

Women and Smoking in Hollywood Movies: A Content Analysis

ABSTRACT

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Objectives. We analyzed the portrayal of smoking in Hollywood films starring 10 popular actresses.

Methods. Five movies were randomly sampled for each actress, for a total of 96 hours of film footage that was analyzed in 1116 5-minute intervals.

Results. Leading female actors were as likely to smoke in movies aimed at juvenile audiences (PG/PG-13) as in R-rated movies, whereas male actors were 2.5 times more likely to smoke in R-rated movies. PG/PG-13-rated movies were less likely than R-rated movies to contain negative messages about smoking.

Conclusions. Smoking is highly prevalent in Hollywood films featuring popular actresses and may influence young audiences for whom movie stars serve as role models. (*Am J Public Health*. 2000;90:412-414)

According to the Centers for Disease Control and Prevention, over one third (34.7%) of female high school students in a national survey reported smoking at least 1 cigarette in the previous month, up 10% since 1993 and 32% since 1991.¹ Cigarette smoking is initiated primarily in adolescence. Among adult regular smokers, 71% reported having formed the habit before the age of 18 years.²

Television and popular films have contributed to the allure of smoking. A recent study found that young adults smoked in about 75% of music videos.³ Although tobacco industry documents suggest that manufacturers have not engaged in deliberate product placement in Hollywood movies since the late 1980s,⁴ recent evidence indicates that smoking continues to be depicted at very high levels. Moreover, the gap between the prevalence of tobacco use in movies and in actual life has steadily widened through the 1990s.⁵ A recent analysis of G-rated children's animated films found that more than two thirds featured tobacco or alcohol use in story plots, with no clear reference made to the adverse health consequences associated with these substances.⁶

Popular film actresses are likely to be role models for young women and adolescent girls. The way that movie stars portray cigarette smoking on the screen may influence young girls' attitudes toward the habit. In this study, we analyzed the portrayal of smoking by 10 leading Hollywood actresses.

Methods

Selection of Actresses

We selected 10 leading Hollywood actresses by surveying the 1997 issues of 5 popular magazines that had the highest readership among women aged 18 to 24 years, according to *Simmons Study of Media and Markets*.⁷ Magazine titles from the "Special Interest" and "Women's Magazines" categories were selected if the editorial descriptions taken from *Bacon's Magazine Directory*⁸ included 1 or more of the following key words or phrases: entertainment, contemporary or current, Hollywood, celebrity, film or movie, personality profiles, women in their 20s, or young women. All issues for the period January 1997 through December 1997 were

obtained for the magazines *Cosmopolitan*, *Glamour*, *Vogue*, *Vanity Fair*, and *Rolling Stone*. Each issue was analyzed for the appearance of female film stars. Advertisements were excluded, and the search was limited to women whose careers are primarily in film. The number of magazine appearances was tallied for each actress, and the 10 actresses with the greatest number of appearances were selected.

Selection of Films

A list of films starring each selected actress was generated from the Web site www.tvguide.com. This Web site, maintained by TV Guide Entertainment Network, provides information on the cast, credits, and reviews for some 35 000 movies. Five titles released between 1993 and 1997 were randomly selected for each of the 10 actresses. We excluded period dramas as well as movies in which the actresses did not play a lead or major supporting role. The title, year of release, rating (R, NC-17, PG, PG-13, G), and genre of each film were recorded.

Content Analysis

We followed the analytic approach described by Hazan et al.⁹ Each film was divided into 5-minute intervals. The occurrence of smoking episodes in each interval was recorded on a coding sheet. We recorded both actual and implied smoking behavior (e.g., holding or smoking a lit or unlit tobacco product); the presence of cigarettes or other smoking paraphernalia (e.g., cigars, matches, and ashtrays); and environmental messages, including "no smoking" signs, tobacco advertising, and tobacco merchandise. Additionally, we recorded smoker characteristics (e.g., gender; whether lead, supporting, or other character); location (i.e., outdoors or in a bar, restaurant, home, or car); the social context of the event (i.e.,

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TABLE 1—Depiction of Smoking Behavior and Paraphernalia, Smoking Context, and Location of Smoking Behaviors in 50 Hollywood Movies

	No. of 5-Min Intervals	Total 5-Min Movie Intervals, % (n = 1116)	Intervals Containing Smoking Behavior, % (n = 317)
Smoking behavior and paraphernalia			
Smoking (actual or implied) behavior	317	28.4	...
Cigarettes	267	23.9	...
Cigarette packs	64	5.7	...
Matches/lighter	108	9.7	...
Cigars, pipes, or smokeless tobacco	71	6.4	...
Ashtray	105	9.4	...
Social context of smoking behavior^a			
Alone	46	...	14.5
With others (nonsmokers)	186	...	58.7
With others, including smokers and nonsmokers	71	...	22.4
Consideration shown to nonsmokers	5	...	1.6
Location of smoking behavior^b			
Bar/lounge	25	...	7.9
Home/apartment	84	...	26.5
Restaurant	28	...	8.8
Car	40	...	12.6
Outside	103	...	32.5
Other location	69	...	21.8

^aA total of 4.4% of intervals depicted incidental smoking by characters other than the lead/supporting actors.

^bPercentages total more than 100 as smoking may have occurred in more than one context in the same interval.

smoking alone or with others and whether consideration was shown to nonsmokers). We also noted verbal and nonverbal tobacco messages (i.e., positive or negative consequences of smoking behavior and discussion about tobacco products, including positive, negative, or mixed reference to tobacco use). To establish interrater reliability, 5 films (10% of total sample) were randomly selected and independently rated by graduate student coders (G. Escamilla and A. L. Cradock). The coders had 99% agreement on all of the parameters examined regarding the depiction of smoking.

After viewing each film, the coders also completed a qualitative assessment of smoking themes and behaviors, addressing contextual issues such as the emotional valence attached to the smoking behavior and the significance of smoking for the character portrayed. All statistical analyses were performed with Stata.¹⁰

Results

The 50 films, representing approximately 96 hours of footage, were broken down into 1116 5-minute intervals (excluding introductions and credits). Of these, 317 (28.4%) of the intervals depicted smoking behavior (Table 1). Cigarettes were the most common tobacco product shown (23.9%). Over half of the smoking episodes (58.7%) occurred in the presence of others who were not smoking.

As Table 2 indicates, smoking was significantly more likely to be depicted in R-rated or unrated films than in PG/PG-13-rated films ($P < .001$). Although the percentage of lead actors or supporting actors shown smoking was similar for men and women (38% and 42%, respectively), sex differences were apparent according to the film's rating. Males in lead or supporting roles were 2.5 times more likely to be shown smoking in R-rated/unrated movies than in PG/PG-13-rated films ($P < .001$). By contrast, the portrayal of smoking by a female lead or supporting character was not significantly different according to the movie's rating; that is, female actresses were *equally likely* to light up in movies aimed at juvenile audiences as in those aimed at mature audiences.

Smoking was also more likely to be depicted in the movies starring younger actresses. The mean age of the 10 actresses was 29.3 years (range = 21–40 years). When we categorized actresses according to quartiles by age, movies starring actresses in the youngest quartile featured 3.6 times as many intervals depicting smoking as did movies starring actresses in the oldest age group (95% confidence interval [95% CI] = 2.4, 5.4).

Negative messages regarding tobacco product use (e.g., depictions of the consequences of the use of tobacco products, such as coughing or grimacing at the smell of smoke) were more common than positive messages (30 vs 23) among the 50 films viewed. However, only 9 of 22 messages in PG/PG-13 films depicted smoking in a nega-

tive light, compared with 21 of 31 messages in R-rated/unrated films; that is, movies aimed at young audiences were *less* likely (odds ratio = 0.33; 95% CI = 0.11, 1.01) to carry negative messages associated with tobacco use than were movies made for mature audiences.

In a qualitative analysis of the social context of smoking, sex differences were detected in the themes associated with tobacco use. Women were likely to be portrayed using tobacco products to control their emotions, to manifest power and sex appeal, to enhance their body image or self-image, to control weight, or to give themselves a sense of comfort and companionship. Men were more likely to be depicted using tobacco products to reinforce their masculine identity; to portray a character with power, prestige, or significant authority; to show male bonding; or to signify their status as a "protector" (the last 3 themes were associated with cigar smoking).

Discussion

The results of this study raise concerns about exposure to smoking in popular movies. According to social learning theory, by paying attention to the behaviors of a person who possesses the qualities, skills, and capacities one hopes to achieve, a young observer learns to model these behaviors.¹¹ Among third-through sixth-grade students who had smoked, having role models who smoked was more common, and having beliefs about the adverse

TABLE 2—Odds Ratios (ORs) and 95% Confidence Intervals (95% CIs) for the Occurrence of Smoking Behavior in R-Rated/Unrated Movies

	OR ^a	95% CI
Overall smoking behavior	1.62	1.20–2.14
Smoking by male lead or supporting actor	2.48	1.55–3.97
Smoking by female lead or supporting actor	1.23	0.88–1.86

^aReferent is PG/PG-13 movies.

consequences of smoking was less common, than among their peers who never smoked.¹²

The prevalence of smoking by both female (42%) and male (38%) lead or supporting actors was substantially higher than the national smoking prevalence for females (24.3%) and males (29.2%) aged 18 to 44.¹³ This discrepancy is significant, given that adolescents who overestimate smoking prevalence among young people and adults are more likely to become smokers themselves.² In the films viewed, over half of the smoking episodes occurred in the presence of others who were not smoking, and in fewer than 2% of the intervals was consideration shown to nonsmokers (e.g., smoker leaves the room or asks permission to smoke). The depiction of smoking in Hollywood would thus appear to reinforce smoking as an acceptable and normative behavior in society. While most young people older than 18 years are able to acknowledge that on-screen smoking is part of a movie role, this may be more difficult for younger females aged 12 to 17 years, among whom smoking initiation is taking place.

Our qualitative analysis of smoking identified several themes related to smoking. One of the most prominent themes was using smoking to control emotion, which was specific to female characters and occurred during times of stress or difficulty, when the character was trying to regain or establish control, to repress or deny emotion, or to exit a negative or threatening situation.

Important limitations of this study should be noted. First, the sampling of magazine titles was limited to those with the

highest readership among women aged 18 to 24 years. On the other hand, given the content and focus of the magazines, it is highly likely that they are widely read by adolescent girls. Surveying the issues of only 5 magazines may have biased our sample of actresses. However, a recent study on the influence of movie stars on adolescent smoking identified 6 of the 10 actresses in our sample as being the “most favorite” among girls.¹⁴ Given that African American and Latina women have become targets for tobacco advertisements, it would also be informative to survey movies starring actresses of different racial/ethnic backgrounds. Future studies need to be extended to popular male actors as well. Finally, replication of our findings through the use of raters who are unaware of the hypotheses would be desirable, since the smoking-related themes emerging from our qualitative analyses may have been biased.

Our findings, in conjunction with those of others,¹⁴ suggest the need for the development of policies—such as the adoption of a voluntary code of ethics by the entertainment industry—to eliminate the depiction of smoking in ways that appeal to adolescent audiences. □

Contributors

G. Escamilla and A. L. Craddock designed the study; collected, coded, and analyzed the data; and wrote the paper. I. Kawachi supervised the study design and data analysis and contributed to the writing of the paper.

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