A REVIEW ARTICLE ON MILLENNIUM'S EXPERIENCE OF VIDEO GAMING

Arpit Sidhu Prerana Rout***

ABSTRACT:

The aim of this paper is to connect, by reviewing the available literature, the current status of research carried out on gaming addiction, PUBG, mobile gaming effects and psychological behavior. Other aims of the present study are to classify the previous studies into different categories, to provide an inclusive bibliography of the subject, and to analyze the results of the studies taken into account by different researchers. In order to analyze the previous studies, various sources were reviewed and 25 research papers were considered out of thousands of papers, forming the sample for the present analysis. The research work on this subject was found to have increased from 2011 to 2020, thus gaining consistently greater interest since then. This report will assist scholars, clinicians, potential researchers, policy makers and other relevant stakeholders in the study of current research work, as well as in the establishment of guidelines for future research work related to the same subject area, and in the use of such data in any field that can make a resourceful contribution.

Keywords: ***Gaming Addiction; Mobile Gaming; PUBG; Literature Review.***

INTRODUCTION

One of the world's favorite recreational opportunities for young people is online video gaming. The main choice for smartphones is mobile phones, but seasoned players prefer to switch to larger screens with an 86 percent stake, an 11 percent stake for laptops, and 4 percent for tablets.

Research has consistently shown that gaming, including therapeutic, medical, health, cognitive, and academic improvements, can deliver many positive benefits. There are also other benefits, and some of the 'learning and growth benefits' may be an excellent source of enhancing younger children's early learning capacity, improving memory, brain speed, and attention, improving multi-tasking abilities, fostering teamwork, and building children's confidence. The State of Online Gaming 2020 research report highlights the latest findings in an ongoing series of consumer reports on online tastes and opinions. This research is based on responses from 4,500 clients in France, Germany, India, Italy, Japan, Singapore, South Korea, the United Kingdom and the United States, aged 18 and over, who play video games at least once a week. Respondents were asked questions on a number of subjects for a successful gaming experience to determine the types of games they play and how often, the devices they use, how they access information, and what they think is important.

In the past year, since the State of Online Gaming 2019 study, there have been new gaming possibilities and improvements in online gaming activity. A new category of online gaming included in this year's survey is Console-less Gaming Platforms (such as Google Stadia). In terms of the most influential behavior change, binge-gaming is on the increase, with most players reporting having played for more than four hours consecutively. However, gaming can be problematic and potentially addictive, and there is no formal rating system in India. No comprehensive study has been conducted on the harmful psychosocial impacts of Indian gamers and we have attempted to highlight a few global instances for awareness purposes.

The concepts of the relationship between gaming addiction, its effects and psychological behavior came to the fore during the 1990s, but surprisingly, an unprecedented amount of research work has been done on these topics during the last nine to ten years. Most of the previous research analyzed relationships (long-term and short-term), psychological behavior using regression analysis, exploratory analysis, statistical analysis, descriptive, reliability and correlation analysis, Likert 5 scale, independent-sample test and many more during the study of the current literature on gaming impact. The remainder of this paper is organized as follows: Section 2 and Section 3 concentrate on Today's Online Gaming Has Many Ways of Involvement, Including: Game Genre and Monetization Strategies and research purpose. In Section 4, the data and methodology used in the present study are defined. Section 5 addresses the description and discussion of previous scientific research relating to the relationship between gaming addiction, its consequences, and psychological behavior. Section 6 offers insight into the final conclusion on the analysis of past literature, and this section also addresses the perceived research gap that will support future research activities.

Assistant Professor, Lovely Professional University **Student, Lovely Professional University * Student, Lovely Professional University*

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1. Online Gaming Today Has Several Ways of Participation

• Channels:

▹ Via browser, apps& pre-loaded gadgets

▹ A device used: Consoles, PC/ laptops, and mobile/laptops

▹ Modes of playing: Offline& Online

• Game Genres

▹ Puzzle: Problem-solving skills (E.g.: Rush Hour)

▹ Action: Physical challenges – (e.g.: The Legends of Zelda: Breath of the Wild)

▹ Strategy: Gamer(s) decision-making skills (e.g.: StarCraft with Brood War Expansion)

▹ Adventure: Story-based (e.g.: Harry Potter's Hogwarts Mystery)

▹ Arcade: Single-player games (e.g.: Space Invaders)

▹ Sports: (e.g.: EA Sports Cricket)

▹ Skill-based: Mental skills (e.g.: Poker)

• Monetization models

▹ In-app advertisement

▹ In-game product

▹ Incentive based advertisement

▹ Purchase/pay per download

▹ Premium/upgrades

▹ In-app purchases

▹ Subscription

Research Purpose: It has generated alarm about the rapid growth of video game popularity among professionals, parents, educators, and politicians. Since TV's advent, an entertainment medium has not been subjected to such wildly ambivalent reactions or such skyrocketing revenues. Sales amounted to $6.3 billion in the United States in 1998, and 90 percent of US households with children leased or owned a video or computer game. There is concern that video games can interfere with the development of skills needed to make a successful transition to a successful transition to adult health, particularly during adolescence, when social interactions and academic achievements lay the foundations for adult health. While gamers and non-gamers concerns about the lack of school duties (reading and homework) of gamers are justified. While video games have only been played by a small percentage of girls, our findings indicate that playing video games can have different social effects for girls than for boys.

Although it is widely acknowledged that most American teenagers spend a large amount of time playing video games, the veracity of this statement has been given little empirical attention.

This has been remedied by the Kaiser Family Foundation in 19993 and 20044 in representative studies of media use by 8- to 18-year-olds in America. On an average day in 1999, 39 percent of young people were found to have played video games, and 41 percent did so in 2004. This proportion, while sizable, is far from capturing the majority of American youth. In comparison, gamers spent an average of 26 minutes a day playing in 1999 and 32 minutes per day in 2004, respectively.

Research Gap

Many studies have already been conducted on the perception of video games, their side effects, their association with stress and mental health in various countries such as the U.S., U.K, etc. But very few or almost none of the studies are linked to the positive side of video games or their benefits in some way contributing to the well-being of a person, keeping the point in consideration that excessive use of video games is harmful, even the research done on this subject and field is limited from our country INDIA.

Data and Methodology

4.1 Data

The purpose of this section is to organize past research studies on the relationship between gaming addiction, PUBG, psychological activity, and mobile gaming effects. For this reason, 25 research papers did not differ in the amount of time they spent interacting with family and friends, from 2011 to 2020, conference proceedings and working papers. First, the research papers were split into two groups, i.e., Indian studies and international studies. Of the 25 journals, 22 are focused on international papers, with the remaining 3 on the Indian market. The classification of empirical research papers on the basis of the year of study, the country in which the research was carried out, the sample duration taken by the researchers, the number of sample countries, the sources of papers, the methodology adopted and the results and conclusions published by the researchers are reported in various tables and figures in the following pages.

Methodology :-Initially, the related literature was checked for 9-10 years on selected databases and websites on the basis of the keyword descriptor 'gaming addiction" PUBG' and 'gaming impact'. The quest for similar literature was based on the keywords in the titles, the list of keywords, references, and abstracts. Many research papers were produced by this quest and most of them were related to gaming effects. Yeah, but the

The selection of these 25 papers was specifically focused on their direct relationship between the gaming effects of the person concerned. To determine the proper categorization, the research work of these 25 papers was checked. The following different groups are categorized into all the research papers:

1.Online Gaming Today Has Several Ways of Participation

• Channels:

▹ Methodology in many academic papers used for data processing

▹ Year wise classification of study (from 2011 to 2020)

▹ Classification of studies country-wise (where research has been conducted)

▹ Number of years taken as a data set sample

▹ Number of countries used in different research papers as a sample collection

▹ Sources of papers that have been taken up for study.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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Literature review

The (fig 1.1) data is been shown regarding the no. of countries' author's research paper has been reviewed for the current research paper. As described Turkey (3), Hong Kong (1), China (4), Philippines (1), Netherlands (3), Saudi Arabia (1), United States (2), Germany (2), India (3), United Kingdom (2), Pakistan (1), Norway (1). As it can be clearly seen that the highest number of research papers referred is from China.

COUNTRIES	NO. OF STUDIES
TURKEY	3
HONG KONG	1
CHINA	4
PHILIPPINES	1
NETHERLANDS	3
SAUDI ARABIA	1
UNITED STATES	2
GERMANY	2
INDIA	3
UNITED KINGDOM	2
IRELAND	1
PAKISTAN	1
NORWAY	1

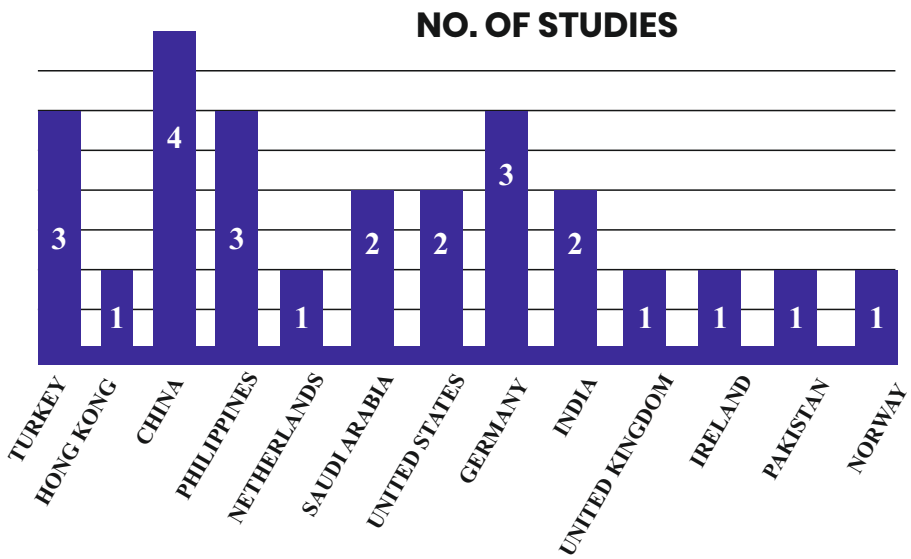


Figure 1.1 The fig describes about the no. of countries used in the study

The next (fig 1.2) shows that the total research papers reviewed where 25 and how many of them are from India and how many of them are International, it clearly states that (12%) is

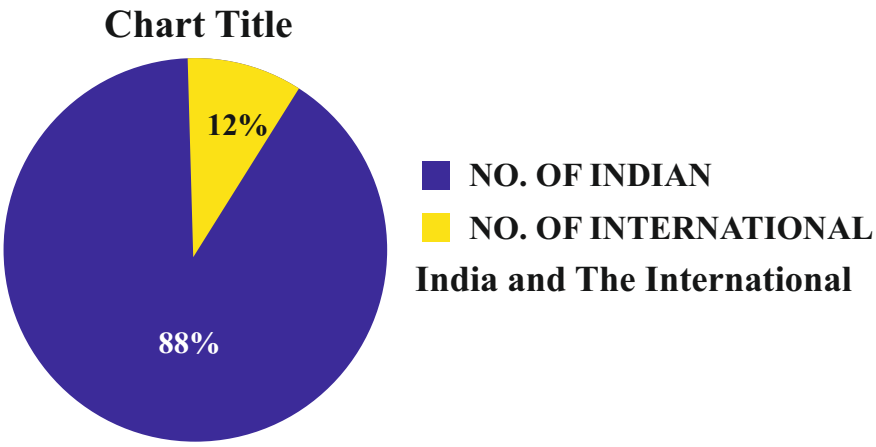


Fig 1.2 Describes the no. of research paper, Indian and International remaining (88%) is International.

As described below (fig 1.3) the various number of journals in which the referred research papers are been published, so according to it International Journal of Mental Health and Addiction and Frontiers in psychology Journal is been referred 2 times among the rest of the journal.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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S.No.	JOURNAL	No. of Journals
1	Journal of Surgical Education	1
2	Dove Press Journal	1
3	International Journal of Technology Enhanced Learning	1
4	International Conference on Engineering Psychology and Cognitive Ergonomics	1
5	Akademin For Halsa Och Arbetsliv	1
6	Journal of behavioral addictions	1
7	Conference: 12th International Symposium Communication in the Millennium	1
8	The Scientific World Journal	1
9	Int J Ment Health Addiction	1
10	IRCHE	1
11	International Journal of Educational Technology in Higher Education	1
12	Addictive Behaviour Journals	1
13	Universal Journal of Educational Research	1
14	IOP Publishing Ltd	1
15	Indian Journal of Social Psychiatry	1
16	Archives of Neuropsychiatry	1
17	International Journal of Management, IT & Engineering	1
18	International Journal of Mental Health and Addiction	2
19	BMJ Journals	1
20	Frontiers in public health journal	1
21	Frontiers in psychology Journal	2
22	Asian Journal of Social Sciences and Management Studies	1
23	International Research Journal of Modernization in Engineering Technology and Science	1

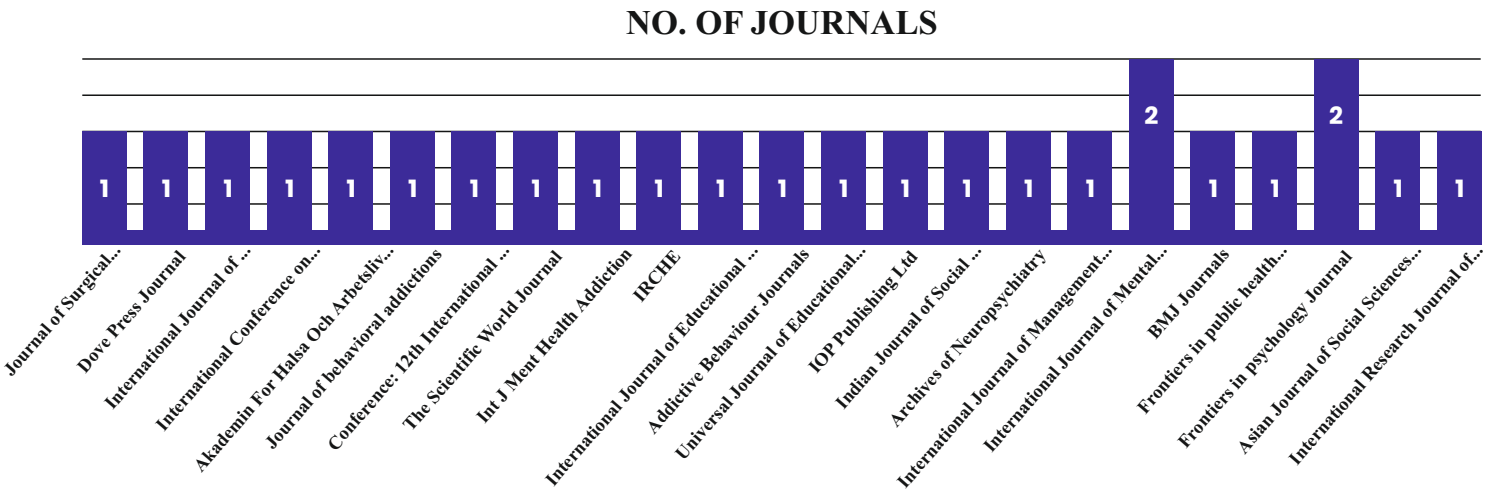


Fig 1.3 Describes the journals in which research papers are published

In (fig 1.4) the sample size is been segmented from the range of 0-1000 and above,

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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S.No.	Sample Range	No. of Sample
1	0-100	8
2	101-200	6
3	201-300	2
4	301-400	3
5	401-500	0
6	501-600	2
7	601-700	0
8	701-800	1
9	above 1000	3

Here, year 2019 is referred maximum no. of times, i.e., 5(20%).

2011	1
2012	2
2013	2
2014	3
2015	1
2017	4
2018	3
2019	5
2020	4

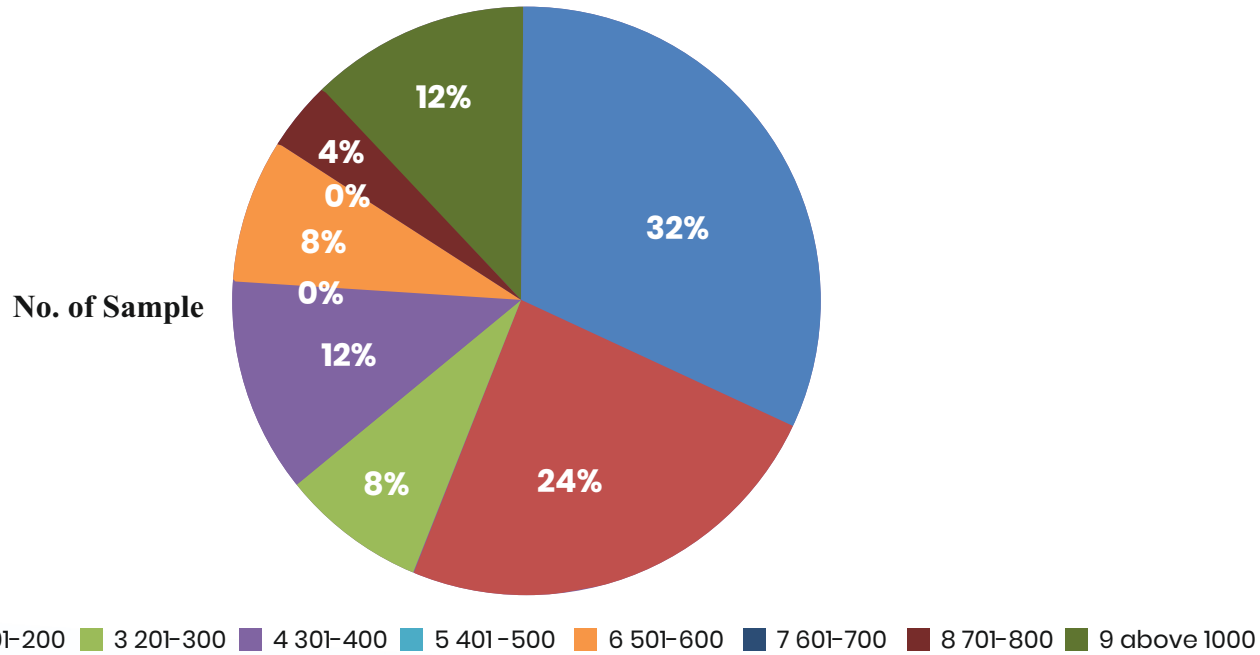


Fig 1.4 Describes the sample size used in the research papers

In (fig 1.5) as described below we can clearly see the year wise distribution and from which year the maximum number of research paper is been referred.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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S.No.	Author, Country Year of Study	Journal	Sample size	Tools adopted for Data Analysis	Findings and Conclusion
1	Kennedy, A. M., Ireland in 2011	Journal of Surgical Education	38 respondents	ProMIS laparoscopic surgical simulator, cube and arrow test, statistical analysis	The purpose of this study was to examine whether experience playing video games on a laparoscopic simulator predicts psychomotor competence or ratings for visuospatial and perceptual skill tests and, if any, to examine the relationship between these inherent abilities.
2.	Daria J. Kuss and Mark D. Griffiths, United States in 2012	Dove Press Journal	252 respondents	Virtual ethnography, ludology principles	The purpose of this review was to identify all research studies to date that have used neuroimaging techniques to shed light on the emerging problem of Internet mental well-being and gaming addiction from a neuroscientific perspective. Neuroadaptation and physiological changes occurring as a result of prolonged elevated activity in addiction-related brain regions have led to Internet and gaming addiction at the level of neural networks. In certain ways these findings offer clear proof of the parallels between different types of addiction, in particular substance-related addiction, and internet and gaming addiction.
3.	Birgit Schmitz, RolandKlemke, Marcus Specht, Netherlands in 2012	International Journal of Technology Enhanced Learning	56 cases	Secondary Data	We have summarized the results of our study of realistic research papers on the effects of mobile learning games in this article. With respect to the statistical base (dependent/independent variables) and the research methodology they applied, the diverse studies had different settings as they discussed different research interests. This shows that mobile learning games have the ability to deliver both affective and cognitive learning outcomes.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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4.	FL Lin, TY Hsu, TS Wu, CL Chang, Taiwan in 2013	International Conference on Engineering Psychology and Cognitive Ergonomics	36 respondents	Descriptive, Statistical analysis	The purpose of the research proved that online games could be the reason why college students stay up so frequently all night.
5.	Lujiaozi Wang, Siyu Zhu, the United States in 2013	Akademin For HalsaOch -Arbetsliv	4 respondents	Philosophy Philosophy Philosophy Philosophy of Science,Design and Data-gathering, qualitative research	The study was aimed at studying the effect of online game addiction on both Swedish and Chinese undergraduate students at the University of Gävle, Sweden. The effect of online games on undergraduate students at Gävle University, Sweden, is also being investigated.
6.	Geir Scott Brunborg, Rune Aune Mentzoni, and Lars Roar Frøyland, Norway in 2014	Journal of behavioral -addictions	1928 respondents	First-differencing (A Regression method)	In the analysis, the relationships between the use of video games and adverse consequences are discussed, and the relationships between the use of video games and adverse effects are discussed.
7.	SelahattinÇavuş, BünyaminAyhan, Turkey in 2014	Conference: 12th International Symposium Communic -ation in the Millennium	741 respondents	Screening model, crosstabs technique, factor analysis	The study shows that habits of social networking networks, such as friendly placement, taking more responsibilities, and emphasizing social life, need to be allowed to reduce game addiction.
8.	Chong-Wen Wang, Cecilia L. W. Chan, Kwok-Kei Mak, Sai-Yin Ho, Paul W. C. Wong, and Rainbow T. H. Ho, Hong Kong in 2014	The Scientific World Journal	503 respondents	Descriptive Analysis, Likert scale	This pilot study examined the trends of video and internet gaming habits and the prevalence and correlations of gaming addiction in adolescents in Hong Kong.The average time spent gaming per week, the frequency of spending money on gaming, the length of spending money on gaming, perceived family disharmony, and having more close friends were significantly associated with gaming addiction.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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9.	Charlotte ThoresenWittek & TuriReiten Finserås & StålePallesen & Rune Aune Mentzoni & Daniel Hanss3 & Mark D. Griffiths & Helge Molde, China in 2015	Int J Ment Health Addiction	10081 respondents	Mini-IPIP, Descriptive statistics	This study analyzed the prevalence rates and rates of video game addiction predictors (N=3389) in a group of gamers randomly selected from the National Population Registry of Norway. These factors offer insight into the field of video game addiction and may help inform how to classify individuals who are at risk of becoming addicted gamers. Video gaming has become a popular leisure activity in many areas of the world, and an increasing number of scientific studies are researching the tiny minority that appears to be developing issues as a result of excessive gaming.
10.	Dennis O. Dumrique, Jennifer G. Castillo, the Philippines in 2017	IRCHE	126 respondents	Purposive sampling, descriptive-correlation	This study was conducted at the Laboratory High School of the Polytechnic University of the Philippines to assess and determine the impact of online gaming on the academic performance and social activity of students. The research revealed that boys are more of a player compared to girls who often play games that need to mention three or more teams, such as League of Legends, Clash of Clans, Crossfire, and many more.
11.	Dimitrios Vlachopoulos & AgoritsaMakri, the Netherlands in 2017	International Journal of Educational Technology in Higher Education	305 cases	Qualitative content analysis technique, secondary data	As the area of digital games and simulations was still maturing, this paper proved to systematically review literature related to games and simulation pedagogy in higher education. The main objective was to research the impact of games and simulations on the achievement of clear learning goals. On balance, the findings show that games and/or simulations have had a positive influence on learning goals.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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12.	NazmusSaquib, JuliannSaquib, AbdulWarisWahid, Abdulrahman Akmal Ahmed, Hamad Emad Dhuhayr , Mohamed SaddikZaghloul, Mohammed Ewid, Abdulrahman Al-Mazrou, Saudi Arab in 2017	Addictive Behaviour Journals	276 respondents	Chi-square test, Descriptive	The goal of the paper was to show that the number of students with psychological distress was high. Other possible correlates of depression, such as personal traits, family relationships, and academic performance, should be examined in future research.
13.	İbrahim Taş, Turkey in 2017	Universal Journal of Educational Research	365 respondents	Multiple regression analysis	This study explored the correlation of internet addiction and gaming addiction with school engagement and the effect on school engagement of internet addiction and gaming addiction. The research was conducted with 365 students studying at an Anatolian high school in Gaziantep province (140, 38.4 percent, males; 225, 61.6 percent, females).
14.	Zhuqing Xu, Ming Xiang, and Lijun Pang, China	IOP Publishing Ltd	163 respondents	Descriptive, Analysis of reliability and correlation, Likert 5 scale,Independent -sample t test, Regression analysis	The study aimed to show that the influence on game loyalty of game design and social experience has some intermediary effect on trust. The results show that the user's social experience and the operator's game design also encourage their loyalty. Gender also plays an important role in the relationship between confidence and loyalty, i.e. the more trust women have in teammates and game operators, the greater their loyalty to the game.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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15.	Janardhana Navaneetham, Juna Chandran, India in 2018	Indian Journal of Social Psychiatry	200 respondents	Descriptive	The paper showed that playing video and internet games is a common practice among young children, and a large proportion of their time is spent on this activity, impacting their connection and the time spent on learning.
16.	GülşahBaşol and Abdullah Bedir Kaya, Turkey in 2018	Archives of Neuropsy-chiatry	327 respondents	Exploratory analysis, Statistical analysis	In this study, expected factors such as "Belonging to a group" and "success" and "Economic profits" did not seem to be closely related to the online gaming habits of adolescents. Our findings showed that some of the items did not appear at their expected sub-scales; for example "I gave up my sleep for an online group facility," were expected to be an item at the Belonging sub-scale, "My friendships"
17.	Aswathy.V & Devika.E, Girish.S, India in 2019	International Journal of Managem -ent, IT & Engineering	200 respondents	Descriptive	The study aimed to show that the advanced model for infotainment relies on social media and online gaming. The advancement in this generation of the mobile industry and network industry has contributed to the development of the online gaming industry. Some people perceive online gaming as a form of entertainment. People become addicted to it due to the heavy use of online gaming, causing many health problems such as vision problems, headache, and neck pain, etc., and behavioral issues that often lead to many gaming disorders.
18.	Mark D. Griffiths & Halley M. Pontes ,England in 2019	International Journal of Mental Health and Addiction	5 cases	Secondary Data	This study studied the timely establishment of a good level of cooperation between video game operators and researchers, provided that GD has been identified by the WHO as a mental health condition. Therefore, if the video game industry is to take social responsibility activities seriously and incorporate them in their mission and dedication to player safety and harm minim-ization, achieving this collaboration phase is paramount.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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19.	Qianjin Wang, Honghong Ren, Jiang Long, Yueheng Liu, Tieqiao Liu, China in 2019	BMJ Journals	6 cases	Secondary Data	The study showed that this article attempts to explain the context, epidemiology, etiology, diagnosis, treatment, and prevention of gaming disorder as a contribution to the future conceptualization of gaming disorder. There are already conflicts within the research community about public health problems associated with gaming disorder at present.
20.	Jin-Liang Wang, Jia-Rong Sheng and Hai-Zhen Wang, China in 2019	Frontiers in public health journal	578 respondents	Mobile Game Addiction Scale, Depression Scale, Child Loneliness Scale, Child Social Anxiety Scale	The study found that because of its potential detrimental effects on mental health problems, mobile game addiction has drawn researchers' attention as a new form of addictive behaviour and is distinct from conventional internet game addiction on desktop computers.
21.	Juliane M. von der Heiden, Beate Braun, Kai W. Müller, and Boris Egloff, Germany in 2019	Frontiers in psychology Journal	2734 respondents	5-point Likert-type scale, co-relation & regression analysis	The study found that potentially problematic video gaming was associated with positive effects and social interactions while playing, but also psychological symptoms, maladaptive coping mechanisms, negative affectivity, low self-esteem, a propensity for isolation and poor school results.
22.	Mamun, Mohammed A. and Mark D. Griffiths, U.K in 2020	International Journal of Mental Health and Addiction	7 cases	Secondary Data	The study aims to examine the fact that online video gaming among young people has become one of the most popular leisure-time activities in the world. Battle Royale, a team game inspired by the Japanese film, is one of the most popular games at the time of writing.
23.	Maria Waris Nawaz, Tooba Nadeem, Tahira Fatima, Sana Rao, Pakistan in 2020	Asian Journal of Social Sciences and Management Studies	160 respondents	Correlational analysis	The study showed that the resources included the Online Game Addiction Scale's Narcissistic Personality Inventory (Raskin& Hall, 1981) and Social Isolation Interventions (Zavaleta, Samuel, & Mills, 2017) (Kim, Namkoong, Ku, & Kim, 2008) to test the hypothesis.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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24.	S. Lokesh Kumar, Ms. M. Lakshmi Priya, India in 2020	International Research Journal of Modernization in Engineering Technology and Science Frontiers in psychology Journal	158 respondents	Statistical tools	The study will learn about PUBG addiction and its health problems among young people in the city of Erode. The study focuses on PUBG game addiction and its health problems among young people in the city of Erode. I have been doing an online survey study questionnaire with the help of a Google form, where I find out how many young people play PUBG games, how much they spend their time playing PUBG games
25.	Lucio Gros, Nicolas Debue, Jonathan Lete and Cécile van de Leemput, Belgium & Netherlands in 2020	Frontiers in psychology Journal	61 respondents	Descriptive, Statistical Analysis	This study studied that Internet gaming disorder is characterized by a substantial decrease in gaming control, resulting in increasing gaming time and leading to adverse effects on several aspects of individual life: intimate, family, social, occupational and other related functioning areas (World Health Organization).The magnitude of this problem (an approximate prevalence of between 1.7% and 10% of the general population) has prompted the Association to include gaming disorders in the list of mental health conditions (2018).

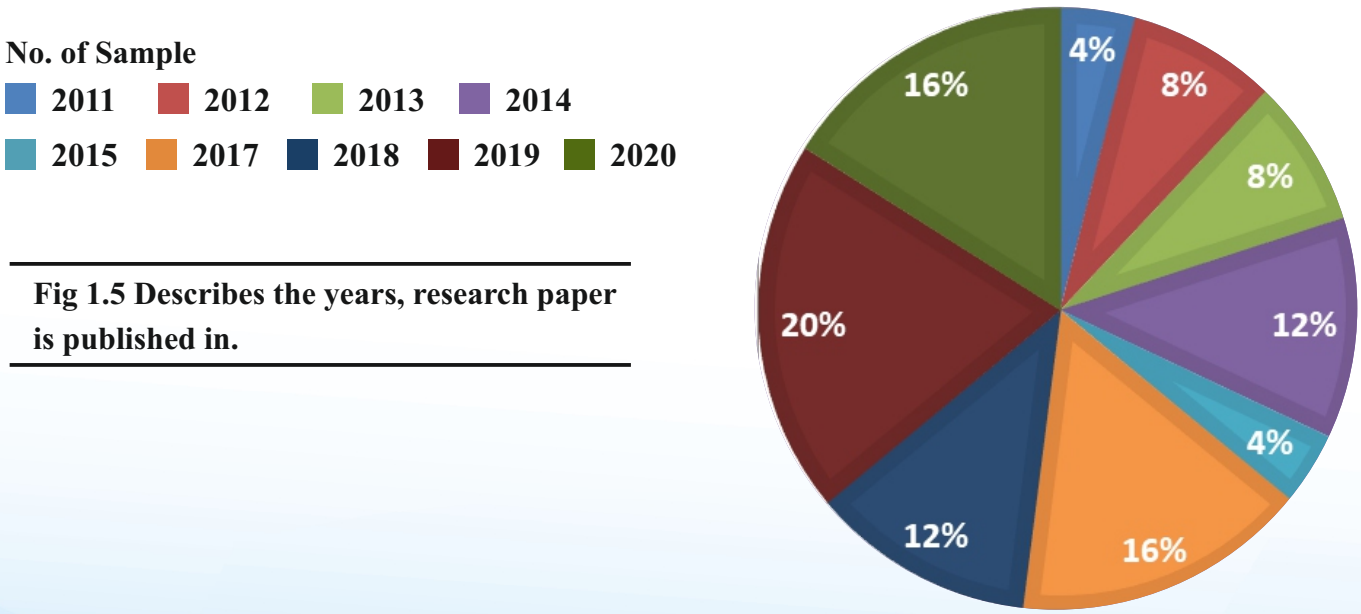


Fig 1.5 Describes the years, research paper is published in.

*Assistant Professor, Lovely Professional University **Student, Lovely Professional University *** Student, Lovely Professional University

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1.Conclusion

The table contains the author of the report, the country from which the author belongs, the year he wrote the journal, the next column shows the journals in which the research paper of the respective author is written, the sample size, the process of the author, the finding and conclusion for the same, the links have also been given. Here is the reference table used for our literature review.

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