A Study on the Impact of Online Entertainment on the Quality of Life of Undergraduate Students

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Abstract: **This study explores the impact of online entertainment on the quality of life of undergraduate students through a statistical approach. By analyzing survey data and demographic information, we examine the relationships between online entertainment consumption, including streaming services, social media, and gaming, and various aspects of students' well-being, such as academic performance, physical health and social interactions. Utilizing data visualization tools such as simple pie charts and bar charts, and statistical hypothesis testing, we identify and establish the nature of relationships between these factors, which highlights both the benefits and challenges posed by online entertainment. The findings of this research contribute to a deeper understanding of how online entertainment shapes the daily lives and overall well-being of undergraduate students, enabling parents and educators in guiding the youth to make better use of the internet.**

Keywords: **Online Entertainment, Social Media, Music Streaming, Productivity, Physical Activity Levels, Interpersonal Relationships.**

1. Introduction

Online entertainment is a form of entertainment made available over the internet through devices such as phones and computers. It encompasses various forms of services such as music and video streaming services, social media, online gaming, webcomics, web novels, etc. In the modern world, there is almost no individual who doesn't possess a smartphone or a computer or any other type of internet devices. The rapid advancement of internet technology over the years has played a crucial part in making the consumption of online entertainment through such devices a widespread phenomenon.

The speed and ease of access to digital entertainment platforms through one's personal devices greatly contributed to the rising popularity of online entertainment. The ability to choose what to watch and when is a major advantage of using online entertainment, contrary to the traditional forms of entertainment. In addition, the user is presented with a significantly greater number of options to choose from, to cater to a wide range of interests and preferences.

One can listen to music, podcasts, or audiobooks; watch movies and series; play exciting games; chat with friends, family or even strangers, participate in discussion forums and many more interesting activities, all in the comfort of their home. No matter one's age, there is always something on the internet to entertain its users.

Online entertainment has become an inseparable part of everyone's lives. In particular, it has had a tremendous influence on the lives of students. It wouldn't be wrong to say that for instance, with the amount of online content consumed by the young adult population, online entertainment is more a way of life today, than a part of it. The easy availability of short-form content has captured the attention of student population all over the world, inspiring and distracting at the same time. The multitude of content available online can be considered either a boon or a bane, depending on what they consume, and how often they consume it.

Online entertainment can be of various types. On the basis of content, it can be classified into: music streaming platforms, OTT platforms, live streaming, social media, online gaming, web literature, discussion forums and pornographic sites. These varieties of entertainment can have a positive as well as negative effect on the lives of students, as has been shown by numerous studies on this topic.

A. Factors Determining Quality of Life

A variety of factors influence the "quality of life" for the young college-going population.

i. *Academic Experience*: While some tout online entertainment as the best form of relieving stress for the student population, due to its easy access and affordability, others argue that the same factors have contributed to reduced focus and distraction among students, having negative effects on their academic performance.

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Fig. 1. Online entertainment and factors affecting quality of life

ii. *Physical and Mental Health*: Students claim that online entertainment help relieve mental stress associated with college and personal life. Moreover, there are numerous apps dedicated to health and fitness to assist them in improving their physical health. At the same time, excessive use of such technology increases the risk of internet addiction and a myriad of other physical discomforts.

iii. *Social Life and Relationships*: Online entertainment has the potential to increase connectivity with friends and family and also helps foster new connections, both professionally and personally. However, it is also seen as being detrimental to one's social connectedness when overuse leads to social isolation and loneliness, which ultimately results in social anxiety.

iv. *Career development opportunities*: Through proper use of social media, students can expand their professional network throughout college, thus creating more career opportunities for themselves. Additionally, online entertainment has the possibility of influencing and shaping young adults' career path.

v. *Personal Growth*: Online entertainment provides access to content and platforms that could offer potentially enriching learning experiences.

B. Problem Statement

As students constitute one of the groups that use online entertainment tools the most, it is important to understand the extent and kind of impact it has on them in order to ensure the healthy and productive, personal and professional growth of students. As such, we seek to answer the following questions:

i. Are online entertainment usage and personal development among students dependent?

ii. Are online entertainment usage and academic well-being of students dependent?

iii. Are online entertainment usage and interpersonal relationships of students dependent?

iv. How does listening to music while studying or working impact the focus and productivity of students?

v. What is the impact of online entertainment on the physical activity levels of students?

2. Literature Review

A. Positive Effects

Online entertainment can positively influence emotional well-being. A 2024 case study by Ms. Philomina and Dr. Tahmeena Nigar Sultana on youths in Vijayapura revealed that audio streaming platforms play a significant role in helping individuals relax. The study found that 45% of respondents strongly agreed that listening to their favorite songs made them feel better. Most participants (40%) spent around two hours daily on these platforms, while 22.5% listened to music for one hour a day. Online audio streaming can serve as a healthy way for students to unwind and improve their mood. The role of music in supporting learning has also been studied. Research by Xiao Hu et al. (2023) found that university students use music to enhance their learning experience, with 80% of participants acknowledging its benefits. Relaxation (35%) and improved concentration (28%) were the most frequently cited benefits. This suggests that listening to music while studying can help students focus better and reduce stress.

Online games have also been shown to have positive effects on students. According to a study from China by Feiyue Li et al. (2023), online games help students relieve stress and achieve happiness due to their entertaining, competitive, and challenging nature. Games can broaden students' social networks, allowing them to connect with others worldwide who share common interests, thereby fostering social connections across cultural boundaries.

B. Negative Effects

Studies have highlighted the detrimental effects of excessive online entertainment on students' educational performance. A study by Dr. V. M. Anitha Rajathi and S. Ravisankar (2022) found that online recreation leads to poor academic performance. Students who spend excessive time on online games often face issues with learning ability, concentration, and overall grades. The study, utilizing correlation analysis, indicated a significant relationship between online activities and health issues, including depression. Similarly, a study conducted in 2016 on Italian university students emphasized the problem of internet addiction. The research revealed that 87% of students believed they used new technologies excessively, which negatively affected their focus on academic tasks. The study found a higher prevalence of internet addiction among male students (70%) compared to female students (30%).

Online entertainment can also impact physical health. A study by Yumei Zheng et al. (2016) examined the effects of internet use on physical health, highlighting numerous physical complaints associated with frequent internet use. Common issues reported were dry eyes (73.7%), declining eyesight (64.1%), cervical pain (48.1%), and headache (34.1%). Use of

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Pearson correlations and t-test analysis confirmed a significant positive correlation between the frequency of internet use and the level of physical complaints ($r = 0.236$, $p < 0.001$), indicating that more frequent internet users experience higher levels of physical health issues. Furthermore, a study by Shilpi Rani Saha and Arun Kanti Guha (2019) explored the impact of social media use among university students. While 37.6% of respondents felt that social media had no significant impact on their lives, 17.7% students admitted that they use social media to communicate with each other. In a study conducted by Mehmet Ali Gazi et al. (2017), response of 220 participants who used social media for 4 hours or more were analyzed to examine social media addiction among university students. Using factor analysis, the need for social support was found to be the most important factor in social media dependency, followed by living conditions. In the same study, the use of Tukey test revealed a significant difference in social media addiction between participants who used social media for 4-6 hours and those who used it for more than 6 hours, indicating that social media usage time increases addiction.

While online entertainment can provide avenues for social connection, emotional relief, and even academic improvement through skill development, the negative consequences on academic performance, physical health, and mental well-being are also significant. Understanding the dual nature of online entertainment's impact can prove to be useful in improving the overall quality of life for students by fostering healthy, responsible usage habits.

3. Methodology

The study uses descriptive statistics such as frequencies and percentages to summarize preferred types of online entertainment and time and pattern of usage. Bar diagram is used for visual representation of data. To analyze the relationship between variables, Chi-square test is used to assess independence, whereas one-sample sign test is applied to evaluate differences in the median of a single sample.

The population of the study consists of undergraduate students who use various forms of online entertainment. Using the technique of purposive sampling, responses from a sample of undergraduate students in a considerably appropriate age group (17-24) were collected via a suitably drafted questionnaire distributed as a Google Form.

A. Data Exploration

The data collected is cleaned by eliminating irrelevant or faulty data. Thus, size of the sample used for the study is 330, where the gender-wise distribution is as follows:

Table 1
Gender of the respondents

Gender	Frequency
Male	104
Female	226
Total	330

From the above table, it is evident that majority of the respondents (68%) are females.

Respondents were asked to choose the types of online entertainment they engaged with most frequently and the following data were obtained:

Table 2
Types of online entertainment used

Type of Online Entertainment	Number of Users
Music streaming	229
Social media	271
OTT platforms	142
Online gaming	47
Other	8

It can be seen that social media is the most popular form of online entertainment used by undergraduate students (82.12%). 229 (69.39%) respondents use various music streaming apps/sites, 142 (43.03%) respondents use OTT platforms and 47 (14.24%) respondents engage in online gaming. Some also responded as using other forms of online entertainment such as Duolingo, e-books, online reading platforms, porn, etc.

Table 3
Duration of use per day

Time spent	Frequency
0-2 hours	70
2-4 hours	151
4 or more hours	109
Total	330

From the above table, we infer that 70 (21%) students use online entertainment for small amount of time (0-2 hours), 151 (46%) students use it for a moderate amount (2-4 hours) and 109 (33%) use it for a high amount (4 or more hours) of time. Clearly, the majority of respondents use online entertainment for moderate duration.
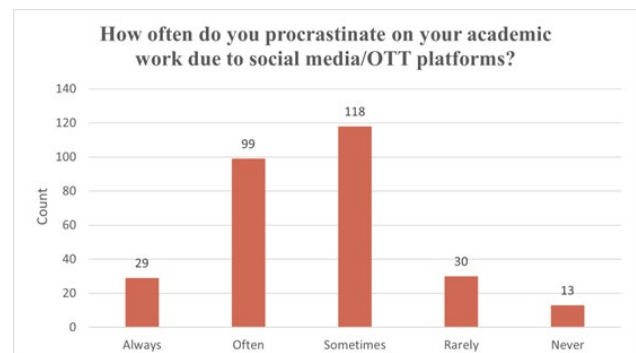

Fig. 2. Frequency of procrastination due to use of social media/OTT platforms

The above bar diagram shows the response count of social media or OTT platform users to the question: "How often do you procrastinate on your academic work due to social media/OTT platforms?" 29 (10%) users of this type of online entertainment responded with "Always", 99 (34.3%) chose "Often", 118 (40.8%) chose "Sometimes", 30 (10.4%) chose "Rarely" and 13 (4.5%) chose "Never". This seems to suggest

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that majority of the users procrastinate on their academic work due to social media or OTT platforms.

B. Hypothesis Testing

The Chi-square test of independence is a statistical test used to determine whether two categorical variables have a significant association. It is a non-parametric test, meaning it does not assume a specific distribution. This test requires a relatively large sample size and independent observations to yield valid results.

This test utilizes a contingency table to analyze the data. A contingency table displays the frequency distribution of categorical variables and helps determine associations between them using the Chi-square test.

To determine if the variables such as online entertainment usage and personal development, academic well-being, interpersonal relationships are related, a level of significance $\alpha=0.05$ is used due to the robust sample size and to ensure a balanced, reliable and practical approach that helps to detect any meaningful relationships without being overly strict.

The Sign-test is a non-parametric test used to evaluate the median of a distribution when the data do not meet normality

uncontrolled usage might be inhibiting students' developmental progression. Online entertainment usage and academic well-being too are dependent. For instance, students who engage in online entertainment in a moderate amount might experience greater academic satisfaction and motivation through the benefits of stress relief and creative stimulation. On the contrary, heavy usage of such entertainment services could lead to poor academic performance due to addiction, procrastination and reduced focus, etc. This result aligns with prior studies highlighting both the beneficial and detrimental effects of online entertainment on students' academic performance. Further studies in these directions could reveal more specifically the nature of dependency between these factors and help identify if there are any causes for concern regarding the effects of online entertainment on students that should be addressed swiftly and efficiently.

Interestingly, the results seem to suggest that there is no meaningful association between online entertainment usage and interpersonal relationships of undergraduate students. This could imply that online entertainment usage neither interferes with nor enhances social interactions of students, i.e., online entertainment and interpersonal interactions may simply

Table 4
Chi-square test results

Online Entertainment Usage	Test Statistic	p-value	Remark
Personal development	11.595	0.003035	Reject H_0
Academic well-being	12.361	0.01486	Reject H_0
Interpersonal Relationships	3.2743	0.51301	Accept H_0

Legend: <0.05 – reject, >0.05 – accept

assumptions. It tests the null hypothesis that the median of a population is equal to a specified value. Here also, $\alpha=0.05$ is used as the level of significance.

In all the tests used, p values are determined to take decisions about the acceptance or rejection of the null hypothesis. If the p-value is found to be less than the chosen level of significance α, the null hypothesis is rejected, and if the p-value is greater than α, the null hypothesis is accepted.

4. Results and Discussion

A. Impact of Online Entertainment on Personal Development, Academic Well-Being and Interpersonal Relationships

Null hypothesis (H0): There is no relation between online entertainment usage and factors such as personal development, academic well-being, interpersonal relationships.

Alternative hypothesis (H1): There is a significant relationship between online entertainment usage and factors such as personal development, academic well-being, interpersonal relationships.

The results suggest a significant association between online entertainment usage and personal development among undergraduate students. This could mean, for example, that students who use online entertainment for an appropriate amount of time might be experiencing greater self-improvement or skill development, whereas excessive and

coexist without influencing one another.

B. Effect of Listening to Music while Studying/Working on Focus and Productivity

Null hypothesis (H_0): Listening to music while studying/working has no impact on focus and productivity.

Alternative hypothesis (H_1): Listening to music while studying/working improves focus and productivity.

Sign test was used to test the hypothesis regarding the effect of listening to music while studying/working on the focus and productivity of undergraduate students. A p-value of 0.001225 (<0.05) implies that for most students, music is a tool that aids them in getting work done by improving the ability to concentrate, leading to more productivity. This is also in alignment with previous literature establishing the role of music in enhancing concentration and overall learning experience. However, it is also important to note that the type of music, the task at hand, and personal differences are also important factors that determines its effectiveness.

C. Effect of Online Entertainment on Physical Activity Levels of Students

Null hypothesis (H_0): Online entertainment has no impact on physical activities of students.

Alternative hypothesis (H_1): Online entertainment has reduced the physical activities of students.

Sign test was used to test the hypothesis and p-value was found to be 0.002416(<0.05), which implies that online

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entertainment is associated with a reduction in the physical activity levels of students. The result raises concerns regarding the changing lifestyle of the young student population due to increased use of online entertainment. Excessive time spent on social media, gaming, and streaming series and movies, might be contributing to an inactive lifestyle among students, exposing them to the risk of various diseases such as obesity, eating disorders, cardiovascular diseases, diabetes, etc.

5. Conclusion

The findings of the study open up avenues for further research concerning online entertainment and its impact on the student population. The association between online entertainment usage and personal development offers an avenue to explore the types of digital entertainment services that could bring about self-improvement for students while also identifying the cause of a negative impact on personal growth. The observed association between online entertainment usage and academic well-being highlights perhaps the most critical aspect of student life. It is of utmost importance to ensure that the integration of online entertainment into students' lives takes place without negatively impacting their academic activities. Intervention programs can be introduced to help students reduce the use of such technology and mitigate the adverse effects associated with it. Similarly, various activities and strategies can be adopted to encourage students to engage in more physically active hobbies that will help in limiting the screen time and thus maintain a good balance between the time spent on digital and hands-on leisure time activities.

Ultimately, the overall impact of online entertainment on life quality likely varies from person to person, depending on the types of services used, the frequency of usage and the purpose of usage. It is also important to note the dual nature of online entertainment's impact on students' quality of life. The benefits of stress relief, boredom avoidance, and creative inspiration which contribute to an improved quality of life among students cannot be ignored. This reaffirms that when used properly, any tool — including online entertainment — can bring about positive effects, outweighing the negatives often associated with it.

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