

## Original Research Article

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# Problematic binge-watching and its impact on mental health status among students in Puducherry: a cross-sectional study

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## ABSTRACT

**Background:** Binge-watching, or watching numerous episodes of a TV show back-to-back in one sitting, has been very popular in the last few years, especially among young people and students. Although it can be leisure, compulsive binge-watching can affect mental health. Objectives were to evaluate the prevalence of problematic binge-watching among college students in Puducherry and its association with students' mental health status, which includes anxiety, depression, and stress levels.

**Methods:** A Cross-sectional study among 360 students with 18-25 years in Puducherry was conducted using simple random sampling for a period of three months. Data were collected using a structured questionnaire that included sociodemographic details, questions related to binge-watching behavior, and three mental health scales patient health questionnaire-9 (PHQ-9), generalized anxiety disorder-7 (GAD-7) and perceived stress scale (PSS-10). The chi-square test was used for determining independence. A  $p<0.05$  was considered statistically significant.

**Results:** Out of 360, 53.3% were aged 18-20 years, and 51.6% were female. The majority belonged to urban (85.8%), and 56.1% were from the lower socioeconomic class. 63.6% of students binge-watched, predominantly on smartphones (71.6%). Even though age, gender, and socioeconomic status had no significant relationship with binge-watching, urban participants had a high association ( $p<0.001$ ). Consistent associations were found between binge-watching and anxiety ( $p<0.001$ ) and depression ( $p=0.008$ ), but stress was not significantly related ( $p=0.764$ ).

**Conclusions:** This research highlights the psychosocial dangers of overusing screen-based entertainment in young adults, emphasizing the need for targeted counseling and awareness programs to encourage good watching habits and maintain student mental health.

**Keywords:** Binge-watching, Mental health, Depression, Anxiety, Stress

## INTRODUCTION

Binge-watching, or watching numerous episodes of a TV show back-to-back in one sitting, has been very popular in the last few years, especially among young people and students. This activity, driven by the growth of streaming media such as Netflix, Amazon Prime, and Disney+, provides an apparently limitless amount of content easily accessible for viewing. Nonetheless, though binge-watching may give pleasure and relieve stress, there is

already rising concern that it can affect one's mental health, particularly if it is problematic.

Several studies have established that binge-watching is prevalent among students in universities and colleges, with most of them reporting frequent occurrences of increased viewing hours. The convenience of accessing streaming websites and the need to follow popular web series are major reasons for this trend. Flayelle et al in their study identified that there are several psychological

and situational variables that affect binge-watching behaviors, like stress, boredom, and escapism.<sup>1</sup>

The association of problematic binge-watching and mental health consequences has been the focus of a number of recent studies. Steins-Loeber et al in their study concluded that binge-watchers in an excessive manner tend to have higher rates of anxiety and depression.<sup>2</sup> Likewise, Starosta and Izydorczyk conducted a study in 2020, which emphasized that problematic binge-watching might contribute to heightened feelings of solitude and low-quality sleep, thereby worsening mental health conditions.<sup>3</sup>

Students are specifically susceptible to the ill effects of problematic binge-watching to overcome certain types of stressors faced in their lives, like academic stress, social difficulties, and transition into independent living<sup>4</sup>. According to a study done by Sun et al the addictive nature of binge-watching can disrupt the academic life of students and general well-being, leading to a vicious cycle of stress and further cognitive dependence on binge-watching.<sup>5</sup>

This cross-sectional study aims to evaluate the impact of problematic binge-watching on the mental well-being of students in Puducherry. On assessing the prevalence of binge-watching habits and their association with markers of mental health, which include anxiety, depression, and sleep quality, this study attempts to provide a well-rounded insight into this binge-watching phenomenon among students.

The results will highlight the current knowledge about media use and mental health, providing insights that may help in future interventions and support services for students.

## METHODS

The present study aimed to evaluate the prevalence of problematic binge-watching among college students in Puducherry and assessed the association of problematic binge-watching with the mental health status of the students, which includes anxiety, depression, and stress levels. A cross-sectional study was conducted among college students of Puducherry for a period of three months from April to June 2025. The research was conducted in the chosen colleges after getting prior consent from the corresponding institutional authorities.

The study population included undergraduate students between the age group of 18-25 years who were enrolled students in colleges in Puducherry. Students with a confirmed diagnosis of psychiatric disorders and those who were not even watching television or streaming media at all were excluded. All those students who agreed to give consent during the data collection phase were included. According to the study conducted by Srinivasan et al prevalence was considered to be 63.3%.<sup>6</sup> With an

assumed absolute error of 5% and a confidence interval of 95% and considering 5% dropout rate, the estimated sample size was 360 by using Cochran's formula.

Simple random sampling was used to ensure representation from different colleges in Puducherry. A mail was sent to all the students to obtain their consent to participate in the binge-watching study. Each student was assigned a unique identification number, and the required number of participants from each college was selected.

The number of students chosen from each institution was proportional to the size of the student population in that college. On the prefixed date and time, a total of 615 students turned up for the study. By simple random sampling, the questionnaire was sent randomly to 380 of the study participants selected by computer-generated random numbers. Thereby, a total of 360 students participated in the study.

After explaining the study objectives, informed consent was obtained from all participants. Data collection was done during the academic year, and participants were approached either in classrooms through paper-based questionnaires. Data were collected using a structured questionnaire that had two sections: Section 1 included sociodemographic details and questions related to binge-watching behavior, whereas section 2 included three mental health scales (PHQ-9, GAD-7 and PSS-10).

Three standardized self-report measures assessed the mental health outcomes of the participants. The PHQ-9 consisted of 9 items with scores ranging from 0 ("not at all") to 3 ("nearly every day") and a total score of 0 to 27, which was used for depression.<sup>7</sup> The GAD-7 scale included 7 items that scored similarly, yielding a total score ranging from 0 to 21, which was used for assessing anxiety.<sup>8</sup> Perceived stress was measured using the PSS-10 a 10-point scale scored from 0 ("never") to 4 ("very often"), with a total score of 0-40.<sup>9</sup> Cut-off values established for standard purposes were utilized to classify participants into varying degrees of severity for depression, anxiety, and stress, and scores greater than the set threshold values were regarded as the presence of the respective condition.

On average, it took about 12-15 minutes for each of the participants to complete the survey. The research team was available to clarify any doubts, but no guidance was provided on answering the items to avoid bias. To ensure accuracy, all items were made mandatory paper forms were checked immediately for completeness.

Data entry was made in Microsoft excel. Data were analyzed using IBM SPSS 20.0 version. Continuous variables were presented in the form of frequency and proportion. The chi-square test was used for determining independence. Categorical variables were summarized in the form of proportions. A  $p < 0.05$  was considered statistically significant.

Ethical principles such as respect for persons, beneficence, justice, privacy, and ensuring confidentiality were adhered to throughout the study. The ethical approval was obtained from the institutional ethics committee. Participants who met the criteria were asked to provide informed written consent.

## RESULTS

The sociodemographic profile of study participants (n=360) in a cross-sectional study assessing the effect of problematic binge-watching on mental health among students in Puducherry is presented in Table 1. Participants' age varied from 18 to 23 years, with most (53.3%) of them belonging to 18-20 years old (n=192), and the remaining 46.6% aged 21-23 years (n=168). The study sample consisted of a slightly higher percentage of women (51.6%, n=186) compared to men (48.6%, n=175). The majority of the participants were from urban settings, which made up 85.83% of the sample (n=309), whereas rural dwellers consisted of 14.17% (n=51). Participants' socioeconomic status was divided into the upper and lower classes, with 56.11% of the participants (n=202) falling into the lower socioeconomic group, and 43.89% (n=158) belonging to the upper socioeconomic group. This demographic sketch renders an adequate picture of the sample, including the generally balanced gender split, a greater proportion of urban dwellers, as well as a considerable percentage of participants from lower socioeconomic strata. These features will be taken into consideration on analyzing the effect of problematic binge-watching on mental health outcomes in this group

Table 2 depicts the frequency and percentage of binge-watching behavior among the 360 participants of the study. Binge-watching was common among 63.62% of the students. Conversely, 36.38% (n=131) of the respondents were not found to be involved in binge watching, as clearly evident from Figure 1. This information highlights a considerable percentage of students who are involved in binge-watching, which will be imperative in examining its effects on their mental well-being.

Table 3 depicts the frequency and percentage of binge-watching via various devices by the students covered

under the study. The largest percentage, 71.6%, binge-watched on a smartphone, followed by tablets at 41%. Televisions were used by 21.3% of the students, while laptops were used by 17%. Desktops were the least used for binge-watching, and only 6.1% of students reported their usage, as shown in Figure 2. These results show a preference for personal and mobile devices such as smartphones and tablets compared to more fixed devices like desktops and televisions

The relationship of sociodemographic variables with binge-watching behavior among the students in this survey is shown in Table 4. In terms of age, both age brackets (18-20 and 21-23) had nearly identical frequencies of binge-watching, with no significant statistical difference (Chi-square=0.0009, p=0.976). No significant relationship between gender and binge-watching was found, as females and males both reported equivalent rates (Chi-square=0.048, p=0.825). However, locality had a strong association, with students in urban areas being more likely to binge-watch than students in rural areas (Chi-square=12.919, p<0.001). Socioeconomic status was not significantly associated with binge-watching behavior (Chi-square=0.305, p=0.580). These results indicate that although age and gender do not impact binge-watching behavior among students, urban residence strongly relates to binge-watching at higher frequencies than rural residence

The association between mental health indicators such as anxiety, depression, stress, and binge-watching behaviour among the students are illustrated in Table 5. There was a significant association between anxiety and binge-watching, as students reporting anxiety were more likely to engage in binge-watching compared to those without anxiety (Chi-square=15.759, p<0.001). Similarly, depression also revealed a significant association, with students experiencing depression being more addicted towards binge-watching (Chi-square=6.9037, p=0.008). Nonetheless, the presence of stress did not show a statistically significant association with binge-watching behaviour (Chi-square=0.08, p=0.764). These findings underscore that anxiety and depression are closely linked with higher rates of binge-watching among students, highlighting potential psychological factors influencing viewing habits.

**Table 1: Frequency and percentage of sociodemographic characteristics of the study participants (n=360).**

Sociodemographic characteristics	N	Percentage (%)
<b>Age (in years)</b>	18-20	192
	21-25	168
<b>Gender</b>	Female	185
	Male	175
<b>Locality</b>	Urban	309
	Rural	51
<b>Socioeconomic status</b>	Lower	202
	Upper	158

**Table 2: Frequency and percentage of binge-watching among students (n=360).**

Binge-watching	N	Percentage (%)
Present	229	63.62
Absent	131	36.38

**Table 3: Frequency and percentage of binge-watching using different devices (n=229).**

Binge watching devices	N	Percentage (%)
Smart phone	164	71.6
Laptop	39	17
Desktop	14	6.1
Television	49	21.3
Tablet	94	41

**Table 4: Association between sociodemographic characteristics and binge watching.**

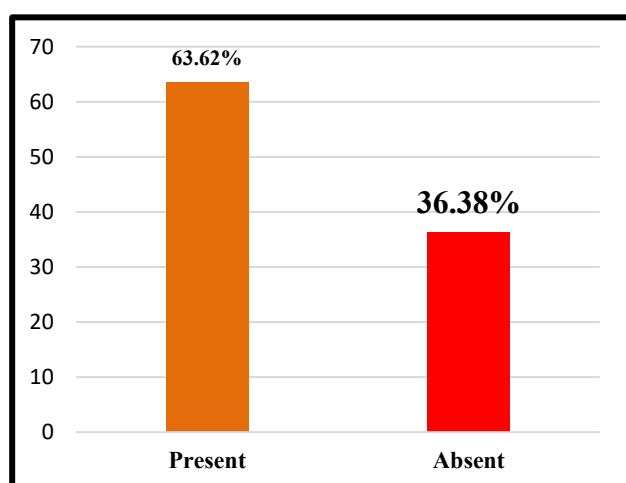
Sociodemographic characteristics	Binge watching present	Binge watching absent	Chi square	P value
Age (in years)	18-20	122	0.0009	0.976
	21-23	107		
Gender	Female	119	0.048	0.825
	Male	110		
Locality	Urban	208	12.919	0.000*
	Rural	21		
Socioeconomic status	Lower	131	0.305	0.580
	Upper	98		

\*P<0.05, which is statistically significant.

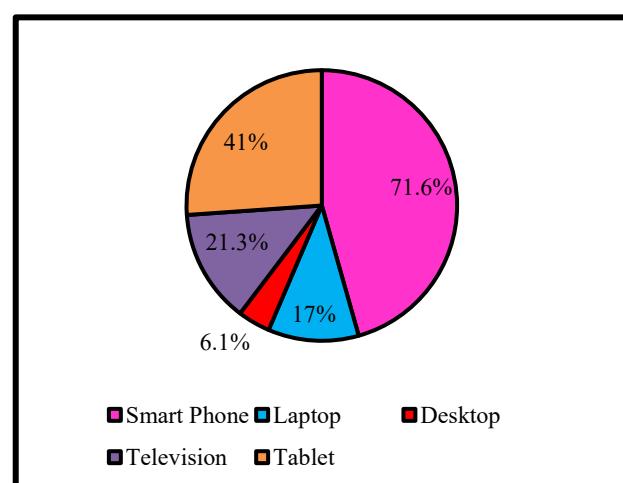
**Table 5: Association between anxiety, depression, stress, and binge watching.**

Variables	Binge watching present	Binge watching absent	Chi square	P value
Anxiety present	33	2	15.759	0.000*
Anxiety absent	196	129		
Depression present	22	3	6.9037	0.008*
Depression absent	207	128		
Stress present	14	7	0.08	0.764
Stress absent	215	124		

\*P<0.05, which is statistically significant



**Figure 1: Percentage of binge-watching among students.**



**Figure 2: Percentage of binge-watching using different devices.**

## DISCUSSION

Binge-watching has emerged as a relatively recent obsession among students. This can have a detrimental impact on the psychosocial well-being of the students if it affects their mental health. The following discusses the research conducted among college students on problematic binge-watching. The study found that possibilities for social involvement, escape from reality, simple access to TV programming, and advertising encourage college students to binge-watch. If students are dissatisfied with their binge-watching experience, they desire to continue doing so.

This study discovered that binge-watching was common among students, with 63.62% (n=229) indicating engagement in binge-watching, which is similar to a study conducted by Srinivasan et al in the Kancheepuram district of Tamil Nadu.<sup>6</sup>

In a study in Patna done by Rahul et al about 80% of the participants watched 1 to 2 hours of web-series content daily, and 17% of them watched 3 to 4 hours daily, which is contradictory to our results, as 75% of them watched 3 to 4 hours daily, and 25% watched just 1 to 2 hours daily.<sup>10</sup>

Dixit et al conducted a study and found that 68% of the population binge-watched, which is in conformity with our results.<sup>11</sup> High prevalence of binge watching is a matter of concern since it may result in psychosocial problems like anxiety, depression, and stress among people.

Our results indicated that 71.6% of the students binge-watched using smartphones, consistent with another study on pandemic binge-watching by Rahman et al in Bangladesh, which showed that the increase in smartphones has been a major issue in the recently emerging problematic binge-watching.<sup>12</sup>

Our research established that 32% of the respondents viewed 2-14 episodes consecutively, which accounts for a propensity towards problematic binge-watching, which can expose one to the risk of acquiring behavioural addiction characteristics. It is refuted by a study conducted by Starosta et al in Poland, which indicates that 7% viewed 2-14 episodes in a single sitting, resulting in problematic binge watching.<sup>13</sup>

Our research results indicate that even though gender and age don't have any impact on binge-watching behavior among students, those who are residing in urban areas strongly show increased binge-watching rates than rural areas, which is more or less similar to research conducted by Srinivasan et al.<sup>6</sup>

The results of this study characterized positive correlations among problematic binge watching and

depression on the PHQ Questionnaire shared resemblance with a study conducted by Sun et al in Taiwan.<sup>5</sup>

Our findings further indicate that problematic binge-watching is linked with a higher risk for anxiety. Other studies done by Maras et al and Gunnell et al have found a positive correlation between screen use and anxiety.<sup>14,15</sup> Nevertheless, to our knowledge, this research is the first one to have explored the relation between problematic binge-watching with depression, anxiety, and stress.

Overall, the results indicate that even though students are compelled to watch more in order to meet their expected gratifications, there is a possibility of them becoming hooked on it, particularly if they derive negative gratifications upon the termination of the binge-watching session. This study is rare and reveals insight into the addictive habit of binge-watching. The results are concerning because college students are likely to become addicted to bingeing behavior in a bid to escape the ill effects of binge-watch.

This research, even though valuable, was not without some limitations. Findings may be specific to the context of Puducherry, limiting their generalizability to other geographical regions. This in turn, influences the binge-watching behaviour, which may vary over time.

## CONCLUSION

This study is significant in emphasizing that dysfunctional binge-watching is very prevalent among Puducherry students, with nearly two out of every three reporting the habit. Smartphones were utilized most often, with easy access being a primary driving factor. While age, gender, and socio-economic status were not significantly associated, urban residency showed a strong association with binge-watching. Interestingly, binge-watching was significantly associated with both depression and anxiety but showed an insignificant association with stress. These findings underscore the psychosocial risks of excessive screen entertainment usage among young adults. Therefore, evidence-based counseling and awareness campaigns are warranted to promote healthy watching habits and sustain the mental well-being of students.

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*Ethical approval: The study was approved by the Institutional Ethics Committee NO.IEC/C-P/7/2025.*

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