

## BRIEF REPORT

## Leaders and elites: portrayals of smoking in popular films

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**Objective:** To study frequency and traits of characters that smoke in films and to document on-screen consequences of tobacco use.

**Design:** This study conducted a content analysis of the top 100 grossing films in 2002, with a total global gross of US\$12.4 billion.

**Outcome measures:** Three outcome measures were frequency of smoking incidents, traits of characters who smoke, and consequences of tobacco use.

**Results:** 6% of characters smoked in 453 incidents, including 3% of children. In 92% of incidences, smoking had no consequences. The most frequent consequence was a verbal reprimand. Although tobacco is a leading cause of preventable deaths globally, only 0.4% of tobacco incidences resulted in death. No deaths were caused by disease. Characters who smoked tended to be major characters playing leadership roles. They tended to be from privileged elites: male, white, and mature.

**Conclusions:** Films portray characters that smoke as leaders from privileged elites, making smoking more attractive to audience members. Because 99.6% of characters suffer no life threatening consequences from smoking on screen, smokers seem invincible, belying tobacco's role as a leading cause of preventable deaths.

Smoking in films helps mould the way audiences perceive smoking and smokers.<sup>1</sup> Furthermore, exposure to smoking in films has been shown to exert a strong, direct, and independent association with smoking initiation among adolescents.<sup>2-3</sup> As such, the frequency and nature of tobacco use in films constitutes an important public health issue. Any comprehensive strategy for controlling tobacco use globally must address the role that films play in reinforcing the attractiveness of smoking and what films teach audiences about the consequences of tobacco use. Prior research on films released between 1960 and 1990 indicates that characters who smoke tend to be "white, middle-class, successful, and attractive, a movie hero who takes smoking for granted".<sup>4</sup> This study builds upon prior research regarding smoking in films by documenting the frequency of smoking in recently released films, identifying features that distinguish smoking from non-smoking characters, and tracking the on-screen consequences of tobacco use.

## METHODS

## Sample selection

The study examined smoking and character portrayals in the top 100 US domestic grossing films released in 2002. These films were taken from *Variety's* annual list of the top 250 US domestic grossing films.<sup>5</sup> At the time of the study, 88 of the top 100 films were available in VHS or DVD format, constituting the final sample. The US domestic gross corresponds closely with top films distributed globally. Of the films

analysed, all but one appeared on *Variety's* listing of the top 125 grossing films around the world.<sup>6</sup> Globally, the films analysed grossed US\$12.4 billion in 2002. Other than subtitles, films distributed globally differ little from the versions distributed in the USA.<sup>7</sup>

## Data collection

The coding instrument incorporated variables developed in prior studies.<sup>2-10</sup> However, this study analysed smoking as a behaviour of characters; only incidents linked to specific characters were coded. Background indicators of smoking (for example, ashtray) not linked to characters were not coded, a more conservative measurement strategy that accounts for fewer smoking incidents in this study, when compared to other studies.<sup>1-4</sup> After intensive training on a separate sample, the last three authors coded the films. Scott's  $\pi$  intercoder reliability coefficient was calculated by double coding approximately 10% of the films.<sup>11</sup> All intercoder reliability coefficients were deemed acceptable according to established standards in content analysis.<sup>12</sup>

Coders classified characters as smokers if characters used a tobacco product, such use was implied, or characters mentioned their own smoking. Every speaking character was coded. Smoking incidents were summed for each character; 182 characters (6% of all characters) used tobacco at least once. Among these characters, the mean number of tobacco incidences was 2.49. The number ranged from just one incident per character ( $n = 102$ ) to 17 incidents for one character. Intercoder reliability was 0.87.

Each character was coded as either female ( $n = 889$ ) or male ( $n = 2253$ ). Intercoder reliability was 0.99. Each character was coded as either major ( $n = 1733$ ) or minor ( $n = 1409$ ). Characters deemed essential to the development of the central or ancillary plots were coded as major characters; others were coded as minor characters. Intercoder reliability was 0.86. Age was categorised as children (1-12 years), teens (13-19 years), 20-29, 30-39, 40-49, 50-59, or 60 years and older. Intercoder reliability was 0.88. Race was coded into seven categories; intercoder reliability was 0.94. Race was then collapsed into white ( $n = 2236$ ) and non-white ( $n = 906$ ) categories. Characters were classified as playing leadership roles ( $n = 349$ ) or not ( $n = 2793$ ). Characters were coded as leaders if they were formally appointed within groups to provide guidance and direction or emerged informally to serve those functions.<sup>13</sup> Intercoder reliability was 0.84.

## Statistical methods

Key character traits were cross tabulated with tobacco incidents to determine what kinds of characters were portrayed using tobacco products. The  $\chi^2$  test of significance was used; Yates correction for continuity was used for all  $2 \times 2$  tables.

## RESULTS

Nearly two thirds of films portrayed at least one character related tobacco incident. Only 37% of films showed no

**Table 1** Differentiating characters who smoke from those who do not smoke

Characteristic	% involved in smoking incidents	$\chi^2$	df	Significance
Character type				
Major	8.7	56.88*	1	<0.01
Minor	2.3			
Sex				
Males	6.6	8.30*	1	<0.01
Females	3.8			
Leadership (any kind)				
Yes	11.2	19.74*	1	<0.01
No	5.1			
Race				
White	6.5	6.38*	1	0.01
Not white	4.1			
Age (years)				
Child (1-12)	3.2	14.17	6	0.03
Teen (13-19)	2.5			
20-29	5.0			
30-39	6.1			
40-49	6.4			
50-59	6.5			
60 and older	9.8			

\*Yates  $\chi^2$  corrected for continuity.

smoking. About 15% of films portrayed one instance of tobacco use, 18% portrayed 2–5 incidents, 14% portrayed 6–10 instances, and 16% portrayed 11 or more instances. One film portrayed 47 separate incidences of smoking. Characters in comedies smoked less frequently (4.5%) than characters in action-adventure films (7.1%) or dramas (7.7%). Characters in G (general audience) rated films (1.4%) and PG (parental guidance) rated films (1.3%) smoked less frequently than characters in PG-13 (5.2%) and R (restricted) rated films (10.0%).

In all, 453 incidents involving tobacco were portrayed in the 88 films analysed. Of the 453 incidences, 92% (n = 415) indicated no consequences from tobacco use. Of the remaining 8%, the most common consequence was a verbal reprimand from another character. Only two incidences (0.4%) resulted in death. In one, lighting a cigarette set off a car bomb; in the other, a cigarette attracted a heat seeking missile. No deaths from tobacco use were caused by disease. In reality, the World Health Organization regards tobacco as the second major cause of death globally, with five million tobacco related deaths annually.<sup>14</sup>

Common reasons for smoking in films included 57 incidences to relieve stress and 31 incidents to relax. Arguably, real people smoke to satisfy nicotine addiction; only five incidents (1.1%) in the films analysed involved smoking to satisfy a craving for tobacco.

Major characters were almost four times more likely to smoke as minor characters. Male characters were almost twice as likely to smoke as female characters. Leaders were more than twice as likely to smoke, when compared to characters that were not leaders. White characters were over 50% more likely to smoke than characters from other ethnic groups. In the 88 films analysed, 3.2% of characters classified as children used tobacco, higher than the 2.5% of teenagers that smoked. Mature characters 60 years old and older used tobacco the most. Characters in their 60s and older were almost twice as likely as characters in their 20s to use tobacco products (table 1).

## DISCUSSION

In 2002, the Motion Picture Association of America (MMPA) reported 7.3 billion admissions to theatres.<sup>15</sup> Thus, the 453 incidences of tobacco use in the 88 films analysed represent

## What this paper adds

Prior research has examined the frequency and nature of portrayal of tobacco use in films, but the most recent published data were from 1994. This paper adds to the empirical research showing that films portray smoking frequently and in a positive manner. Further, smoking had no serious health consequences. In this content analysis of 2002 top grossing films, smokers tend to be major characters, white, male, and mature. They tend to play leadership roles.

several hundred million consumer impressions for each smoking incident. What do these impressions communicate about tobacco? First, smoking has no serious consequences. If any, consequences are most likely verbal reprimands. Although tobacco use is the leading cause of preventable deaths in the USA,<sup>16</sup> and the second leading cause of death globally,<sup>14</sup> only 0.4% of smoking incidents in top grossing films led to death. Diseases caused neither of the two deaths. Coupled with the higher frequency of smoking among characters 60 and older, smokers are wrapped in a cloak of invincibility. Those who smoke are important people (major characters) who play leadership roles. Film characters who smoke tend to be members of privileged elites: white, male, and mature. What are the consequences of such fictional portrayals of tobacco use in films? One cross sectional study of 4919 American adolescents showed that exposure to smoking incidents in films was as at least as powerful in predicting smoking initiation as having parents or siblings who smoked.<sup>2</sup> If longitudinal studies demonstrate the causal relationship between smoking in films and smoking initiation among youths, then the frequency and nature of smoking portrayals in films constitute significant global health risks.

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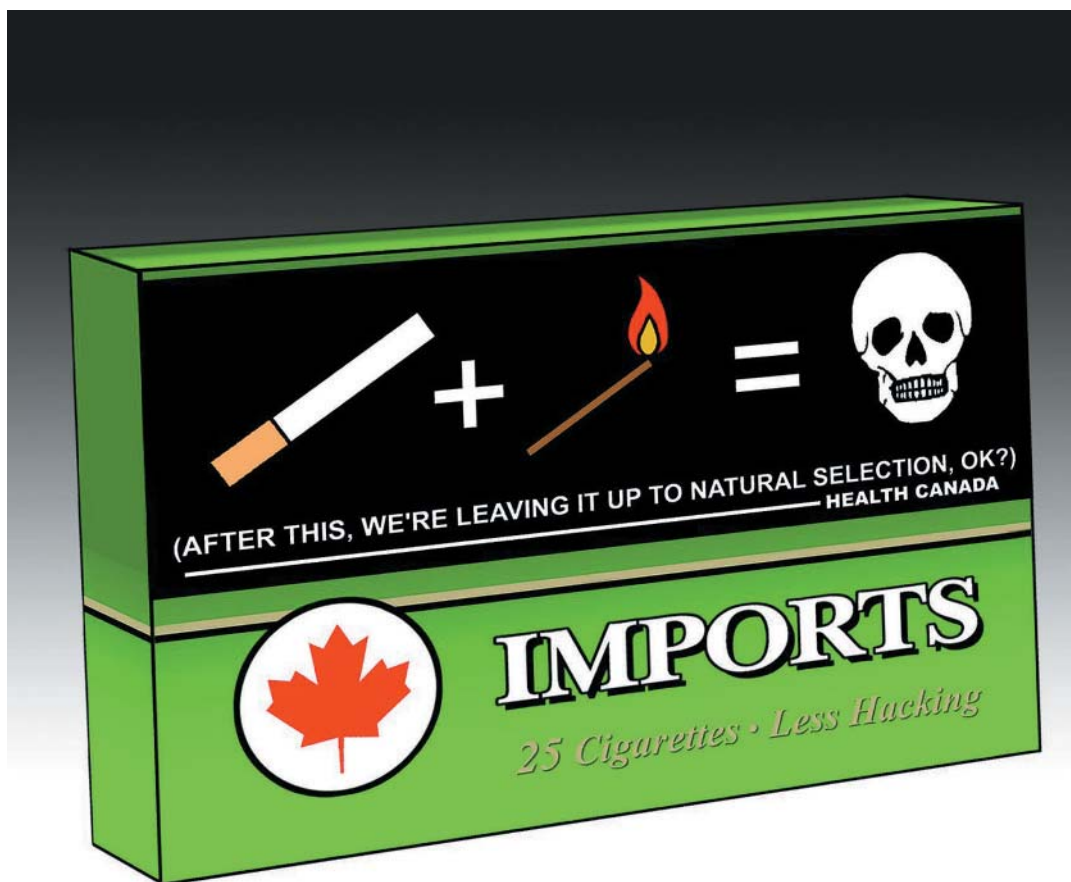
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