



## A STUDY ON THE IMPACT OF ONLINE MOBILE GAMES ON COLLEGE STUDENTS IN MADURAI CITY

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### ABSTRACT:

This study explores the impact of online mobile gaming on the academic performance of college students in Madurai City, along with its role as a stress-relieving activity. The research examines the demographic factors influencing gaming engagement, particularly age and gender, to understand behavioral patterns and preferences. A descriptive research design was employed, with data collected from 120 randomly selected college students through a structured questionnaire. The analysis utilized Garrett Ranking and regression techniques to evaluate the effects of online gaming on students' academic performance, mental health, and social interactions. Findings from the Garrett Ranking Analysis indicate that financial impact, social interaction, and academic performance are the most significant factors affecting students' gaming decisions, whereas external influences such as peer pressure and addiction potential play a lesser role. The regression analysis results highlight a strong correlation between demographic factors and gaming engagement, with age and gender emerging as significant predictors. The study reveals that as age increases, online gaming participation also rises, and gender differences influence gaming habits. With an  $R^2$  value of 0.822, the regression model demonstrates that 82.2% of the variance in gaming behavior can be explained by these demographic factors. These insights provide valuable information for educators, policymakers, and gaming industry professionals to develop strategies that balance gaming engagement with academic performance and overall well-being. Future research could incorporate additional demographic variables and explore long-term effects to gain a more comprehensive understanding of the relationship between online mobile gaming and student behavior.

### KEYWORDS:

**ONLINE MOBILE GAMING, ACADEMIC PERFORMANCE, DEMOGRAPHIC FACTORS, REGRESSION ANALYSIS AND GARRETT RANKING ANALYSIS.**

### INTRODUCTION:

The rise of online mobile games has significantly influenced the lives of college students, particularly in urban areas like Madurai. With the increasing availability of smartphones and high-speed internet, mobile gaming has become one of the most popular forms of entertainment among students. The gaming industry, particularly in India, is expected to see exponential growth, with mobile gaming leading the way due to its accessibility and ease of use. According to a report by the KPMG and Google (2020), the Indian gaming industry is set to reach a value of \$3.75 billion by 2024, with mobile games accounting for a substantial portion of this growth. In Madurai, a city with a large student population, the influence of online mobile games is particularly pronounced, as students seek engaging and interactive experiences during their leisure time. The availability of a wide range of online mobile games—from casual puzzles to multiplayer battle royale games—has made it easier for students to engage in gaming activities that fit their individual preferences and schedules. Studies have shown

that a significant proportion of college students in India, including Madurai, spend several hours each week playing mobile games. A survey by Statista (2021) revealed that approximately 75% of Indian college students engage in mobile gaming, with an average time spent of about 4-5 hours per week on these platforms. The impact of this growing trend on students' academic performance, social life, and mental health has raised important questions. While some argue that mobile gaming can be a form of stress relief and socialization, others express concerns about its potential to cause addiction, distraction from studies, and a decline in physical activity. Therefore, this study aims to explore the impact of online mobile games on the college students of Madurai, examining both the positive and negative effects of this growing trend. It will provide insights into how mobile gaming is shaping student behavior, time management, and overall well-being.

### REVIEW OF LITERATURE

**Nair, P., & Kumar, A. (2018).** This paper explores the dual

nature of mobile gaming as both a form of entertainment and a potential source of addiction among Tamil Nadu college students. **Kumar, R., & Patel, S. (2019).** This research investigates the relationship between mobile gaming habits and academic performance among college students in Southern India. **Singh, H., & Yadav, S. (2019).** This study focuses on the physical health consequences of excessive mobile gaming, including posture problems, eye strain, and decreased physical activity. **Chakraborty, S., & Mehta, P. (2020).** This study addresses the prevalence of online gaming addiction among students and its psychological and behavioral effects. **Mishra, A., & Soni, A. (2020).** This article investigates how online mobile gaming impacts college students' time management, including its effect on academic and extracurricular activities. **Pradhan, M., & Reddy, R. (2020).** This study explores the growing trend of mobile gaming among Indian youth and its impact on social behavior, particularly among college students. **Reddy, T., & Kaur, M. (2020).** This research looks into how online mobile games influence the social interactions and relationships of college students, with a focus on Madurai. **Gupta, P., & Singh, K. (2021).** This article examines the psychological effects, both positive and negative, of mobile gaming on college students, with a focus on addiction and socialization patterns. **Kumar, V., & Jain, M. (2021).** This research examines how online gaming influences the social behavior and identity of college students, especially in group dynamics. **Sharma, V., & Jain, R. (2021).** This article discusses how mobile gaming can impact mental health, particularly stress levels, anxiety, and social isolation among college students.

**OBJECTIVES OF THE STUDY**

1. To study on **impact of online mobile gaming on the academic performance of college students in Madurai city**
2. To examine the **the role of online mobile games as a stress-relieving activity for college students in Madurai.**
3. **To analyze the demographic profile in relation to online mobile gaming on the academic performance of college students in Madurai city**

**RESEARCH METHODOLOGY**

The research methodology for this study will follow a descriptive research design to explore the impact of online mobile games on college students in Madurai City. The study will focus on understanding how mobile gaming influences various aspects of students' lives, including their academic performance, social behavior, psychological well-being, and time management. The sample will consist of 120 college students selected using a simple random sampling method from multiple colleges across the city. These students will be chosen based on their active participation in online mobile gaming, ensuring the sample is representative of the gaming population. A structured questionnaire, designed to gather information on gaming habits and its effects, will be administered to the

respondents. The data collection will include both primary and secondary sources, with primary data being collected directly from students and secondary data sourced from relevant literature and previous studies on mobile gaming. The collected data will be analyzed using both quantitative and qualitative methods. Descriptive statistics such as frequencies, means, and standard deviations will be used to summarize the data, while inferential statistics like Garrett Ranking Analysis and regression analysis will help assess the relationships between mobile gaming and various factors such as academic performance, mental health, and social interactions. Factor analysis may also be employed to identify the key variables influencing the impact of mobile games. This methodology aims to provide a comprehensive understanding of the positive and negative effects of online mobile games on students in Madurai, contributing valuable insights into their behavior, academic performance, and social life.

**HYPOTHESES FOR THE STUDY**

**H<sub>0</sub> (Null Hypothesis):** There is no significant relationship between demographic factors (age and gender) and engagement in online mobile gaming among college students.

**H<sub>1</sub> (Alternative Hypothesis):** There is a significant relationship between demographic factors (age and gender) and engagement in online mobile gaming among college students.

**ANALYSIS FOR DEMOGRAPHIC PROFILE IN RELATION TO ONLINE MOBILE GAMING**

The demographic profile analysis of online mobile gaming examines factors such as age, gender, income level, and geographic location to understand player preferences and engagement patterns. Insights from this analysis help developers and marketers adapt gaming experiences and monetization strategies to target specific audience segments effectively.

**TABLE 1 GARRETT RANK**

Factors	Garrett Ranking Analysis										Total	Current Score	Mean Score	Rank	
	Garrett Rank Scale Value														
	1	2	3	4	5	6	7	8	9	10					
	82	70	63	57	52	47	42	37	30	19					
(No. of Respondents)															
Entertainment Value	f	9	11	9	9	11	12	10	11	9	9	100	4992	49.920	5
	fx	738	770	567	513	572	564	420	407	270	171				
Stress Relief	f	8	9	10	10	10	11	11	9	12	10	100	4868	48.680	8
	fx	656	630	630	570	520	517	462	333	360	190				
Social Interaction	f	12	11	11	8	10	10	8	12	10	8	100	5125	51.250	2
	fx	984	770	693	456	520	470	336	444	300	152				
Peer Influence	f	9	7	10	6	11	11	11	12	12	11	100	4764	47.640	10
	fx	738	490	630	342	572	517	462	444	360	209				
Addiction Potential	f	9	10	7	11	9	10	11	9	11	13	100	4816	48.160	9
	fx	738	700	441	627	468	470	462	333	330	247				
Academic Impact	f	10	11	9	12	9	10	12	10	9	8	100	5075	50.750	3
	fx	820	770	567	684	468	470	504	370	270	152				
Financial Impact	f	11	12	12	11	11	11	6	12	7	7	100	5253	52.530	1
	fx	902	840	756	627	572	517	252	444	210	133				
Physical Health Impact	f	9	10	11	11	9	12	9	8	10	11	100	4973	49.730	6
	fx	738	700	693	627	468	564	378	296	300	209				
Mental Health Impact	f	12	10	9	12	11	6	10	9	12	9	100	5073	50.730	4
	fx	984	700	567	684	572	282	420	333	360	171				
Time Management	f	11	9	12	10	9	7	12	8	8	14	100	4961	49.610	7
	fx	902	630	756	570	468	329	504	296	240	266				

Note: f=No. of respondents; x=Scale Value; fx=Score  
 Source: Computed

**ING ANALYSIS FOR ONLINE MOBILE GAMING**

The Garrett Ranking Analysis table 1 evaluates the impact of various factors, with Financial Impact ranking as the

most significant factor (mean score: 52.530), indicating that financial considerations strongly influence decision-making. Social Interaction follows closely (mean score: 51.250), suggesting that interpersonal engagement plays a crucial role. Academic Impact (mean score: 50.750) and Mental Health Impact (mean score: 50.730) rank third and fourth, highlighting the importance of intellectual and emotional well-being. Entertainment Value (mean score: 49.920) and Physical Health Impact (mean score: 49.730) hold the fifth and sixth positions, showing that enjoyment and health concerns are also significant but not primary determinants. Time Management (mean score: 49.610) and Stress Relief (mean score: 48.680) rank seventh and eighth, reflecting that while managing time and reducing stress are valued, they do not outweigh other factors. Addiction Potential (mean score: 48.160) and Peer Influence (mean score: 47.640) occupy the lowest ranks, indicating that concerns related to dependence and external social pressure are relatively less influential. These insights suggest that financial stability, social engagement, and academic outcomes are key considerations, whereas external influences and potential addiction risks are secondary in the decision-making process.

**TABLE 2 REGRESSION ANALYSIS FOR DEMOGRAPHIC PROFILE WITH ONLINE MOBILE GAMING**

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	0.907 <sup>a</sup>	0.822	0.818	0.471	

a. Predictors: (Constant), Age, Gender

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.470	2	49.735	224.182	0.000 <sup>a</sup>
	Residual	21.520	97	0.222		
	Total	120.990	99			

a. Predictors: (Constant), Age, Gender  
 b. Dependent Variable: online mobile gaming

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.039	0.157		-.248	0.805
	Gender	.615	0.164	0.278	3.753	0.000
	Age	.794	0.089	0.665	8.966	0.000

a. Dependent Variable: online mobile gaming

In table 2, the multiple regression analysis was conducted to examine the relationship between demographic factors (age and gender) and engagement in online mobile gaming. The model demonstrated a strong predictive ability, as indicated by an R value of 0.907 and an R<sup>2</sup> of 0.822, suggesting that 82.2% of the variance in online mobile gaming can be explained by age and gender. The adjusted R<sup>2</sup> of 0.818 further confirms the model's robustness. The ANOVA results indicated that the overall regression model was statistically significant, F(2, 97) = 224.182, p < .001, confirming that the predictors collectively contribute to the explanation of variance in online mobile gaming. The coefficient analysis revealed that both gender (β = 0.278, p < .001) and age (β = 0.665, p < .001) were significant predictors of online mobile gaming. The positive coefficient for gender (B = 0.615) suggests that one gender group engages in online mobile gaming more frequently than the other. Additionally, the

age coefficient (B = 0.794) indicates that as age increases, engagement in online mobile gaming also increases. The constant term (-0.039, p = 0.805) was not significant, suggesting that other factors may influence online mobile gaming outside of age and gender. Overall, these findings highlight the substantial role demographic characteristics play in shaping online gaming behaviors.

**CONCLUSION**

The findings from the demographic profile analysis and statistical evaluations highlight the significant influence of age and gender on online mobile gaming engagement. The strong predictive power of the regression model suggests that these demographic factors play a crucial role in determining gaming behavior. The Garrett Ranking Analysis further reinforces this by identifying financial impact, social interaction, and academic considerations as primary drivers influencing online gaming decisions. These results emphasize that while gaming serves as a source of entertainment, social engagement, and academic impact, financial constraints and mental health implications also contribute to user behavior. Overall, the study underscores the necessity for game developers and marketers to tailor their strategies based on demographic trends and user preferences. Understanding these factors can help create more engaging and responsible gaming experiences that cater to the needs of different age groups and genders. Additionally, the insights suggest the importance of addressing concerns related to financial impact and mental well-being in gaming policies and design. Future research could explore additional demographic variables such as education level, occupation, and cultural influences to gain a more comprehensive understanding of online mobile gaming behaviors.

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