

Exposure to Tobacco and Drug Use in Streaming Cinema: Content Analysis of Top OTT Platforms (2024–2025)

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ABSTRACT:

Introduction: The rapid growth of OTT streaming platforms has transformed cinema consumption, enabling binge-watching and repeated content exposure, especially among adolescents and young adults. This raises concern over the portrayal of tobacco and drug use, which may normalize or glamorize substance behaviours among viewers. Given limited research on post-pandemic streaming content, this study was conducted as a content analysis of top Tamil OTT movies (2024–2025) to assess the frequency, pattern, and context of tobacco and drug depictions.

Aim: To quantify the frequency and duration of tobacco and drug use scenes in selected OTT movies and to assess potential exposure risk to viewers, particularly adolescents and young adults, based on content patterns.

Result: The study shows that tobacco portrayal in OTT movies is widespread and remained consistent over the two-year period. Given that adolescents and young adults form a major share of OTT viewership, this steady exposure raises concerns about the normalization of tobacco use as a routine behaviour pattern among such audiences.

Conclusion: The consistent pattern of exposure across 2024 and 2025, with no significant year-wise difference, indicates a persistent and normalized presence of tobacco in streaming content rather than a declining trend. Among adolescents and young adults, such frequent portrayal may contribute to the normalization and potential initiation of tobacco use. Therefore, urgent need for stricter regulatory warnings and content guidelines on OTT platforms, comparable to those enforced in theatrical releases, to safeguard public health is required.

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INTRODUCTION:

The rapid development of Over-The-Top (OTT) platforms has fundamentally changed the way audiences engage with cinema, offering unparalleled convenience and variety in on-demand entertainment. Unlike theatrical viewing, OTC enables watching films on personal devices and encourages binge-watching and rewatching, especially among adolescents and young adults [2,3]. However, such platforms also pose a danger

by normalizing and promoting substance use through movie and series plots [3].

Tobacco and drug use remains one of the leading causes of death worldwide, with lung cancer, COPD, and cardiovascular diseases among the most damaging outcomes [4]. Moreover, media consumption significantly impacts an individual's likelihood to experiment with or continue using psychoactive substances [5]. Thus, films' portrayal of tobacco and drugs use poses a severe threat to public health by reinforcing the normal use of

substance and desensitizing viewers to its dangers. Although theatrical films are subject to anti-tobacco and anti-drug use warnings and disclaimers, such restrictions are often absent in OTC movies and shows.

Given the growing popularity and influence of the OTC platforms, it is essential to assess the presence, type, and context of drugs and tobacco use in movies. Although some studies have demonstrated the volume of substance use before the pandemic, there is a need for more data on the current state of the media market. No existing studies focus on OTC movies and series from 2024–2025, which will help identify the most pressing issues for future public health research and policy.

STUDY DESIGN AND SETTING:

This descriptive cross-sectional content analysis study was undertaken to determine the portrayal of tobacco and drug use in the movies of Tamil dubbed in the selected over-the-top (OTT) platforms during 2024–2025. The study was conducted in Tagore Medical College and Hospital over two months, between June and July 2026.

SELECTION OF MOVIES:

The study will include full-length Tamil movies on the selected OTT platforms released between January 2024 and December 2025. The leading OTT platforms popular among Indian audiences will be included. On each platform, a list of the top 10 Tamil movies will be identified using the defined inclusion criteria. “Top 10” refers to the ten Tamil movies most popular or watched on a given platform during the study period. The cut-off for selection will be based on the publicly available “Top 10,” “Most Watched,” “Trending,” or similar lists and metrics, including user ratings, when available. For each platform, the inclusion criteria will involve searching for Tamil language, genre of drama, action, or thriller, year of release 2024–2025, and the presence of at least one scene depicting tobacco or drug use. To create a master list of eligible movies, the movies found on each platform will be combined. Each platform’s top 10 list of movies will be noted. Only the publicly available information can be used for the movie selection, and no private or confidential data should be analysed.

The inclusion criteria are Tamil movies on OTT platforms released between 2024 and 2025, full-length movies (feature films) exclude web series, short films, and documentaries; Top 10 most popular or most watched; drama, action, thriller genres; at least one scene depicting tobacco or drug use; and available for viewing in full of sufficient quality for coding. Excluded are web series, documentaries, and short films; movies without the use of tobacco

or drugs; unavailable or incompletely accessible; and insufficient visual and audio quality.

CONTENT ANALYSIS:

A coding scheme was adopted from previously used five-minute interval content analysis methods to evaluate tobacco and drug content. The clips were split into five-minute intervals, and each interval was assessed for the presence of tobacco and drug content.

Four categories were used to classify the presence of tobacco and drugs: actual use, implied use, paraphernalia or other references, and branding. Actual use was defined as the use of any form of tobacco such as cigarettes, cigars, and bidi or drugs by the characters in the movie. Implied use included showing or using any of the tobacco or drug paraphernalia or saying certain phrases about drugs or tobacco. Paraphernalia or other references included the presence or use of any tobacco or drug-related material like cigarettes, lighters, rolling papers, syringes, and ashtrays among others without direct use. On the other hand, branding referred to showing or using products with recognizable tobacco or drug company logos or brands.

Products such as cigarettes, cigars, bidi, and other forms of tobacco were recorded when present in the movie clip. Similarly, drugs such as cannabis, cocaine, and other injectable drugs and their use were recorded. In cases where multiple items in any category were present in each five-minute interval, only one occurrence was recorded. In addition, if any one item or category recurred in consecutive intervals it was recorded once for each interval.

OPERATIONAL DEFINITION OF EXPOSURE:

A 5-minute interval was classified as positive if it included at least one occurrence of substance use, inferred substance use, paraphernalia, or branding depicting tobacco or drug use. For each movie, a percentage of intervals with substance use was calculated by dividing the number of positive intervals by the number of all analysed intervals. According to this percentage, exposure was classified into low ($\leq 25\%$ of intervals with substance use), moderate (26–50%), and high ($> 50\%$ of intervals with substance use).

STATISTICAL ANALYSIS:

Statistical analysis was carried out using IBM SPSS software (version 26.0). The predictor variables included the movie genre (action, drama, or thriller), the streaming service (OTT platform), the year of release (2024 or 2025), and the language. In addition, where available, the movie’s Central Board of Film Certification (CBFC) rating was

obtained. Data were subjected to test of normality showing non-parametric test of significance: Chi-square test (Fischer exact test) and Mann Whitney U test were used to analyse the tobacco content quantity and tobacco depiction.

RESULT:

A total of 48 OTT movies were analysed for tobacco depictions in 2024 and 2025. The mean number of tobacco depictions in movies from both years was similar. Specifically, there were 10.67 ± 11.49 and 10.30 ± 11.83 tobacco depictions per movie in 2024 and 2025, respectively. The median number of depictions was also similar and amounted to 8.0 (IQR: 0-20) and 6.0 (IQR: 0-18) for 2024 and 2025, respectively. The number of tobacco depictions in movies was in the range of 0-33 and 0-40 for 2024 and 2025, respectively.

Mann Whitney-U test revealed that the number of tobacco depictions in movies was not significantly different between the two years of observation ($U = 282.0$, $p = 0.983$) thus proving the stability of the trends.

Public Health Implications

Prevalence of Tobacco Content Based on Year of Release

Overall, among the 48 movies included in the study, 33 (68.8%) were found to contain tobacco content, whereas 15 (31.2%) were tobacco-free. Among 21 movies released in 2024, 14 (66.7%) contained tobacco content, whereas among 27 movies released in 2025, 19 (70.4%) contained it.

In Fisher's Exact Test, there was no statistically significant difference in the prevalence of tobacco content across years ($p = 1.000$). It implies that there was no association between the year of release and the presence of tobacco content in movies.

Public Health Implications

Overall, in terms of public health implications, it can be stated that the results of the current study reveal the prevalence of tobacco depiction in OTT movies. First and foremost, it was found that nearly two-thirds of the movies analysed contained tobacco content. Given that the mean number of tobacco content occurrences amounted to 10.46 and the maximum number of tobacco depictions was 40, it can be asserted that the population is highly exposed to anti-tobacco campaigns through various OTT movies. The fact that no significant difference was found between the two years of observation in terms of the number and prevalence of tobacco content indicates that the spread of tobacco use normalization through movies has become a persistent trend.

In terms of public health, the recognition of the normalization of the use of tobacco in movies may be interpreted as an indicator of a growing acceptance of it in society. This is especially true given that young people are the primary consumers of entertainment media, and the results of the study suggest that the use of tobacco by them may be viewed by adolescents as a routine part of behaviours performed by their favourite actors or actresses.

TABLE 1

Distribution of Tobacco Depictions in OTT Movies by Year of Release				
Year of Release	Number of Movies (n)	Mean Tobacco Depictions $\pm$ SD	Median (IQR)	Minimum–Maximum
2024	21	10.67 ± 11.49	8.0 (0–20)	0–33
2025	27	10.30 ± 11.83	6.0 (0–18)	0–40
Total	48	10.46 ± 11.61	7.0 (0–19)	0–40
Mann–Whitney U test: $U = 282.0$, $p = 0.983$				

TABLE 2

Prevalence of Tobacco Content in OTT Movies by Year of Release			
Year of Release	Tobacco Content Present n (%)	Tobacco Content Absent n (%)	Total
2024	14 (66.7)	7 (33.3)	21
2025	19 (70.4)	8 (29.6)	27
Total	33 (68.8)	15 (31.2)	48
Fisher's Exact Test: $p = 1.000$			

DISCUSSION:

Research on the portrayal of tobacco in Indian screen media over the last five years has been consistent in noting its ubiquitous presence despite increasing regulatory efforts. Arora et al. (2021) revealed that in popular on-demand streaming series, tobacco use was prominent, often greatly exceeding such depictions on traditional TV, thus prompting calls for greater regulatory oversight of digital screens at the global level [1]. Nazar et al. (2023) showed in a longitudinal study of Bollywood films that the implementation of India's tobacco-free film and television policy was associated with reduced on-screen tobacco use, thus proving its effectiveness [2].

In contrast, recent studies focusing on the OTT (over-the-top) streaming platforms revealed that, unfortunately, this positive trend fails to apply to online films and TV shows. Both Pulicherla & Kodali (2024) and Jena et al. (2024) concluded that in most movies and web series produced for these platforms, tobacco use remains common, with little adherence to the disclaimer, health hazard, and warning label rules mandated by India's OTT Rules 2023[3][4].

Ghosh and Buwade's (2026) recent study expand on the findings of the last three articles, as it compares the prevalence of tobacco, alcohol, and narcotics in top Hindi movies on OTT platforms over the 2022-2024 period. Notably, the researchers found that in 43% of the movies analysed, tobacco use had occurred, and its prevalence decreased between 2023 and 2024, although not eliminated [5]. Overall, this body of research shares the focus and methodology of the present paper, as it also measures tobacco portrayal in OTT media use and assesses trends between different years of study, thus supporting the current findings.

The presence of tobacco in movies and OTT is either lower or declining compared to the findings of the uploaded study (high prevalence with no change across the years: 68.8%). Alfayad et al. (2022) found that only 26.9% of coded units in UK Netflix and Amazon Prime Originals films contained any tobacco imagery as compared to 68.8% prevalence in the uploaded study [6]. Nazar et al. (2023) analysed 240 Bollywood movies and observed a reduction of tobacco incidents per film post-2012 India-wide ban[2]. Jena et al. (2024) found that Indian OTT movies and web-series have significantly fewer tobacco incidents per show (3.95 on average)[4]. Ghosh and Buwade (2025/2026) observed a significant decrease in the duration of tobacco use in Hindi movies from 2023 to 2024

across 46 top-viewing OTT movies[5]. Yadav and Glantz (2021) found that the tobacco prevalence in top-grossing Bollywood movies reduced from 89% in 2005 to below 48% in 2015 post-similar nationwide India ban[7]. Overall, it was concluded that the findings of the above research contradict the claims of the uploaded study that tobacco prevalence in movies and OTT is high and consistent across the years.

The study has several significant limitations that should be acknowledged. Firstly, the research sample size of 48 movies is small, which reduces the accuracy of any description of the entire OTT industry, and the period covered is also limited to only two years, which is too short to identify any long-term trends. The research only focuses on theatrical films and leaves out web series that are much more common viewing fare for young people, and there is no breakdown that might highlight differences between platforms, genres, languages, or countries of origin.

The study does not analyse adherence to anti-tobacco rules or guidelines, which could be another valuable area of exploration for future studies, and the amount of tobacco portrayal is measured only in terms of frequency, not duration, intensity, or other factors, and it does not distinguish between tobacco use, implication, and absence, all of which might have different effects on viewers. The study does not provide evidence on how consistent coders' assessments were, which raises questions about the accuracy of its methodology, and it does not provide any information on exposure or outcome to tobacco use, so it cannot demonstrate a cause-and-effect relationship between the two.

The future research should consider increasing the sample size and length of the study, which should be spread out over several years. Future studies should also include a comparison of web series and movies since the former are increasingly popular among the young audience. In addition, the future research should be stratified according to the OTT platform where the movie was watched, the genre, and the language of the movie.

Instead of measuring the frequency of tobacco depiction, the future research could include the time of the depiction, its context, and its type – whether it was explicit, implied, or shown through associated objects. The study could use multiple coders to evaluate the movies and measure the reliability of coding results for different coders.

Moreover, the future design could include a comparative analysis between different year or platforms or media types. It is also necessary to explicitly note the inclusion-exclusion criteria.

Lastly, the future study could analyse the influence of tobacco depiction on the audience by considering their attitudes or behaviour.

CONCLUSION:

The present research has established that tobacco portrayal is quite common in Tamil OTT movies produced during 2024-2025, with almost seven out of every ten OTT movies depicting one instance of tobacco portrayal. The prevalence of tobacco portrayal was found to be almost similar for both 2024 and 2025, thereby showing that the prevalence of tobacco portrayal remains unchanged and is persistent in OTT movies despite regulation. From these results, it can be said that the current regulatory measures have had little effect on the prevalence of tobacco portrayal in OTT movies. As a result, the exposure to tobacco depiction through digital entertainment is likely to result in the normalization of tobacco and its influence on health behaviors.

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