PlayApartTogether to beat the #coronavirus. 9:29am. 29 March 2020. Tweet.
- [6] <https://www.windowscentral.com/world-health-organization-encourages-people-game-during-coronavirus-outbreak>
- [7] Lippi, G., Henry, B. M., Bovo, C., & Sanchis-gomar, F. (2020). Health risks and potential remedies during prolonged lockdowns for coronavirus disease. *Diagnosis*, 7(2), 85–90.
- [8] Männikkö, N., Ruotsalainen, H., Miettunen, J., Pontes, H. M., & Kääriäinen, M. (2020). Problematic gaming behaviour and health-related outcomes: A systematic review and meta-analysis. *Journal of Health Psychology*, 25, 67–81. <https://doi.org/10.1177/1359105317740414>.
- [9] Nuyens, F., Kuss, D. J., Lopez-Fernandez, O., & Griffiths, M. D. (2019). The experimental analysis of nonproblematic video gaming and cognitive skills: A systematic review. *International Journal of Mental Health and Addiction*, 17, 389–414. <https://doi.org/10.1007/s11469-018-9946-0>