

## Iranian Audience Poll on Smoking Scenes in Persian Movies in 2011

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### ABSTRACT

**Background:** Scenes depicting smoking are among the causes of smoking initiation in youth. The present study was the first in Iran to collect some primary information regarding the presence of smoking scenes in movies and propagation of tobacco use.

**Methods:** This cross-sectional study was conducted by polling audience about smoking scenes in Persian movies on theaters in 2011. Data were collected using a questionnaire. A total of 2000 subjects were selected for questioning. The questioning for all movies was carried out 2 weeks after the movie premiered at 4 different times including twice during the week and twice at weekends.

**Results:** A total of 39 movies were selected for further assessment. In general, 2,129 viewers participated in the study. General opinion of 676 subjects (31.8%) was that these movies can lead to initiation or continuation of smoking in viewers. Women significantly thought that these movies can lead to initiation of smoking (37.4% vs. 29%). This belief was stronger among non-smokers as well (33.7% vs. 26%).

**Conclusions:** Despite the prohibition of cigarette advertisements in the mass media and movies, we still witness scenes depicting smoking by the good or bad characters of the movies so more observation in this field is needed.

**Keywords:** Initiation, movies, scenes, smoking

### INTRODUCTION

Smoking is the first preventable cause of morbidity and mortality world-wide.<sup>[1]</sup> According to the World Health Organization, more than 5 million people die annually owing to smoking-related diseases.<sup>[2]</sup> It seems that half of these cases occur in developing countries. It is estimated that this rate reaches about 10 million people per year in the next 20 years out of which 7 million will occur in developing countries.<sup>[3,4]</sup> Tobacco use is considered as the main cause of 70% of pulmonary diseases, 50% of cardiac diseases, 30% of all cancers and 90% of lung cancers.<sup>[5]</sup> Smoking is the main cause of 12% of all morbidity and mortality and carries the highest rate of death due to environmental factors.<sup>[6,7]</sup> Descriptive, cross-sectional, longitudinal and

experimental studies have all demonstrated a direct correlation between observing smoking scenes in movies and initiation of smoking in youth.<sup>[8]</sup>

Movies have always been a suitable means for tobacco companies to advertise their products. When a movie star smokes in a blockbuster movie, it adds value to smoking. Millions of young individuals watch these movies all around the world.<sup>[9]</sup> Attractive scenes depicting smoking are very important because among different age groups, teenagers are more interested in going to the movies. It has been reported that young adults go to the movies 3 times more than adults.<sup>[10]</sup> Furthermore, 90% of teenagers go to the movies at least once a year.<sup>[11]</sup> A large study in the United States showed that the likelihood of smoking in adolescents who watch movies with lots of smoking scenes is 3 times greater than that in those who have seen such scenes less frequently.<sup>[12]</sup> A study revealed that smoking scenes in movies completely reflect the truth.<sup>[13]</sup> It has been demonstrated that movies depicting smoking undermine the youth's motivation to quit or not smoke.<sup>[14]</sup> In a study conducted by NSW Department of Health in 2002 on health behaviors of secondary school students, 49% of students aged 12-17 years (46% boys and 51% girls) believed that smoking by the superstars motivates smoking by teenagers.<sup>[15]</sup>

Tobacco consumption is behavior that usually starts in young ages. About 80% of smokers have experienced smoking before the age of 18.<sup>[16]</sup> This rate was 60% in a study conducted in Iran.<sup>[17]</sup> Other studies have reported higher rates at younger ages about the age of 15.<sup>[18,19]</sup> Smoking behavior is influenced by several parameters and personal, familial and social factors play a role in this regard.<sup>[20]</sup> In many studies, personal factors, i.e. curiosity to smoke and history of smoking have had the greatest effect. For instance, about 60% of Tehran high school students in a study in 2003 stated the two mentioned factors as the reason of smoking.<sup>[21-23]</sup>

Furthermore, it has been reported that non-smoker teenagers who witness smoking scenes in movies have a 2.5 times greater likelihood of initiation of smoking. However, frequency of smoking scenes in movies has tremendously increased during the last decade.<sup>[24,25]</sup> Both in the US and overseas, movies are a key means for propagation of tobacco use.<sup>[26]</sup> Tobacco industry

used to pay for inclusion of its products in movie scenes 10 years ago while denying it in the congress.<sup>[27]</sup> Researchers have found that teenagers whose favorite movie stars smoke on a movie scene have 16 times greater likelihood of having a positive attitude toward smoking.<sup>[28]</sup>

This is the first study to collect the primary information about the frequency of scenes depicting smoking and propagation of tobacco use in Persian movies. In Iran, smoking scenes have greatly increased in movies during the recent years, which indicate the inadequate supervision of the authorities to delete these scenes according to national law. The results of the present study can be helpful for the authorities in Ministry of Health and film making industry for implementation of tobacco control programs.

## METHODS

This cross-sectional study was conducted by polling Iranian audience about smoking scenes in Persian movies on theaters in 2011. Data were collected using a questionnaire. According to similar studies,<sup>[12]</sup> a total of 2000 subjects were selected for questioning. Azadi Movie Theater in downtown Tehran was selected for this purpose due to its easy accessibility, large area and unique history. The questioning for all movies was performed 2 weeks after, the movie premiered at 4 different times including twice during the week and twice at weekends. Each time, 15 subjects were randomly selected. By doing so, 60 subjects were selected for each movie and considering the showing of about 40 movies per year and the response rate, the required sample size was met.

### Sample selection

Sampling was consecutive and all movies shown during 2011 were evaluated.

### Method of questioning

Convenient access to subjects was provided by using a designed questionnaire. The validity and reliability of the questionnaire was approved in a pilot study. Questionnaires were distributed at the beginning and collected at the end of each movie.

### Inclusion criteria

Subjects willing to participate in the study.

**Exclusion criteria**

Children and people with no literacy.

**Ethical considerations**

Since the evaluations were performed at the end of movies, the questioning was carried out based on the subject’s willingness. Personal information was not recorded. The collected data remained confidential. There was no risk of mental or physical harm to the subjects.

**Assessment indices**

Subjects’ demographic information, number of scenes depicting smoking, tobacco consumption by the main or side characters, smoking by the positive or negative characters of the movie, direct or indirect mentioning of tobacco use and its adverse effects and movie’s general message regarding smoking or not smoking were all evaluated.

**Statistical analysis**

The obtained data were demonstrated as frequency and means and statistically analyzed using Chi-square and Students *t*-tests. *P* < 0.05 was considered statistically significant.

**RESULTS**

Of 43 movies on theaters for more than 7 days in 2011, 39 were evaluated. A total of 2,129 subjects participated in the study. The movie with the code 11 had the lowest audience with 23 subjects and the movie with the code 25 had the highest

audience with 112 subjects. Averagely, 55 subjects were questioned for each movie. Of a total of 3000 questionnaires, 2,129 were filled out, which indicates 70% response rate.

**Demographic characteristics of participants**

Of the participants, 1,436 subjects (67.4%) were males. The mean age was 30.8 ± 14.7 years (range 14-68 years). A total of 1,107 (52%) were single, 838 (39.4%) were married and 184 (8.6%) were separated or divorced. In terms of level of education, 361 (17%) were below high school diploma, 1,367 (64.2%) had high school diploma or Bachelor’s degree and 401 (18.8%) had Master’s degree or higher. A total of 539 (25.3%) subjects were smokers. Number of married women was significantly higher than married men (45.6% vs. 36.4%). Furthermore, the frequency of women with high school diploma and Bachelor’s degree was higher than men (98.7% vs. 47.6%). However, rate of cigarette smoking was higher among men (34% vs. 7.2%) [Table 1].

**Polling data**

A total of 876 subjects (41.1%) mentioned at least one scene with the presence of a tobacco product without its consumption, 745 subjects (35%) mentioned the presence of at least one scene depicting smoking and 672 subjects (31.6%) mentioned the presence of more than 3 smoking scenes in movies. Regarding with smoking scenes more than 1 person together, 817 subjects (38.4%) mentioned up to 3 and 238 (11.2%) mentioned

**Table 1:** Demographic characteristics of participants in the study *N* (%)

Characteristics	Male	Female	Total	Significant
Marital status				
Single	729 (55.2)	315 (45.5)	1107 (52)	
Married	552 (36.4)	316 (45.6)	838 (39.4)	
Divorced	122 (8.5)	62 (8.9)	184 (8.6)	
			2129	<i>P</i> <0.05
Education				
Less than high school diploma	357 (24.9)	4 (0.6)	361 (17)	
Diploma and bachelor’s degree	683 (47.6)	684 (98.7)	1367 (64.2)	
Higher than BS	396 (27.6)	5 (0.7)	401 (18.8)	
			2129	<i>P</i> <0.05
Smoking				
Yes	488 (34)	51 (7.4)	539 (25.3)	
No	948 (66)	642 (92.6)	1590 (74.7)	
	1436	693	2129	<i>P</i> <0.05

BS=Bachelor of Science best

more than 5 scenes. Depicting smoking; 627 subjects (29.5%) mentioned smoking by the main and positive character of the movie and 770 (36.2%) mentioned smoking by the bad character of the movie. Regarding the general message of the movie, 676 (31.8%) believed that watching these movies could result in the initiation or continuation of smoking; whereas, 1,156 (54.3%) believed that these movies had no effect and 297 (14%) believed that these movies can prevent smoking. A significant number of women in comparison to men believed that these movies could result in the initiation of smoking 26%(37.4% vs. 29%). Furthermore, this belief was stronger among non-smokers (33.7% vs.). Smoker women are more than others believed that these movies propagate tobacco use (47.1% vs. 23.8%). In the classification of movies, 17 of the selected movies (43.5%) had been nominated for the 2010 Fajr Film Festival [Table 2].

In terms of genre of movies, 9 (23%) were family movies, 9 (23%) were social movies, 8 (20%) were romantic movies, 8 (20%) were comedy, 3 (8%) were about Iraq-Iran war and 2 (6%) were action movies. In terms of genre of the movies, audience believed that romantic movies had the highest number of smoking scenes (48.7%).

The important points detected were as follows: none of the movies regarding Iraq-Iran war propagated tobacco use and social movies ranked 2<sup>nd</sup> in this regard (37.2%); whereas, 5 out of 9 movies (56%) were about substance abuse and none of the movies directly condemned smoking.

## DISCUSSION

In this study, more than 2000 subjects that had watched movies in theaters during 2011 expressed their opinion about the smoking scenes in movies. In total, 32% of the subjects believed that watching these movies will lead to initiation or continuation of smoking. The idea that movies can propagate tobacco use was first born in late 1980s when Stockwell and Glantz in their study evaluated movies produced during 1960-1990 and compared smoking scenes and movie characters. They reported that frequency of these scenes in movies was increasing and this can propagate smoking.<sup>[29,30]</sup>

In Iran, in the past 2 decades we witnessed that despite the bans on cigarette advertisement in the mass media, this important task is not thoroughly implemented and many of the produced movies contain smoking scenes. Thus, the present study

**Table 2:** Perception of participant regarding the general message of movies about smoking *N* (%)

Characteristics	General message (%)			Significant
	Support	No effect	Prevent	
Gender				
Male	417 (29.0)	766 (53.3)	253 (17.6)	<i>P</i> <0.001
Female	259 (37.4)	390 (56.3)	44 (6.3)	
Smoking				
Yes	140 (26.0)	278 (51.6)	121 (22.4)	<i>P</i> <0.001
No	536 (33.7)	878 (55.2)	176 (11.1)	
Male smoking				
Yes	116 (23.8)	251 (51.4)	121 (24.8)	<i>P</i> <0.001
No	301 (31.8)	515 (54.3)	132 (13.9)	
Female smoking				
Yes	24 (47.1)	27 (52.9)	0 (0.0)	<i>P</i> <0.001
No	235 (36.6)	363 (56.5)	44 (6.9)	
Genre				
Family	117 (29.5)	211 (53.3)	68 (17.2)	<i>P</i> <0.001
Romantic	150 (48.7)	125 (40.6)	33 (10.7)	
Social	222 (37.2)	267 (44.7)	108 (18.1)	
Comedy	146 (28.5)	308 (60.2)	58 (11.3)	
Iraq-Iran war	0 (0.0)	175 (89.3)	21 (10.7)	
Action	41 (34.2)	70 (58.3)	9 (7.5)	



was conducted to seek public opinion about smoking scenes in movies and their effect on rate of smoking.<sup>[29,30]</sup>

In terms of the demographic characteristics of the participants, most understudy men were single, whereas the majority of women were married. The majority of women had high school diploma or Bachelor's degree while there were men with educational level higher than BS or lower than high school diploma [Table 2]. These findings are different from those of Glantz *et al.*<sup>[31]</sup> and Hazan *et al.*<sup>[32]</sup>

Of the understudy population, 34% of men, 7% of women and 25% of all subjects were smokers. This rate is higher than the smoking rate in the general population, which may be owing to the different sample size and age range of subjects that cannot be generalized to the entire population. This result is similar to that of other studies.<sup>[17]</sup> As mentioned earlier, 32% of subjects believed that watching these movies initiates smoking and this belief was significantly stronger among women. This finding was also reported by Everett *et al.*<sup>[33]</sup> According to him, this is attributed to the curiosity and precision of women. Authors of the present study believe that this finding may be due to the role of women as mothers and their sense of responsibility and concern about their family members. Furthermore, non-smokers significantly more than smokers believed that smoking scenes in movies propagate smoking as 33% of non-smokers and 26% of smokers believed that these movies can play a role in the initiation or continuation of tobacco use. This finding has been confirmed in similar international studies as well.<sup>[34,35]</sup>

The important issue worth noting is the opinion of smoker women who significantly more than non-smoker women and all men believed that these movies support the act of smoking. No such finding has been reported in other studies.<sup>[36]</sup> The authors have no theory for justification of this finding and complementary studies are required to further evaluate this issue.

Regarding the audience's belief about the movie propagating tobacco consumption, it was found that movies nominated for the Fajr Film Festival had a greater effect in this regard (37.9% vs. 28.5%).

Last but not least, audience believed that propagation of smoking was the highest in romantic movies (48%). This is worth noting

since this genre attracts mostly teenagers and young audience and can have a marked effect on propagation of smoking among this age group. In several accredited studies,<sup>[37,38]</sup> action movies had the highest number of smoking scenes and since these movies have a large number of young audience, they are mainly selected by the tobacco companies for propagation of their products by making financial or funding contracts. However, smoking cannot turn a character into a hero and this is just a hidden message for indirect smoking advertisement.

Based on international experiences,<sup>[39]</sup> presence of these scenes can affect public tobacco use. A significant correlation has been observed in this regard, which needs to be addressed. Sargent *et al.*<sup>[40]</sup> in their study evaluated movies shown on American theaters during 2 decades and noted that a reduction in number of these scenes decreased prevalence of smoking in general population. The present study took the first step for evaluation of the trend of tobacco use in Persian movies.

Being the first in this field and showing a general view of smoking movies was the strengths of this study. Our limitation in this was that to find the exact time of direct and indirect smoking scenes is much better than audience believe.

## CONCLUSIONS

Despite the prohibition of cigarette advertisements in the mass media and movies, we still witness scenes depicting smoking by the good or bad characters of the movies, so more observation in this field is needed.

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