



“A DESCRIPTIVE STUDY TO ASSESS THE IMPACT OF FREE FIRE GAME ON BEHAVIOURAL PROBLEMS AMONG HIGHER SECONDARY STUDENTS IN SELECTED SCHOOLS OF ANAND DISTRICT”

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Abstract:

Background of the study:

Online gaming is highly popular among adolescents, Free Fire being one of the most played games. Excessive use may cause aggression, irritability, poor concentration, and social withdrawal. Limited research exists in semi-urban Indian areas; hence this study assessed the behavioural impact of Free Fire among higher secondary students in Anand district.

Aim:

To assess the impact of Free Fire game on behavioural problems among higher secondary school students in Anand district.

Materials and Methods:

A descriptive quantitative design was adopted. The study included 300 students selected through convenient sampling. Data collected using a structured questionnaire with demographic and 30 Likert-scale behavioural items. Reliability was $r = 0.82$. Analysis using descriptive and inferential statistics showed a mean score of 97.22 ± 11.91 ; 71% had high impact, 25.3% moderate, 3.7% very high. No significant association found between behavioural problems and demographic variables ($p > 0.05$).

Conclusion:

Excessive Free Fire gaming significantly affects adolescents' behaviour. Awareness and parental monitoring can reduce its negative effects.

Keywords:

Free Fire game, Behavioural problem, Online gaming, Descriptive study.

Index Terms - Component, formatting, style, styling, insert.

1. INTRODUCTION

"Technology should be a tool to build the mind, not a weapon that alters behaviour."

Playtime is a powerful way for children to learn, helping them develop communication skills and adjust to their surroundings through active engagement. It serves as both mental and physical exercise, boosting motivation, improving task performance, and encouraging personal growth and achievement. However, with the rapid growth of technology in today's globalized world, the nature of children's play has changed. The internet has become a major part of daily life, especially through its use in digital entertainment like online games. These games, which require an internet connection, allow players to connect and interact with others in real time. As online gaming becomes more popular among school-aged children, parents and teachers are growing increasingly concerned. Many children now spend long hours gaming without realizing the negative consequences. Excessive gaming can lead to a variety of problems such as laziness, less interest in social interaction, eye discomfort, and even the development of inappropriate language and behaviour.

Over the last decade, the popularity of online games has grown rapidly across all age groups, including children, teenagers, and adults. With the advancement of technology and the widespread use of smartphones, playing online games has become easier and more accessible than ever. Today, children can connect and play games with other players not just locally, but from across the globe. This easy access and constant availability have made online gaming a favourite past time, especially among school-aged children and adolescents. However, while these games offer entertainment and social interaction, they also bring certain risks, particularly when played excessively. The growing presence of online gaming in children's lives has raised concerns about its influence on their academic performance, emotional well-being, and social behaviour. Many students who spend a lot of time playing games tend to show a decline in their studies, reduced interest in real-life social activities, and sometimes even changes in personality. Online games often have addictive elements that keep players engaged for long periods, affecting their daily routines, sleep, and interactions with family and peers.

Free Fire is a very popular online battle royale game created by Garena in 2017. By 2021, more than 500 million people had downloaded it from the Play Store, with a huge fan base in countries like Indonesia. It can be played on both Android and iOS phones and is enjoyed by people of all ages. The game is also part of national and international e-sports tournaments.

Free Fire, also known as Garena Free Fire, is a popular online battle royale game developed by Vietnamese company 111 Dots Studio and published by Garena. Designed for both Android and iOS platforms, it became one of the most downloaded mobile games worldwide. The game is played from a third-person perspective, where up to 50 players are dropped on to a virtual island and must compete against each other to survive. Players can choose their own landing spots, collect weapons, Armor, and supplies, and engage in combat with opponents. The main goal is to be the last person or team standing. As time progresses, the safe zone on the map gradually shrinks, forcing players into closer encounters and increasing the pace of the match. Each game lasts around 10 to 15 minutes, making it fast and engaging. Free Fire features various characters, each with special abilities, and includes options to customize outfits, weapon skins, and emotes. It supports multiple game modes such as solo, duo, and squad. The game also allows voice chat, enhancing team coordination. Its simple controls and low system requirements make it accessible to users with basic smartphones. Free Fire regularly updates its content, introducing new maps, events, and seasonal rewards. It also has a strong e-sports presence, with global competitions and large online viewership. Its mix of strategy, action, and social interaction makes it highly appealing, especially to younger audiences.

Adolescence is a sensitive and important stage of life that usually occurs between the ages of 12 to 18 years. It is a period of transition from childhood to adulthood, where young individuals experience rapid physical, emotional, and mental changes. Teenagers at this stage often feel confused, as they are expected to act maturely like adults but still carry the emotional traits of children. This imbalance can lead to stress, mood swings, and behaviour changes, especially when they struggle to cope with these changes. Along with these internal challenges, external factors like peer pressure, social media, and online gaming also play a significant role in shaping their behaviour. One such popular online game is Free Fire, which has gained immense popularity among teenagers due to its engaging and competitive features. However, excessive involvement in such games can negatively impact their overall behaviour. Many adolescents tend to get addicted, leading to problems like aggression, reduced interest in studies, irritability, social isolation, and disturbed sleep patterns.

Teenagers are more emotionally vulnerable and easily influenced, making them more likely to develop unhealthy gaming habits compared to adults. The continuous exposure to violence and competition in the game can also affect their thinking and reactions in real life.

According to Baron and Byrne, social psychology seeks to understand the origins and causes of individual thoughts and behaviour in social situations. This means that when individuals engage in activities involving others—such as playing online games like Free Fire—it is important to examine what drives their behavior in these social contexts. As Ahmadi (2019) suggests, understanding why individuals choose to participate in such interactions can reveal the root of behavioural changes. Free Fire, being a fast-paced, competitive multiplayer game, places adolescents in constant virtual social interaction that often includes violence, pressure to win, and emotional highs. This environment can lead to behavioural problems such as aggression, reduced attention span, irritability, and social isolation. These effects highlight how repeated gaming can influence thought patterns and social behaviour, aligning with the principles of social psychology.

According to data from the Google Play Store, India has recorded an impressive 844.8 million downloads of mobile games, accounting for 18.4% of the total global downloads of 4.6 billion. Among these, Garena's Free Fire holds the second position with 24.7 million installations in India, highlighting its widespread popularity among Indian youth. Garena has also introduced an enhanced version of the game called Free Fire Max, now available to Indian users, offering improved graphics and gameplay experience. While Free Fire provides excitement, fast-paced action, and multiplayer interaction, it has also raised concerns regarding its impact on the younger generation. Excessive gaming has been linked to various behavioural and mental health issues such as interpersonal relationship problems, aggression, attention deficits, anxiety, depression, sleep disturbances, and increased spending of time and money. When individuals, especially adolescents, are unable to regulate their gaming habits, it can lead to addiction-like behaviours. If this pattern of excessive gaming persists for at least 12 months, it may lead to gaming disorder, a recognized mental health condition as defined by the World Health Organization (WHO). The addictive elements of Free Fire, including constant rewards, daily missions, and social engagement, can further encourage prolonged screen time. Therefore, while Free Fire continues to dominate the Indian mobile gaming scene, it is important for players, parents, and educators to be aware of its potential psychological and social impacts, and to encourage healthy, balanced gaming habits.

3.1 Population and Sample

The population of the study comprises all higher secondary school students studying in selected schools of Anand district. These students fall within the age group of 12 to 17 years and are enrolled in classes IX to XII. This population represents the group that has potential exposure to the Free Fire game and may exhibit behavioural changes due to its use.

The sample of the study will consist of a selected group of higher secondary school students drawn from the population using a non-probability convenient sampling technique. The sample size will be determined based on availability and willingness of students to participate in the study. The selected students will represent both male and female participants within the age range of 12 to 17 years who play or have experience with the Free Fire game.

3.2 Data and Sources of Data

The data collection process was carried out after obtaining permission from the respective school authorities and ensuring informed consent from all participants. Prior to data collection, our research group explained the purpose, objectives, and importance of the study to the students in simple and understandable language. Confidentiality and anonymity of the participants were assured.

The data were collected using a structured questionnaire consisting of Section A (demographic data) and Section B (behavioural impact assessment). Each participant was given a printed copy of the questionnaire, and sufficient time was provided to complete it without any disturbance. Our research group remained present throughout the process to clarify any doubts and ensure honest responses.

3.3 Conceptual framework

The conceptual framework selected for the study is based on the Input–Process–Output (IPO) Model, which is derived from Ludwig von Bertalanffy's General Systems Theory (1968). This model was introduced to explain how every system functions in terms of receiving inputs, transforming them through processes, and producing outputs. It was developed to simplify complex systems and to provide a universal framework for analysing cause-and-effect relationships across different fields such as biology, psychology, management, education, and health sciences. The IPO model is particularly suitable for this study because it allows a systematic understanding of how various factors (inputs) influence the process of exposure to Free Fire gaming and result in different behavioural problems (outputs) among students.

I. RESEARCH METHODOLOGY

Research design is also known as the blueprint that guides the researcher in planning, implementing, and analysing a study. It provides an outline of how the research will be conducted and what methods will be used. This chapter deals with the methodology used to collect and analyse data for the study. It includes the following major sections: Research Approach, Research Design, Variables, Setting of the Study, Population, Sample and Sampling Technique, Sample Size, Criteria for Sample Selection, Description of the Tool, Data Collection Procedure, and Plan for Data Analysis.

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● INPUT VARIABLES (SECTION A – DEMOGRAPHICS)

Age
Gender
Religion
Type of family
Area of residence
Monthly income

● PROCESS VARIABLES

Data collection of Exposure to Free Fire game, as measured by a structured questionnaire (Section B consist of Likert scale behavioural problems assessment).

The questionnaire will assess behavioural dimensions such as emotional, social, academic, and psychological aspects.

● OUTPUT VARIABLES (DEPENDENT VARIABLES)

Level of behavioural problems (low/moderate/high)

Pattern and association between demographics and behavioural problems

Emotional problem such as: Irritability, mood swings, anxiety.

Social problems: Poor relationships, isolation, conflicts.

Academic problems: Lack of concentration, poor performance, absenteeism.

Psychological/behavioural problems such as: Aggression, impulsivity, disturbed sleep, reduced self-control.

II. RESULTS AND DISCUSSION

4.1 Results of Descriptive Statics of Study Variables

Table 4.1: Descriptive Statics

Behavioural Problems	Range	Minimum	Maximum	Mean	Std. Deviation
Score	61	68	129	97.22	11.91

TABLE-3: presents the mean, range, minimum, maximum, and standard deviation regarding the behavioural problem scores among higher secondary school students (N = 300) who play the Free Fire game.

The data show that the behavioural problem scores ranged from 68 to 129, with an overall range of 61 points. The mean behavioural problem score was 97.22 with a standard deviation of 11.91, indicating a moderate level of variation in behavioural problem scores among the respondents. This implies that while most students scored close to the mean value (reflecting a generally high level of behavioural impact), there were also a few students who had either relatively low or very high behavioural problem scores.

Hence, the results indicate that Free Fire game exposure has a considerable effect on behavioural tendencies, with notable variability among individuals depending on their gaming duration, engagement, and personal factors.

ACKNOWLEDGMENT

It is a moment of gratification and pride to look back with a sense of contentment at the long travel path, to be able to recapture some of the fine moments, and to express heartfelt thanks to the infinite number of people who joined me at some stage during the journey. Their kindness, love, and blessings have made this day possible. I wish to thank each of them from the bottom of my heart.

First and foremost, we would like to thank Almighty God for giving us such great strength and courage. You have given us the power to recognize our abilities and to build our self-confidence. We would never have completed this successfully without Your divine support.

We would like to offer our sincere gratitude to the inspirational personality and Principal Mr. Nickson Das, Medical Surgical Nursing Speciality, R. P. Patel Nursing College, Ode, for his valuable suggestions, guidance, and personal interest in our research study. He has always been there to listen, solve problems, and provide his precious time and encouragement during the research process.

We are heartily thankful to our guide Mr. Abhishek Makwana, M.Sc. Nursing Tutor in Community Health Nursing, who helped us to choose an appropriate topic suitable for our research study. With his opinion and support, we were able to move forward successfully in every step of our work. We are also thankful to the MSc faculty of Late Ratibhai Prabhudas Patel Nursing College for their continuous guidance and support throughout the entire course of our study.

We would like to express our heartfelt thanks to our parents, who have supported us all the time and given us inspiration, blessings, and unconditional love. We sincerely thank them for believing in us.

We extend our deep sense of gratitude and heartfelt thanks to all experts who spent their valuable time in validating the tool and contributing their valuable suggestions to make it suitable for our study.

We extend our gratitude to each respondent for their cooperation and participation in the study, without which it would not have been possible to complete the research successfully.

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