

# Attitudes about Smoking in the Movies

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Robert Cameron McMillen, PhD

Social Science Research Center, Mississippi State University

Susanne Tanski, MD

Pediatrics, Dartmouth Medical School

Jonathan Winickoff, MD, MPH

Pediatrics, Harvard Medical School

Nell Valentine, MS

Social Science Research Center, Mississippi State University



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## **Executive Summary**

More than a decade of research has established that U.S. movies are a major recruiter of new teen smokers in the United States: about 390,000 each year, of whom 120,000 will ultimately die from tobacco-related diseases unless current trends are altered. This national survey of adults demonstrates substantial and growing public and parental support for voluntary policy changes by Hollywood to reduce this toll, including an R-rating for almost all future tobacco scenes. In 2006:

- 80 percent of U.S. adults agree that smoking in movies influences teens to smoke.
- 70 percent of adults call for R-ratings in movies that show smoking, unless the film clearly demonstrates the dangers of smoking or it is necessary to represent smoking of a real historical figure.
- Public support for the R-rating increased by more than 10% from previous years.
- Two-thirds of adults agree that movies should be required to show an anti-smoking advertisement before any film that includes smoking.
- Support for policies encouraged by Smoke Free Movies has increased over the past three years, especially among smokers.
- Support for these policies among parents is not significantly different from adults in general.
- The “margin of error” for all adults surveyed is  $\pm 2.3\%$ .

The Motion Picture Association of America has recently announced revisions to its four-decade-old ratings system. However, these changes do not include tobacco imagery as a factor in R-ratings despite calls from leading U.S. and international health authorities to do so.

## Background

In 1999, we developed a research protocol under the rubric of the Social Climate Survey of Tobacco Control (SCS-TC). This research protocol involved a comprehensive social climate survey of the U.S. each year. The surveys have been conducted annually since 2000 by the Survey Research Unit at the Social Science Research Center. Sponsors of the research have included the Center for Child Health Research of the American Academy of Pediatrics and the Julius B. Richmond Center of Excellence for Children. The research team consists of scientists from Mississippi State University, the University of Rochester, Dartmouth, Harvard, and George Washington University. This team has published peer-reviewed articles that applied data from the Social Climate Survey to describe rural-urban disparities in smoke free air<sup>1</sup>, children's exposure to secondhand smoke,<sup>2</sup> and the acceptability of pediatricians counseling parents who smoke.<sup>3 4</sup>

The World Health Organization, American Medical Association, the American Academy of Pediatrics, the American Legacy Foundation, the American Heart Association, and other leading health authorities and a majority of state attorneys general have identified smoking in the movies as a serious health threat to adolescents. There is strong scientific evidence that the effect on adolescents is essentially proportional to the level of exposure to smoking in the movies;<sup>5 6 7 8 9 10</sup> thus any policy that reduces the level of exposure is likely to reduce the effect. One policy option suggested to reduce the level of smoking in movies to which adolescents are exposed would be for the motion picture industry to amend its voluntary rating system to classify movies that show

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<sup>1</sup> McMillen RC, Breen J & Cosby AG. (2004). Rural urban differences in the social climate surrounding environmental tobacco smoke: A report from the 2001 Social Climate Survey of Tobacco Control. Journal of Rural Health, 20, 7-16.

<sup>2</sup> McMillen RC, Winickoff JP, Klein JD & Weitzman M. (2003). U.S. adult attitudes and practices regarding smoking restrictions and child exposure to environmental tobacco smoke (ETS): Changes in the social climate from 2000 to 2001. Pediatrics, 112, e55-e60.

<sup>3</sup> Winickoff J, Tanski S, McMillen RC, Klein J, Rigotti N & Weitzman M. (2005). Child health care clinician's use of medications to help parents quit smoking: A national patient survey. Pediatrics, 115, 1013-1017.

<sup>4</sup> Winickoff J, Tanski S, McMillen R, Hipple B, Friebely J & Healey E. (2006). A National Survey of the Acceptability of Quitlines to Help Parents Quit Smoking. Pediatrics, 117, e695-e700.

<sup>5</sup> Sargent JD, Beach M, Dalton M, Mott L, Tickle J, Ahrens B & Heatherton T. (2001). Effect of seeing tobacco use in films on trying smoking among adolescents: cross sectional study. BMJ, 323, 1394-1397.

<sup>6</sup> Dalton MA, Sargent JD, Beach ML, Titus-Ernstoff L, Gibson JJ, Ahrens MB, Tickle JJ & Heatherton TF. (2003). Effect of viewing smoking in movies on adolescent smoking initiation: a cohort study. Lancet, 362, 281-285.

<sup>7</sup> Sargent JD, Beach ML, Adachi-Mejia AM, Gibson JJ, Titus-Ernstoff L, Carusi C, Swain S, Heatherton TF & Dalton MA. (2005). Exposure to movie smoking: Its relation to smoking initiation among US adolescents. Pediatrics, 116, 1183-1191.

<sup>8</sup> Charlesworth A & Glantz SA. (2005). Smoking in the movies increases adolescent smoking: a review. Pediatrics, 116, 1516-28.

<sup>9</sup> DiFranza JR, Wellman RJ, Sargent JD, Weitzman M, Hipple BJ & Winickoff JP. (2006). Tobacco promotion and the initiation of tobacco use: Assessing the evidence for causality. Pediatrics, 117, e1237 - e1248

<sup>10</sup> Wellman RJ, Sugarman DB, DiFranza JR & Winickoff JP. (2006). The extent to which tobacco marketing and tobacco use in films contribute to children's use of tobacco: A meta-analysis. Archives of Pediatric and Adolescent Medicine, 160, 1285-1296

smoking as “R”, or restricted.<sup>11</sup> By eliminating smoking from youth-rated films (mostly PG-13), exposure of adolescents to smoking in movies would be cut by about 60%. The Social Climate Survey of Tobacco Control, for the last three years, has measured the level of public support in the U.S. for smoke free or smoke-rated movies.

## **Survey Development**

The Social Climate Survey of Tobacco Control is an attempt to contribute to the understanding of tobacco control through the introduction of an institutional-based perspective. This stresses not simply individual variations in behaviors and attitudes, but also societal norms, practices, and beliefs surrounding tobacco, through measurement by cross-sectional surveys. Put broadly, we want to measure the social norms, practices, and beliefs surrounding a public health issue — in this case, tobacco use. This technique is primarily one of a shift in focus and interpretation rather than basic survey methodology. By asking this series of questions to a random sample of American adults, we can measure the extent to which tobacco control and tobacco use are ingrained in the social institutions that influence decisions about tobacco.

## **Respondents**

The Social Climate Survey of Tobacco Control (SCS-TC) was administered to representative samples of 1500-3000 U.S. adults who were interviewed by telephone between July and September of 2004 (3,011 respondents), 2005 (1,510 respondents), and 2006 (1,812 respondents). Samples from all years represent the civilian, non-institutionalized adult population over age 18 in the United States, including Alaska and Hawaii. Households were selected using random digit dialing procedures to include households with unlisted numbers. Once a household was contacted, the adult to be interviewed was selected by asking to speak with the person in the household who is 18 years of age or older and who will have the next birthday. (Details of the sample are described in the Appendix.) Five attempts were made to contact those selected adults who were not home. The sample was weighted by race and gender within each census region, based on the most current U.S. Census estimates.

## **Measures**

The SCS-TC is an annual cross-sectional survey that contains items pertaining to normative beliefs, practices/policies, and knowledge regarding tobacco control. Although the SCS-TC includes items to measure smoking status and cessation, the survey emphasizes social and environmental indicators. These intermediate indicators were selected to provide a comprehensive assessment of the social climate in which people are exposed to and make decisions about tobacco control interventions. Survey items were developed and selected based on an extensive review of extant tobacco control surveys and then reviewed by an external panel of tobacco control researchers. The panel developed many of the items included in the survey, while others were selected from existing measurement instruments with established validity. Specifically, the SCS-TC included items from the Behavioral Risk Factor Surveillance System<sup>12</sup> (BRFSS) and the Tobacco Use Supplement-

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<sup>11</sup> Unless the film clearly demonstrates the dangers of smoking or it is necessary to represent actual smoking of a real historical figure, movies that show smoking would be rated “R.”

<sup>12</sup> US Department of Health and Human Services. 2000 Behavioral Risk Factor Surveillance System Summary Prevalence Report. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Adult and Community Health, Behavioral Surveillance Branch; 2001

Current Population Survey<sup>13</sup> (TUS-CPS), as well as modified items from the California Adult Tobacco Surveys.<sup>14</sup>

For the past three years, respondents were also asked if they *strongly agree*, *agree*, *disagree*, or *strongly disagree* with the following statements about smoking in the movies.<sup>15</sup>

1. Exposure to cigarette smoking in television programs increases the chance that a child will start smoking.
2. Adolescents are more likely to smoke if they watch actors smoking in movies.
3. Any film that shows cigarette smoking should be rated "R," unless the film clearly demonstrates the dangers of smoking or it is necessary to represent smoking of a real historical figure.
4. Theaters should be required to show anti-smoking ads before any film with smoking in it.
5. Tobacco logos should not be allowed in any movie scene.

## Results

These results show a high level of concern among the public in general, and parents in particular, about the effects of smoking in the movies on adolescents, and strong support for modernizing the ratings system to rate movies with smoking "R." In 2006, 80.7% of adults (79.1% of parents) agree that adolescents are more likely to smoke if they watch actors who smoke in movies, which is more agreement than in earlier years (Figure 1). In addition, 70.2% of adults (67.5% of parents) believe that movies with smoking should be rated "R", up about 10% over previous years (Figure 2).

As in past years, about two-thirds of adults (and parents) agree that movies with smoking should be preceded with an anti-smoking advertisement (Figure 3) and a majority of adults and parents believe that tobacco logos (brand identification) should not appear in films (Figure 4).

Respondents appear more at ease with measures that do not affect their own experience of the movie; the R-rating is somewhat more popular among adults than either an ad beforehand or elimination of tobacco brand identifications. However, the increase over time in awareness of the risk to adolescents and support for mitigating measures is significant.

The margin of error for all adults (n=1812) is no more than  $\pm 2.3\%$ , for parents (n=476) no more than  $\pm 4.5\%$ , for smokers (n=307) no more than  $\pm 5.6\%$ , and for nonsmokers (n=1482) no more than  $\pm 2.5\%$ .

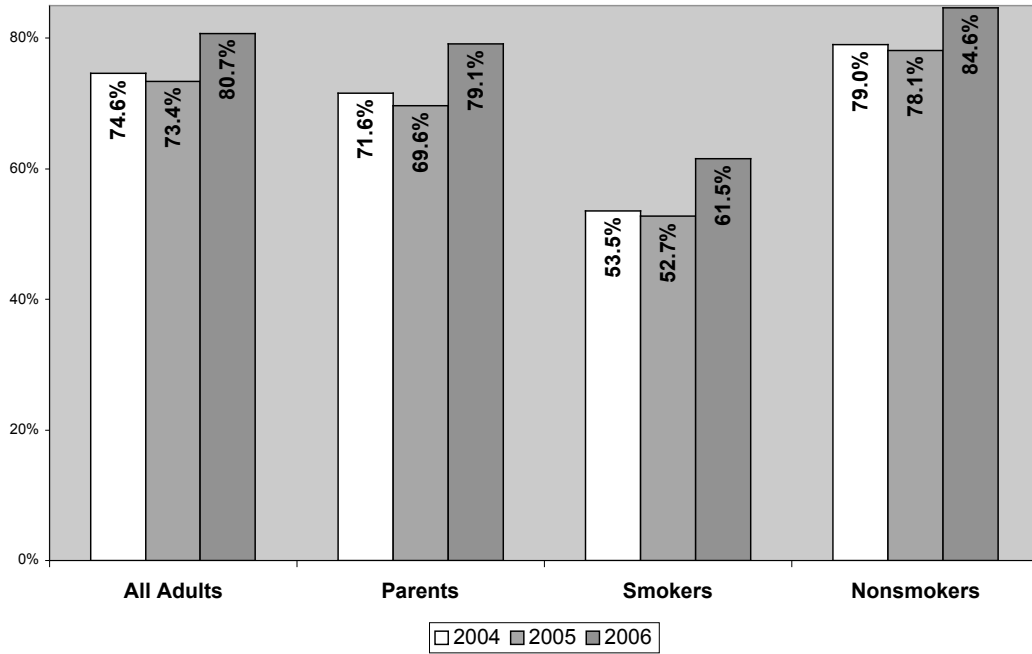
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<sup>13</sup> Hartman A, Willis G, Lawrence D, Marcus S, Gibson J. The 1998 –1999 NCI Tobacco Use Supplement to the Current Population Survey (TUS-CPS): Representative Survey Findings. Bethesda, MD: National Institutes of Health, National Cancer Institute; 2002.

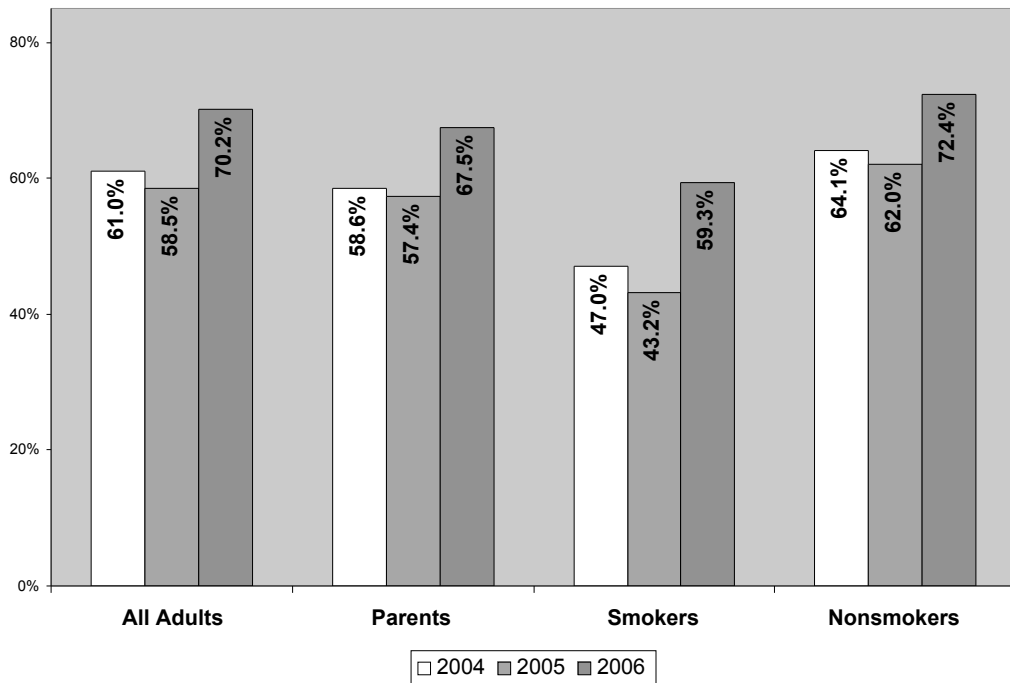
<sup>14</sup> California Department of Health Services. California Adult Tobacco Survey. San Diego, CA: University of California at San Diego; 1990

<sup>15</sup> Respondents could also report "Don't Know" or refuse to answer the question.

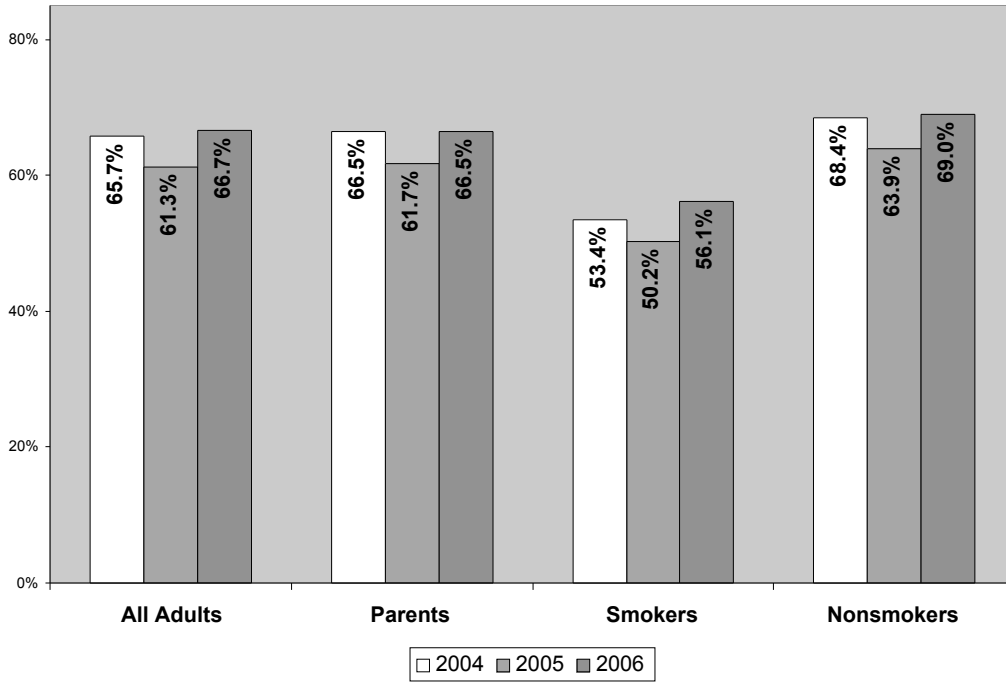
**Figure 1. Percent of adults who believe that adolescents are more likely to smoke if they watch actors smoking in movies**



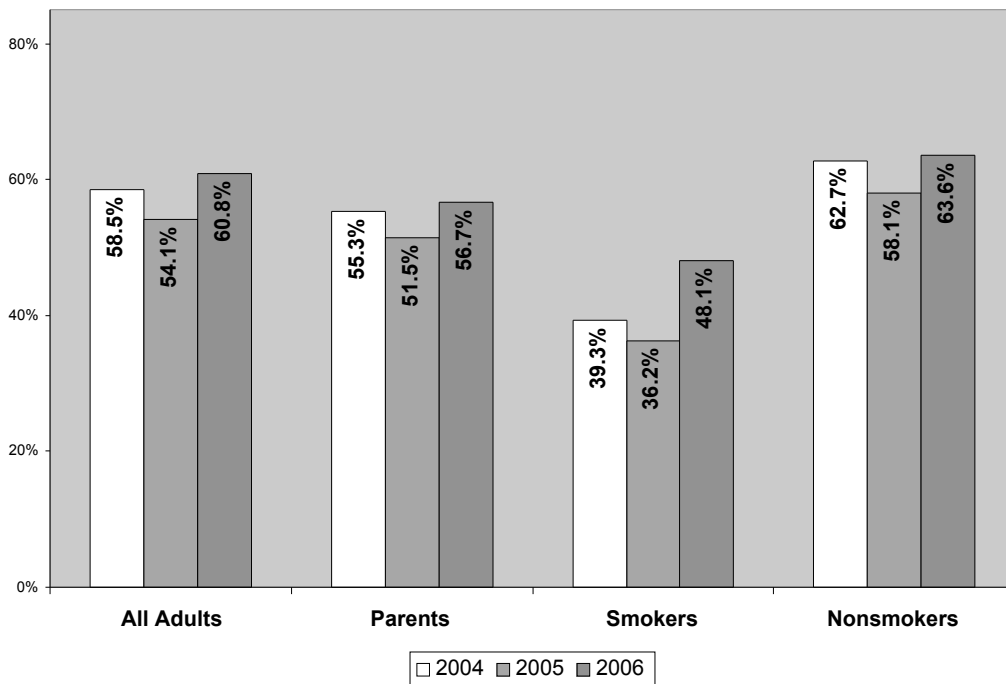
**Figure 2. Percent of adults who believe that any film that shows cigarette smoke should be rated “R,” unless the film clearly demonstrates dangers of smoking or portrays the tobacco use of an actual historical figure**



**Figure 3. Percent of adults who believe that theaters should be required to show an anti-smoking ad before any film with smoking in it**



**Figure 4. Percent of adults who believe that tobacco logos should not be allowed in any movie scene**



## **APPENDIX A – SAMPLE CHARACTERISTICS**

### **2004 Sample Characteristics**

Of the eligible respondents contacted, 3,011 respondents completed the survey (83.3%) and 604 (16.7%) refused to participate. The sampling error (binomial questions with 50/50 split) for the total data set is no larger than  $\pm 1.8$  (95% confidence interval). Of the 3,011 respondents, 1,119 (37.2%) were male and 1,876 (62.3%) were female. The racial composition of the sample is as follows: white = 2,438 (81.0%), African American = 326 (10.8%), Asian or Pacific Islander = 23 (0.8%), American Indian or Alaskan Native = 28 (0.9%), and unknown (i.e., did not answer the question on race) = 196 (6.5%). The sample was weighted by race and gender within each census region, based upon 2003 U.S. Census estimates to ensure that it is representative of the U.S. population.

### **2005 Sample Characteristics**

Of the eligible respondents contacted, 1,510 respondents completed the survey (86.5%) and 234 (13.4%) refused to participate. The sampling error (binomial questions with 50/50 split) for the total data set is no larger than  $\pm 2.3$  (95% confidence interval). Of the 1510 respondents, 688 (46.9%) were male and 781 (53.1%) were female. The racial composition of the sample is as follows: white = 1169 (79.4%), African American = 171 (11.6%), Asian or Pacific Islander = 19 (1.3%), American Indian or Alaskan Native = 19 (1.3%), and unknown (i.e., did not answer the question on race) = 28 (1.9%). The sample was weighted by race and gender within each census region, based upon 2004 U.S. Census estimates to ensure that it is representative of the U.S. population.

### **2006 Sample Characteristics**

Of the eligible respondents contacted, 1,812 respondents completed the survey (86.5%) and 476 (13.4%) refused to participate. The sampling error (binomial questions with 50/50 split) for the total data set is no larger than  $\pm 2.5$  (95% confidence interval). Of the 1,812 respondents, 651 (36.1%) were male and 1,136 (63.0%) were female. The racial composition of the sample is as follows: white = 1,144 (80.1%), African American = 208 (11.5%), Asian or Pacific Islander = 21 (1.2%), American Indian or Alaskan Native = 24 (1.3%), and unknown (i.e., did not answer the question on race) = 106 (5.9%). The sample was weighted by race and gender within each census region, based upon 2005 U.S. Census estimates to ensure that it is representative of the U.S. population.

## APPENDIX B – DETAILED RESULTS

<b>Exposure to cigarette smoking in television programs increases the chance that a child will start smoking</b>					
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>N</b>
<b>All Adults</b>					
2004	14.4%	60.2%	22.5%	2.9%	2746
2005	8.4%	65.0%	25.1%	1.4%	1389
2006	12.5%	68.2%	18.3%	1.0%	1697
<b>Parents</b>					
2004	13.4%	58.3%	25.8%	2.6%	920
2005	8.2%	61.4%	28.5%	1.9%	474
2006	12.4%	66.7%	19.5%	1.4%	442
<b>Nonsmokers</b>					
2004	15.9%	63.2%	18.8%	2.2%	2256
2005	9.4%	68.8%	20.9%	1.0%	1121
2006	13.6%	71.0%	14.8%	0.6%	1401
<b>Smokers</b>					
2004	7.1%	46.5%	39.8%	6.7%	480
2005	4.6%	48.1%	43.8%	3.5%	260
2006	7.0%	54.5%	35.3%	3.1%	286
The percentages in this table exclude respondents who replied “Don’t Know” or did not answer the question: 175 in 2004, 83 in 2005, and 116 in 2006.					

<b>Any film that shows cigarette smoke should be rated “R,” unless the film clearly demonstrates dangers of smoking or portrays the tobacco use of an actual historical figure</b>					
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>N</b>
<b>All Adults</b>					
2004	10.5%	50.5%	33.1%	5.9%	2664
2005	8.0%	50.5%	38.1%	3.5%	1406
2006	12.2%	58.0%	27.6%	2.3%	1698
<b>Parents</b>					
2004	9.8%	48.8%	36.0%	5.5%	898
2005	7.5%	49.9%	39.1%	3.5%	481
2006	11.1%	56.4%	30.5%	2.0%	443
<b>Nonsmokers</b>					
2004	11.6%	52.5%	31.4%	4.5%	2175
2005	8.7%	53.4%	35.5%	2.5%	1130
2006	12.5%	59.9%	25.7%	1.9%	1391
<b>Smokers</b>					
2004	5.8%	41.2%	41.0%	12.0%	483
2005	5.3%	38.0%	48.9%	7.9%	266
2006	10.5%	48.8%	36.3%	4.4%	295
The percentages in this table exclude respondents who replied “Don’t Know” or did not answer the question: 257 in 2004, 67 in 2005, and 113 in 2006.					

<b>Theaters should be required to show an anti-smoking ad before any film with smoking in it</b>					
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>N</b>
<b>All Adults</b>					
2004	10.3%	55.4%	29.1%	5.2%	2781
2005	6.9%	54.3%	35.2%	3.5%	1393
2006	8.9%	57.8%	31.4%	1.9%	1683
<b>Parents</b>					
2004	10.6%	55.9%	30.1%	3.4%	931
2005	7.8%	53.9%	35.6%	2.7%	475
2006	8.1%	58.4%	30.8%	2.7%	445
<b>Nonsmokers</b>					
2004	11.1%	57.3%	27.2%	4.4%	2267
2005	7.4%	56.6%	33.0%	3.0%	1121
2006	9.2%	59.8%	29.6%	1.4%	1380
<b>Smokers</b>					
2004	6.7%	46.6%	37.7%	8.9%	506
2005	4.9%	45.2%	44.1%	5.7%	263
2006	7.2%	48.8%	39.6%	4.4%	293
The percentages in this table exclude respondents who replied “Don’t Know” or did not answer the question: 142 in 2004, 80 in 2005, and 128 in 2006.					

<b>Tobacco logos should not be allowed in any movie scene</b>					
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>N</b>
<b>All Adults</b>					
2004	9.0%	49.5%	36.2%	5.2%	2712
2005	5.8%	48.3%	42.8%	3.2%	1387
2006	8.0%	52.8%	37.7%	1.5%	1661
<b>Parents</b>					
2004	9.1%	46.2%	40.1%	4.6%	905
2005	6.8%	44.7%	45.7%	2.8%	468
2006	5.9%	50.9%	41.1%	2.0%	440
<b>Nonsmokers</b>					
2004	9.8%	53.0%	32.9%	4.3%	2214
2005	6.3%	51.8%	39.2%	2.7%	1119
2006	8.3%	55.3%	35.4%	1.0%	1355
<b>Smokers</b>					
2004	5.7%	33.5%	51.5%	9.2%	489
2005	3.1%	33.2%	58.3%	5.4%	259
2006	6.5%	41.6%	48.1%	3.8%	293
The percentages in this table exclude respondents who replied “Don’t Know” or did not answer the question: 212 in 2004, 86 in 2005, and 153 in 2006.					

## **About the Authors**

Robert Cameron McMillen, PhD

Associate Research Professor, Social Science Research Center, Mississippi State University  
American Academy of Pediatrics (AAP) Julius B. Richmond Center of Excellence and AAP  
Tobacco Consortium

Susanne Tanski, MD

Assistant Professor of Pediatrics, Dartmouth Medical School  
American Academy of Pediatrics (AAP) Julius B. Richmond Center of Excellence and APP  
Tobacco Consortium

Jonathan Winickoff, MD, MPH

Assistant Professor of Pediatrics, Harvard Medical School  
Coordinator of Translational Research, American Academy of Pediatrics (AAP) Julius B.  
Richmond Center of Excellence and Chair, AAP Tobacco Consortium

Nell Valentine, MS

Research Associate, Social Science Research Center, Mississippi State University

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**FOR FURTHER INFORMATION CONTACT**

**Robert McMillen  
[robert.mcmillen@ssrc.msstate.edu](mailto:robert.mcmillen@ssrc.msstate.edu)**

**or**

**Susanne Tanski  
[Susanne.E.Tanski@dartmouth.edu](mailto:Susanne.E.Tanski@dartmouth.edu)**