

FINAL ANNUAL REPORT

Smoking in Films: 2022

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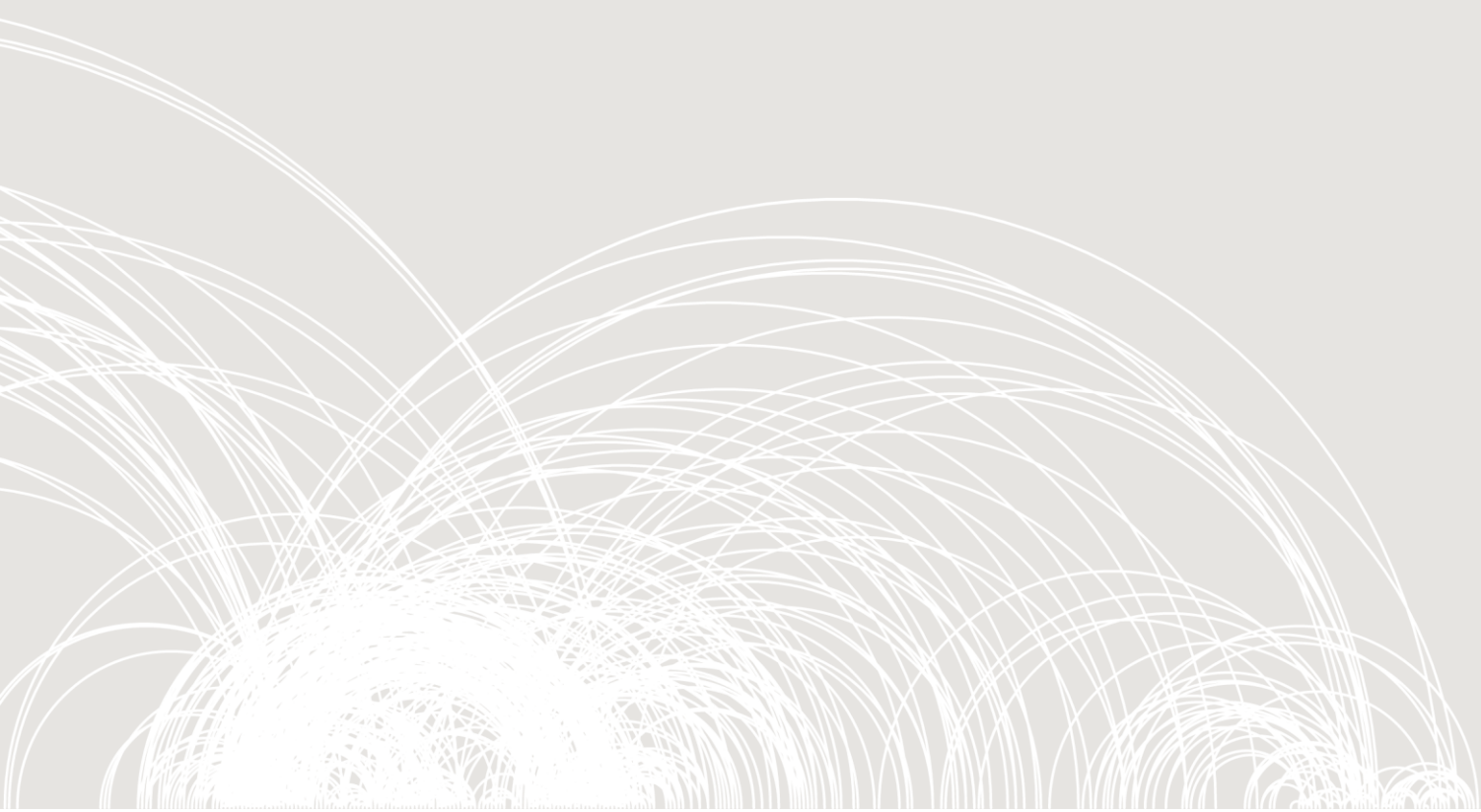


Table of Contents

- Introduction & Background 2
- Top Films Released in 2022 2
- Tobacco Imagery in 2022 Films..... 3
 - Total number and percentage of films with any tobacco imagery: Studio affiliation 4
 - Total number of tobacco incidents in films..... 5
 - Tobacco product imagery in films..... 5
- Audience Exposure to Tobacco Imagery in Top 2022 Films 6
 - Tobacco Free Screens Film Viewership Survey 6
 - Audience exposure to 2022 films with tobacco: Theater..... 6
 - Audience exposure to 2022 films with tobacco: Streaming..... 6
 - Top 2022 films watched by youth and young adults 7
- Tobacco Use Behaviors & Perceptions 9
 - Perceptions of Tobacco Presence in Films 9
- Future Directions 10
- Methods 10
- Conclusion 11
- References..... 12
- Appendix A: Top 2022 Youth-Rated Films Containing Tobacco 13

Introduction & Background

In 2003, researchers, state Attorneys General, and policymakers put the Motion Picture Association of America (MPA) on notice of the need to eliminate youth exposure to smoking on screen. However, to date, the film industry has only taken modest steps to reduce or enforce stricter regulations or exclude tobacco imagery in youth-rated (G, PG, PG-13) films. The MPA represents six major film studios in the U.S.: Walt Disney Motion Pictures, Paramount Pictures, Sony Pictures Entertainment, Universal City Studios, Warner Brothers Entertainment, and Netflix¹. These MPA member studios are committed to lowering tobacco exposure among youth and hold different goals for tobacco-free screens than independent movie studios, who have yet to be as vocal about their commitment to reducing harmful imagery. Non-MPA film studios refer to production companies not part of the MPA. Non-MPA studios can be large studios with publicly traded parent companies or smaller independent studios. Lions Gate Entertainment, STX Films, and BRON Studios are examples of non-MPA member studios, among many others.

Since 2002, the University of California, San Francisco has collaborated with Breathe California and Truth Initiative to analyze onscreen smoking data in the Breathe California Onscreen Tobacco Database² and produce annual reports summarizing tobacco presence in top films released that year³. In 2021, NORC at the University of Chicago joined the collaborative effort, taking over the analysis and reporting role starting with the 2020 report. Our Tobacco Free Screens Film Viewership Survey supplements the Smoke Free Media Onscreen Tobacco Database, which collects and archives film information, including company and production credits and tobacco product count in films. This 2022 report builds on the [2021 Smoking in Films Report](#), highlighting findings from both data sources and discussing evolving changes and implications for this research.

Top Films Released in 2022

We identified the top films released in 2022 if they appeared at least once on Box Office Mojo's Top 10 chart lists. We included 114 films released in 2022 and available to watch in the domestic United States. **Table 1** displays the breakdown of 2022 films by rating and MPA member studio production affiliation. Please visit the [Smoke Free Media Onscreen Tobacco Database](#) for the film name, release date, company credits, tobacco measures, and additional details on each film.

Technological and social changes in the past few years have drastically changed how films are released and watched. With the proliferation of streaming services that offer movies on demand, more people watch movies at home on their personal televisions or devices compared to those in theaters in the recent past. The COVID-19 pandemic made home viewing even more common. As TV-films increased in popularity, our methodology to collect top films expanded to include additional ratings

outside the MPA film ratings. To accurately capture and analyze our data, we grouped films according to the following:

- G/PG rating: Any films rated G, PG, or TV-PG
- PG-13 rating: Any films rated PG-13 or TV-14
- R/Unrated: Any films rated R, TV-MA, Not Rated (NR), or Unrated

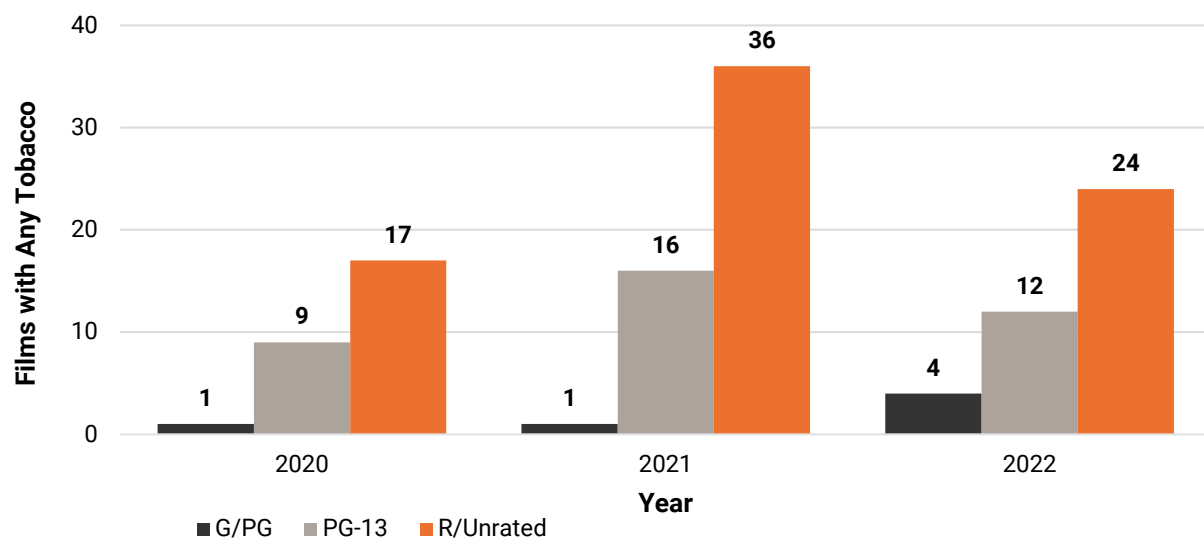
Table 1: Number of top films released in 2021, by rating and studio type

	G/PG	PG-13	R	Total
MPA member studio	8 (7%)	21 (18%)	34 (30%)	63 (55%)
Non-MPA member studio	11 (10%)	21 (18%)	19 (17%)	51 (45%)
Total	19 (17%)	42 (37%)	53 (47%)	114 (100%)

Tobacco Imagery in 2022 Films

The total number and percentage of 2022 films with any tobacco was 40 out of 114 films (35%). This percent represents a decline from 2021, where 47% (53 out of 112 films) contained tobacco (**Figure 1**), representing a 26% decrease in the number of films released with tobacco from 2021 to 2022 (47% in 2021; 39% in 2022).

Figure 2: Number of films with any tobacco by year and rating (2020-2022)



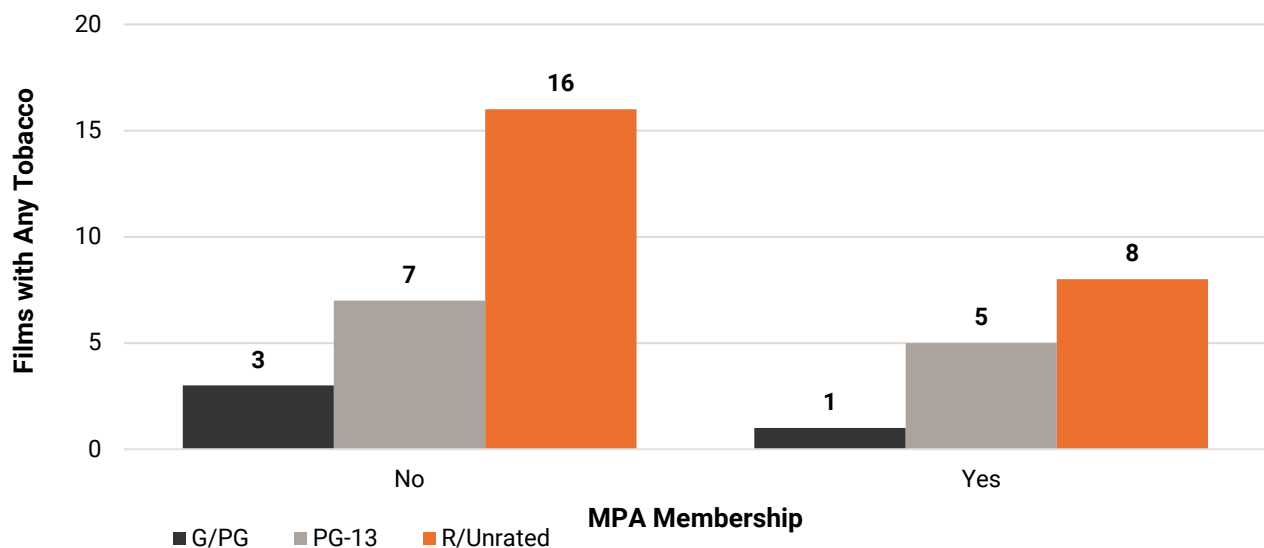
Overall, smoking and tobacco presence in films is declining. However, a continued portrayal of harmful tobacco imagery in youth-rated films (G, PG, and PG-13) is especially detrimental. In 2022, there were

40 tobacco-containing films, of which 16 (40%) were rated appropriate for youth, one less film than in 2021. Among these youth-rated films with tobacco imagery, an alarming four G/PG-rated films contained tobacco imagery, the most since the 2020 COVID-19 pandemic. **Appendix A** contains a complete list of 2022 youth-rated films with tobacco. While the number of R-rated films displaying tobacco imagery decreased since 2021 (36 films in 2021; 24 films in 2022), they account for 60% of all films containing tobacco in 2022.

Total number and percentage of films with any tobacco imagery: Studio affiliation

Non-MPA production companies in 2022 accounted for more than half of all films with any smoking or tobacco (Non-MPA studios: 26 films; MPA studios: 14 films) (**Figure 2**), a trend we first observed in 2019. Non-MPA studios also continue to release more youth-rated films with tobacco imagery than films produced by MPA studios (Non-MPA studios: 10 films; MPA studios: 6 films).

Figure 2: Number of films with any tobacco by rating and MPA studio membership (2022)



Overall, A24 (4 films), Universal Pictures (4 films), and Paramount (3 films) produced the most number of films with any tobacco. Universal Pictures (4 films), Paramount (3 films), and Sony Pictures (3 films) produced the most number of 2022 films overall with any tobacco among MPA studio members. Among non-MPA studio members, A24 (4 films), Toei Company (2 films), and 2AM (1 film) produced the most number of 2022 films with tobacco.

A24, Universal Pictures, and Paramount produced the most 2022 films with any tobacco.

Total number of tobacco incidents in films

There were 1,167 total tobacco incidents in the top 2022 films, a 50% decrease compared to the 2,315 total tobacco incidents in 2021 films. Tobacco incidents are the number of times tobacco products (e.g., cigarettes, cigars, e-cigarettes, smokeless tobacco, and pipe products) appear in a film. We often divide tobacco incidents by the number of movies each year to determine the average number of tobacco incidents per film and to account for fluctuations in the number of films released annually. In all top 2022 films overall, there was an average of 10 tobacco incidents per film, a decrease of more than half compared to 2021 (21.3 incidents per film).

Tobacco product imagery in films

Tobacco products such as electronic cigarettes (e-cigarettes), cigars, and pipe tobacco continue to make their way into mainstream media in both youth and R-rated films. In 2022, there were 1,167 incidents of tobacco products in 114 rated films. Cigarettes accounted for 914 incidents (78%) and were the most common tobacco product displayed in films (**Table 2**), despite having a 56% decrease in incidents since 2021. The number of e-cigarette and pipe depictions increased in the top 2022 films compared to the top 2021 films. For the first time, e-cigarettes emerged in a youth-rated movie, the PG-13-rated film *Glass Onion* (Netflix; MPA member studio). *Redeeming Love*, a PG-13 rated film (Talent10; Non-MPA member studio), contained all three incidents of smokeless tobacco. R-rated films continued to include the most number of tobacco incidents. There were no G-rated films that depicted tobacco products.

Table 2: Tobacco product incidents in films by rating (2021-2022)

Rating	Cigarettes	Cigars	E-cigarettes	Pipes	Smokeless Tobacco	Total Incidents
2021						
G (n=1)	0	0	0	0	0	0
PG (n=16)	8	0	0	0	0	8
PG-13 (n=40)	667	77	0	4	89	837
R (n=49)	1,380	114	4	8	0	1,536
Total (n=106)	2,055	221	4	12	89	2,381
2022						
G/PG (n=19)	30	37	0	36	0	103
PG-13 (n=42)	210	93	1	27	3	334
R (n=53)	674	45	8	3	0	730
Total (n=114)	914	175	9	66	3	1,167

Audience Exposure to Tobacco Imagery in Top 2022 Films

We calculated an estimate of audience exposure to films with tobacco watched both in theaters and on streaming platforms. Calculating in-theater exposure is based on historical methods dating back to when this work began in 2002³. The shift in film-watching and the release of films from in-theater to video-on-demand posed challenges when calculating the number of individuals exposed to tobacco imagery. As a result, researchers from NORC, in collaboration with the Truth Initiative, developed a methodology to estimate tobacco imagery exposure from films watched by youth and young adults on streaming platforms. We used this methodology in our prior reports.⁴

Tobacco Free Screens Film Viewership Survey

NORC, in collaboration with the Truth Initiative, fielded a survey to youth and young adults to measure viewership of top films in 2022 and supplement traditional theater measures using box office estimates. We fielded our survey in April 2023 and asked 1,640 youth and young adults, ages 15-24, to indicate which 2022 films in the Smoke Free Media Onscreen Tobacco Database they watched and whether they first watched the film in theaters or on a streaming service, if at all.

Audience exposure to 2022 films with tobacco: Theater

An estimated **104 million youth and adults** were exposed to tobacco imagery in top films watched in theaters in 2022.

Before the COVID-19 pandemic in March 2020, the *Tobacco in Top Films* methodology used total box office revenue and U.S. average ticket sale prices to estimate audience exposure to in-theater tobacco imagery. At the time of writing this report, the 114 top films released in 2022 amassed \$7 billion in total domestic box office revenue, with the average ticket price in the United States in 2022 being \$9.27. Top in-theater box office films in 2022 exposed an estimated 104,343,823

million youth and adults to tobacco imagery. We calculated this value by using a national average for ticket price and gathered domestic box office revenue data for films containing any tobacco from IMDB Pro (third-party). However, this method only partially accounts for population-level exposure to tobacco in films since the shift of film-watching behaviors, from theaters to streaming, due to the COVID-19 pandemic.

Audience exposure to 2022 films with tobacco: Streaming

We estimated potential exposure to tobacco imagery on streaming platforms among youth and young adults based on our calculations of the percentage of survey respondents who viewed at least one film containing tobacco on a streaming platform (53.11%). We scaled this estimate to the U.S. population,

using the number of youth and young adults aged 15-24 as part of the 2021 American Community Survey (ACS) five-year estimates (39 million individuals). The resulting figure represents a gross estimate of youth exposed to tobacco on streaming platforms. This method suggests that films on streaming platforms potentially expose an estimated 20,683,491 youth and young adults to tobacco imagery, down from approximately 25 million youth and young adults potentially exposed to tobacco imagery in 2021. Our estimate of tobacco imagery exposure among youth and young adults underestimates the true magnitude of exposure to tobacco imagery through streaming platforms and has several limitations.

An estimated **21 million youth and young adults** are potentially exposed to tobacco imagery in top films watched on streaming platforms in 2022.

Top 2022 films watched by youth and young adults

From a randomized list of 30 top 2022 films, we asked youth and young adults to select the films they watched and where they first watched them (in theaters or on a streaming platform). The films most viewed by youth and young adults overall include *Minions: The Rise of Gru* (n=174; PG rating; Universal Pictures; MPA member studio), *Scream* (n=171; R rating; Paramount Pictures; MPA member studio), *The Batman* (n=158; PG-13 rating; Warner Bros.; MPA member studio), *The Bob's Burgers Movie* (n=147; PG-13 rating; Walt Disney Studios; MPA member studio), and *Black Panther: Wakanda Forever* (n=132, PG-13 rating; Walt Disney Studios; MPA member studio). MPA member studios produced all five films most watched by youth and young adults. Notably, all five top films by youth and

All top films watched by youth and young adults in our sample **did not contain tobacco**.

young adults did not contain tobacco imagery. Youth and young adults watched these top films on a streaming platform, demonstrating the widespread use of video-on-demand platforms to access and watch newly released films. All top films watched by youth and young adults in our sample did not contain tobacco and were produced by MPA studio members, potentially demonstrating their renewed efforts to remove tobacco from films.

Table 3 displays the top 2022 films by each age group. We observed no variation in the films watched across groups; none contained tobacco imagery. Youth and young adults only watched one film in theaters, *The Bad Guys* (PG rating; Universal Pictures; MPA member studio). Despite production companies continued concurrent release of films on streaming in theaters, our results demonstrate youth and young adults preferred streaming platforms to access and watch newly released films. This access is especially detrimental given the ease of accessing films that are not age appropriate for youth. For example, as highlighted in our results, the R-rated *Scream* was a top-watched film via a streaming platform among youth ages 15-17.

Table 3: Top 2022 films viewed by respondent age category, with rating, platform, and any tobacco imagery

Film	Rating	Commonly watched on streaming or in theaters	Any tobacco imagery	n (%)
Respondents aged 15-17 years				
<i>Minions: The Rise of Gru</i>	G/PG	Streaming platform	No	61 (42)
<i>Scream</i>	R/Unrated	Streaming platform	No	53 (35)
<i>The Batman</i>	PG-13	Streaming platform	No	48 (33)
<i>Doctor Strange in the Multiverse of Madness</i>	PG-13	Streaming platform	No	45 (32)
<i>The Bad Guys</i>	G/PG	Theaters	No	48 (31)
Respondents aged 18-20 years				
<i>Scream</i>	R/Unrated	Streaming platform	No	59 (43)
<i>Minions: The Rise of Gru</i>	G/PG	Streaming platform	No	58 (41)
<i>The Batman</i>	PG-13	Streaming platform	No	53 (37)
<i>The Bob's Burgers Movie</i>	PG -13	Streaming platform	No	56 (36)
<i>Black Panther: Wakanda Forever</i>	PG-13	Streaming Platform	No	45 (35)
Respondents aged 21-24 years				
<i>Scream</i>	R/Unrated	Streaming platform	No	59 (41)
<i>The Batman</i>	PG-13	Streaming platform	No	57 (40)
<i>The Bob's Burgers Movie</i>	PG -13	Streaming platform	No	57 (40)
<i>Minions: The Rise of Gru</i>	G/PG	Streaming platform	No	55 (38)
<i>Black Panther: Wakanda Forever</i>	PG-13	Streaming Platform	No	51 (37)

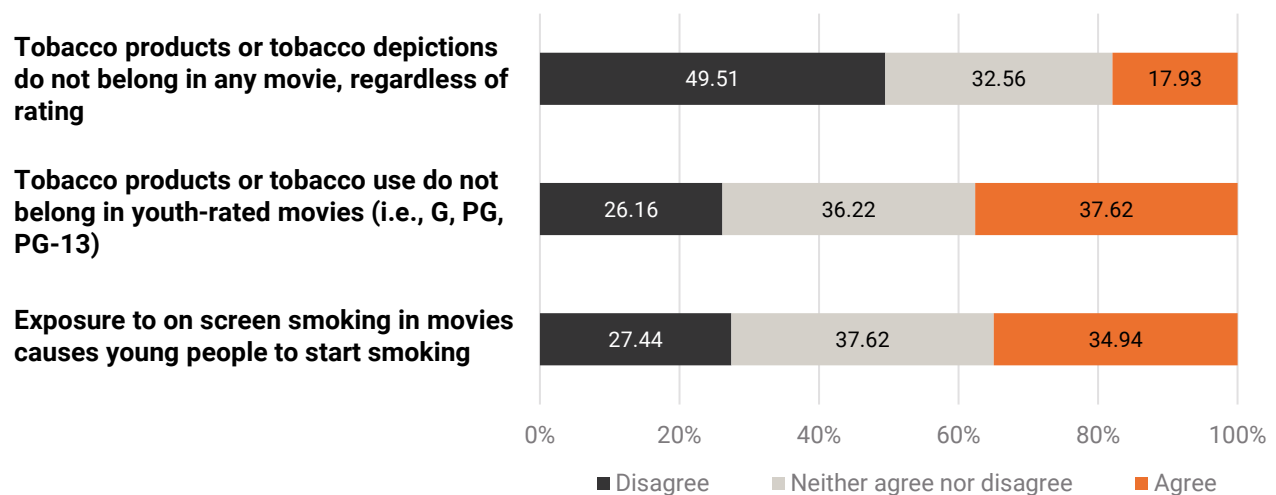
Tobacco Use Behaviors & Perceptions

In addition to the viewership and traditional theater measures captured on the survey, NORC, in collaboration with the Truth Initiative, collected respondent-reported data on youth and young adults' perceptions of smoking and tobacco presence in films.

Perceptions of Tobacco Presence in Films

To better understand how youth and young adults observe and realize the impact of harmful imagery on tobacco use behavior, we showed survey respondents a series of statements about tobacco presence in films and asked them to select their level of agreement. **Figure 3** displays results on youth and young adults' agreement level with statements about tobacco imagery in films and its impact on tobacco youth behavior.

Figure 3: Survey respondents' agreement level to statements about tobacco imagery in films



Half of our youth and young adults survey respondents (50%) disagree with the statement that tobacco products or tobacco depictions do not belong in any movie, regardless of rating. Most youth and young adults are ambivalent about whether tobacco products or tobacco use belong in youth-rated films (37% agree; 36% neither agree nor disagree). Further, they are uncertain about the connection between onscreen tobacco exposure and smoking initiation among youth (38%). Together, these results highlight the increased need to inform youth and young adults of the impact between onscreen media exposure and smoking initiation. A publication from Truth Initiative[®] was the first to find that youth and young adults with high exposure to popular streaming and TV shows containing tobacco images were three times more likely to start vaping⁵ than those without exposure.

Future Directions

Our survey data allowed us to identify the top films youth and young adults watched and the medium used to watch them. We also leveraged our survey to calculate a gross estimate of the number of youth and young adults exposed to tobacco imagery in films watched on streaming platforms. Finally, we explored youth and young adults' perceptions of smoking and tobacco presence in films. Collecting this information better positions our analysis for researchers and public health advocates to speak to the impact of tobacco imagery exposure on youth and young adults' tobacco use behaviors.

In future reports, we plan on including IMDB rating information to allow us to determine whether audience film rating influences which films youth and adults watch. We also collected data using the Brief Sensation Seeking Scale⁶ to explore further youth and young adults' decision-making in selecting films with tobacco imagery. While we collected information in our survey about the age of tobacco use initiation, we plan on incorporating this in future publications and reports to determine whether consuming media with tobacco influences the age of tobacco use initiation. By collecting this data, we can better position our analysis to speak to the impact of tobacco imagery exposure on youth and young adults' tobacco use or initiation behavior. Using this survey, we plan on continuously monitoring cross-sectional trends in tobacco imagery exposure and tobacco use over time among youth and young adults.

We are collaborating with Truth Initiative and Breathe California to expand the Smoke Free Media Onscreen Tobacco Database and improve data collection and codebooks. We intend to include additional fields in the database to capture distributor company information to understand which companies are releasing new films on streaming platforms. These database changes ensure we remain abreast of the changing media and tobacco landscape to conduct a more nuanced analysis in future reports.

Methods

This work started in 2002, with methods documented in full in prior reports³. Breathe California staff monitor new movie release schedules, Box Office Weekend forecasts, and top 10 movie forecasts weekly. A film is chosen for screening and coding if it appeared at least once on a weekly top 10 list (e.g., Box Office Mojo). Once films are identified and released, one to three Breathe California staff members watch and code the film for the presence of tobacco. Staff members code the amount of tobacco displayed (incidents), tobacco use portrayal, character types using tobacco, and location of tobacco use, among other factors. NORC staff collects information on film production details, including media companies, producers, directors, actors, production budgets, and box office results from publicly available entertainment industry databases and publications (e.g., IMDB and The Numbers).

Completed movie records are reviewed and published on the UCSF Smoke Free Media site, with Breathe California staff adjudicating and updating any discrepancies in the records.

NORC at the University of Chicago, in collaboration with the Truth Initiative, fielded a survey in April 2023 to 1,640 youth and young adults (ages 15-24 years) to identify top box office films released in 2022 viewed among this audience. Truth Initiative gathered a representative sample of individuals with a race/ethnicity of 75% White, 13% Black/African American, 6% Asian or Pacific Islander, 6% American Indian Alaskan Native, 50% male, 50% female, 33% of those ages 15-17 years, 33% of those ages 18-21 years, and 33% of those ages 22-24 years. The survey displayed a randomized block list of 30 films out of the 114 included in the Tobacco Onscreen Database. From the list of 30, respondents selected the films they watched and where they first watched them (in theaters or on a streaming platform, if at all). The survey also asked respondents about their demographics, tobacco use, future use intention, and quitting behaviors.

NORC at the University of Chicago compiled all film records and survey data for 2022 films, analyzed the results, and prepared this report funded by Truth Initiative.

Conclusion

The film industry continues to make marginal progress over the decades toward eliminating the number of films released containing tobacco, as we see a decrease in the number of top films released in 2022 with tobacco presence. However, we continue to see youth-rated films containing tobacco imagery (n=16 films in 2022). Non-MPA member production studios remain the top offender for the most youth-rated films with any tobacco imagery (MPA: 6 films vs. non-MPA: 10 films). Of the 1,167 total incidents of tobacco products in 114 rated films, cigarettes continue to dominate tobacco presence in films, accounting for 914 incidents. An estimated 104 million youth and adults were exposed to tobacco imagery in top films watched in theaters in 2022, while approximately 25 million youth and young adults ages 15-24 were exposed to tobacco imagery viewing movies on streaming platforms. Youth and young adults now use streaming platforms as their primary access to newly released films, as they watched all but one top 2022 film on a streaming platform. Notably, none of the top five films watched by youth and young adults contained tobacco, with MPA members producing all top five films. We will continue to monitor newly released films to track trends and changes in the film-watching behaviors and the film industry that have the potential to impact tobacco use among young people.

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Appendix A: Top 2022 Youth-Rated Films Containing Tobacco

Title	Rating	Production Company	Parent Company	MPA Membership Status
<i>Brain and Charles</i>	G/PG	Bankside Films	Bankside Films	No
<i>It's A Wonderful Life</i>	G/PG	Liberty Films	Paramount	Yes
<i>Mr. Malcolm's List</i>	G/PG	Blinder Films	Blinder Films	No
<i>Mrs. Harris Goes to Paris</i>	G/PG	Moonriver Content	Moonriver Content	No
<i>Devotion</i>	PG-13	Black Label Media	Black Label Media	No
<i>Dragon Ball Super: Super Hero</i>	PG-13	Toei Company	Toei Company	No
<i>Glass Onion: A Knives Out Mystery</i>	PG-13	Netflix	Netflix	Yes
<i>Moonage Daydream</i>	PG-13	BMG	Sony Pictures	Yes
<i>One Piece Film: Red</i>	PG-13	Toei Animation	Toei Company	No
<i>Redeeming Love</i>	PG-13	Nthibah Pictures	Talent10	No
<i>Till</i>	PG-13	Eon Productions	Eon Productions	No
<i>The Lost City</i>	PG-13	Paramount Pictures	Paramount	Yes
<i>The Fabelmans</i>	PG-13	Amblin Entertainment		No
<i>The Woman King</i>	PG-13	TriStar Pictures	Sony Pictures	Yes
<i>Uncharted</i>	PG-13	Columbia Pictures	Sony Pictures	Yes
<i>Whitney Houston: I Wanna Dance with Somebody</i>	PG-13	Compelling Pictures	Compelling Pictures	No