# **Under the Radar: Smokeless Tobacco Advertising** in Magazines With Substantial Youth Readership

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Previous studies have examined spending on cigarette advertising in popular magazines, and the subsequent high exposure rates among adolescents aged 12 to 17 years. 1-3 Little attention, however, has been paid to youths' exposure to smokeless tobacco advertising and promotion and its potential impact on them. The fact that the smokeless tobacco industry is smaller than the cigarette industry helps explain why it has not been the focus of more interest. In 2001, the most recent year for which figures are available, \$236.7 million was spent to promote smokeless products<sup>4</sup> compared with \$11.2 billion for cigarettes.5 Essentially, smokeless tobacco advertising and promotion have been under the radar for those studying tobacco advertising and promotion.

Youths have fewer negative images of the consequences of smokeless tobacco use than they do of cigarette use. Kury et al., for example, found that among middle school students, smokeless tobacco can be seen as athletic and masculine.<sup>6</sup> Youths also believe that smokeless tobacco products are a safer alternative to smoking, 6,7 even though they are highly addictive and can lead to cancers of the mouth, pharynx, larynx, and esophagus; damage to gum tissue; loss of teeth; and a reduced ability to taste and smell.8 A national survey conducted by the Centers for Disease Control and Prevention in 2005 found that 8.0% of high school students had used smokeless tobacco in the last 30 days. Prevalence was much higher among male (13.6%) than female (2.2%) students. Although the survey showed an overall decline in smokeless tobacco use since 1995, when it was 11.4%, it was higher than the 2003 rate of 6.7%.9 Of the 12 to 14 million smokeless tobacco users in the United States, one third are younger than 21 years and more than half developed their habit before age 13.7

Individuals observe and learn about behavior through images and symbols translated by

Objectives. In light of the Smokeless Tobacco Master Settlement Agreement (STMSA) and the fact that smokeless tobacco advertising has received little attention, we examined industry data to assess smokeless tobacco advertising in popular magazines. Of particular interest was the level of advertising in magazines with high youth readership and the amount of reach and frequency that was generated among readers aged 12 to 17 years.

Methods. We used readership data from Mediamark Research Inc, advertising expenditure data from TNS Media Intelligence, and Adplus, a media planning program from Telmar to document the composition of adult and youth readership of magazines in which smokeless tobacco products were advertised, industry expenditures on advertising, and adolescents' exposure to smokeless tobacco advertising.

Results. The STMSA appears to have had a limited effect on the advertising of smokeless tobacco products to youth; both before and after the agreement, smokeless tobacco companies advertised in magazines with high adolescent readership.

Conclusions. Popular magazines with smokeless tobacco advertising reach a large number of adolescents through a combination of both youth-oriented and adult magazines. These exposure levels have generally increased since the STMSA. (Am J Public Health. 2008;98:543–548. doi:10.2105/AJPH.2006.092775)

the media. <sup>10–14</sup> Advertising and promotion make smokeless tobacco an attractive part of the American landscape and aim to influence youths. Although its precise impact on initiation of smokeless tobacco use among adolescents cannot be known because of environmental and individual factors that confound the determination of a specific relationship, smokeless tobacco advertising helps normalize behavior and create images that are highly appealing to youths by communicating that use of these products is desirable, socially acceptable, and prevalent. <sup>15</sup>

Youths (persons under age 18 years) are more sensitive and responsive to tobacco advertising than are adults, and they actively search for cues in advertising that conform to peer relations, resulting in a "right" way to look and behave. <sup>16</sup> Repeated exposure to tobacco messages thus raises their prominence and creates favorable images. <sup>17</sup> For example, a 2004 American Psychological Association report that analyzed research on tobacco and alcohol advertising concluded that advertising is particularly effective with youths when

it makes use of these products seem normal. <sup>18</sup> Similarly, an August 17, 2006, ruling by a US district court in *United States of America et al. v Philip Morris USA* concluded that cigarette advertising and marketing influence smoking among adolescents by legitimizing and normalizing smoking behavior. <sup>19</sup> We believe that the same holds true for smokeless tobacco products.

Researchers have used criteria set down by a Food and Drug Administration (FDA) proposal and the Master Settlement Agreement (MSA) to examine whether youths are being exposed to cigarette advertising that appears in popular magazines. In an effort to limit cigarette advertising to youths, the FDA proposed that for any publication read by more than 2 million minors (younger than age 18 years), or in which minors make up more than 15% of the readership, tobacco advertising be limited to a text-only black and white format.20 The proposal was not approved by Congress; however, the standard regarding percentage and number of youthful readers created a clear criterion

for researchers to investigate whether magazines containing cigarette advertising reach youths.

The MSA, which comprised 46 states and 5 territories (Florida, Minnesota, Texas, and Mississippi settled their tobacco cases earlier and separately) and the major cigarette producers, was signed in November 1998. The settlement called for the elimination of outdoor advertising that was not at a retail establishment; transit advertising; cartoons in any tobacco advertising, marketing, or packaging; product placement in the media; and tobacco merchandising (brand names cannot appear on any nontobacco item).21 There was concern that limiting marketing practices in these areas would lead to increased spending in venues such as magazines that were not specifically mentioned in the MSA. The year 1999 therefore became important for determining whether cigarette manufacturers altered their magazine advertising practices in terms of reaching youths.

Although the MSA is more widely known, a similar agreement, the Smokeless Tobacco Master Settlement Agreement (STMSA), was passed for the smokeless tobacco industry at the same time as the MSA. This agreement was reached between the state attorneys general and the US Smokeless Tobacco Company, which represents 58% of the smokeless tobacco market and was the only smokeless tobacco company to participate.<sup>22</sup> The marketing provisions of the STMSA are similar to those established in the MSA.<sup>23</sup>

The FDA criterion regarding percentage and number of youth readers has been used by a number of researchers examining cigarette advertising exposure to adolescents. Their studies have examined the number of youths reached by cigarette advertising in popular magazines and the frequency with which they are reached. Magazines are one of only a few media outlets available to tobacco advertisers (others include newspapers and signs at the retail level), and most research investigating tobacco advertising aimed at adolescents has focused on this medium. Magazines lend themselves well to examination because of the availability of historical data on readership and expenditures, which enables researchers to track trends in tobacco advertising.

Krugman and King<sup>3</sup> analyzed 1998 Mediamark Research Inc data on adolescent readership and constructed limited hypothetical media schedules to examine the extent to which adolescents are reached by popular consumer magazines that contain cigarette advertising. They found that tobacco marketers would reach nearly two thirds of adolescents by placing a single advertisement in each of the 14 magazines identified as having a high youth readership. King and Siegel<sup>2</sup> used a wider and more realistic data set to investigate advertising expenditures for 15 brands of cigarettes in 38 magazines during the period 1995 to 2000. Results indicated that in 2000, more than 80% of US adolescents were exposed to magazines carrying cigarette advertising an average of 17 times. Krugman et al.<sup>1</sup> employed a similar method to analyze cigarette advertising from 1993 to 2002. They found that cigarette advertising for youth brands (i.e., the 3 brands most used by youths) was sufficiently strong to reach youths at high reach and frequency levels. They estimated that in 2000, the 94% of adolescents who were exposed to cigarette ads each saw them approximately 52 times; however, a precipitous drop in such advertising was also found at the end of the period.

To date, levels of adolescent exposure to smokeless tobacco advertising are largely unknown. Only 1 study, using a limited set of 9 magazines, examined expenditures for smokeless tobacco advertising before (1997–1998) and after (1999–2001) the STMSA. Results indicated that expenditures sharply increased during the latter period.<sup>24</sup>

We report on the advertising and promotion of smokeless tobacco products (chewing tobacco, snuff, and tobacco packets) and their potential impact on adolescents. We analyzed 10 years of data from Mediamark Research Inc and TNS Media Intelligence (hereafter called TNS). In 2000, TNS acquired Competitive Media Reporting (whose data have been used in past studies investigating tobacco expenditures in magazines) to assess advertising for smokeless tobacco in popular magazines. We analyzed data from these 2 sources using Adplus, a media planning simulation program (Telmar, New York, NY). We examined the composition of adult and youth readership of

magazines in which smokeless tobacco products were advertised, advertising expenditures, and adolescents' exposure to smokeless tobacco advertising. The 10-year time frame allowed for an examination of readership and spending trends both before and after the STMSA and provided benchmark data for future research.

#### **METHODS**

Readership data from Mediamark Research Inc were obtained for the years 1992 to 2002. Mediamark Research Inc's survey database of 25 000 respondents, an oft-used resource in the advertising industry, measures demographic exposure to multiple media. <sup>25</sup> For the adolescent portion of the sample, which was derived from homes that participated in the adult study, a mail questionnaire and additional monetary incentives are used. For a particular magazine, respondents are asked how often they read the last 4 issues and whether they had read the most recent issue. Readership data are national and generalizable.

The earliest year for which data from the combined Mediamark Research Inc database are available is 1992; at the time we requested data, 2002 was the most recent year for which they were available. In total, we gathered data for 82 magazines (all of the magazines in the Mediamark Research Inc adolescent database) over the designated period. These magazines were compared with youth-designated magazines identified in previous studies and also with a final list of 30 magazines read by more than 2 million minors (younger than 18 years) or with a readership at least 15% composed of minors. TNS is a leading provider of advertising expenditure information to advertising agencies, advertisers, broadcasters, and publishers.<sup>26</sup> The company measures advertising expenditures by national or regional advertisers in approximately 400 consumer magazines (L. McDonald, TNS, oral communication, July 2006). It monitors the magazines and documents the sizes of the ads and the frequency with which they are run. This information is coupled with the costs of the advertising space to determine expenditures. TNS advertising expenditure data for

consumer magazines were acquired for the entire tobacco industry for the period January 1993 through December 2002. Only smokeless tobacco companies were included in the analysis.

Media planning programs provide estimates of audience reach and frequency by modeling how people use media. The usefulness of the models rests on the ability to estimate the underlying observed exposure distribution. We used Telmar's Adplus program, a widely accepted industry model, in determining exposure distribution. Adplus calculates common media statistics such as reach and average frequency. Reach is the percentage of people exposed at least once to a message. Average frequency is the average number of times that a person exposed to the message saw it.

### **RESULTS**

A total of 48 different magazines in the TNS database were used by smokeless to-bacco companies during the period examined. Across these 48 magazines, a total of \$158 003 100 was spent on advertisements for smokeless tobacco products between January 1993 and December 2002 (74.8% was spent by US Smokeless Tobacco, the only company to sign the STSMA). Of this amount, \$94 382 000 (59.7%) was spent after the beginning of 1999, the first year after the STMSA (57.3% of all US Smokeless Tobacco expenditures since 1993 were incurred during this time).

The 48 titles were next compared with the list of all magazines that appeared in the Mediamark Research Inc database. Twenty-six of the magazines in which smokeless tobacco companies advertised were not included in the Mediamark Research Inc database and were excluded from the subsequent analysis. Additionally, 5 magazines were excluded because the total advertising purchased by smokeless tobacco companies (less than 1 page in any 1 year) was too small to be accommodated in the Telmar program. (The names of these 31 magazines are available from M.A.M. upon request.) The remaining 17 magazines were then compared with the list of 30 magazines with high adolescent readership generated from previous studies.

Thirteen magazines appeared on both lists; that is, they were classified as youth-oriented magazines, and smokeless tobacco companies had advertised in them during the period January 1993 to May 2003. The remaining 4 magazines with smokeless tobacco expenditures were classified as adult publications (Table 1).

The 10-year total for smokeless tobacco advertising in all 17 magazines from January 1993 to December 2002 was \$107 million, 74.6% of which was incurred by US Smokeless Tobacco. Of the total, \$66 million (61.7%) was from January 1999 through December 2002. The amount of advertising expenditures in the 13 youth-oriented magazines was \$73 950 100, or 69.1% of the total for the 17 magazines (\$55.2 million, or 74.7%, by US Smokeless Tobacco alone). The 13 youth-oriented magazines accounted for 46.8% of all expenditures by smokeless tobacco companies in the 48 TNS-measured magazines since 1993 and 46.2% of all magazine expenditures after the STMSA.

We used the Telmar Adplus program to compare reach and average frequency levels before and after the STSMA was put into effect. Figure 1 shows the estimated percentage of adolescents exposed at least once yearly to smokeless tobacco advertising in youth- and adult-oriented magazines. By using a combination of adult- and youth-oriented magazines, marketers of smokeless tobacco products reached 66.0% of adolescents in 1993 (average frequency=6.8) and 64.3% in 2002 (average frequency = 13.6), the start and end of the 10-year period. In 1999, the first full year after the STMSA went into effect, 82.6% of adolescents were reached at least once (average frequency = 17.5). There was a sharp drop in 2000 to 56.5% (average frequency=11.0), followed by a gradual increase in 2001 (reach=60.2%, average frequency=15.9) and 2002 (reach=64.3%, average frequency = 13.6). The highest reach occurred in 1996 (reach=81.0%, average frequency = 12.7). When the more stringent criterion of 3+ reach (those exposed 3 or more times to the advertising) was applied (not shown in Figure 1), 47.2% of adolescents were exposed to smokeless tobacco advertising by magazines in which smokeless tobacco companies advertised in 2002.

## **DISCUSSION**

Despite the STMSA, popular magazines with smokeless tobacco advertising reach a large number of adolescents. Although we know of no other studies that examined the percentage of adolescents reached by smokeless tobacco advertising, analyzing the percentage exposed at least once a year provides a key means of comparing this study with studies examining youth exposure to cigarette advertising. Results indicate that the practice of placing smokeless tobacco advertising in popular magazines over the analyzed 10-year period resulted in a yearly reach ranging from 56.5% (2000) to 81.0% (1996) and average frequencies ranging from 6.8 (1993) to 19.7 (1998) for adolescents.

When we compared the results of this study with other work examining adolescent exposure to the top 3 youth cigarette brands, <sup>1,2</sup> we found that cigarette advertising in popular magazines in 2000 reached substantially more adolescents than did smokeless tobacco advertising. This is not surprising considering the relative size of the promotional budgets in the 2 industries.

Our analysis indicates that smokeless tobacco reach among adolescents has increased since 2000. And although adolescents' exposure to cigarette advertising declined substantially in 2002 (the year Altria, formerly Philip Morris, pulled out of magazines), we see no corresponding decline in adolescents' exposure to smokeless tobacco. Further, smokeless tobacco advertising in magazines reaching youths continues. In 2005, we were able to check many, but not all, of the magazines in Table 1. Smokeless tobacco ads still appeared in such youth-oriented magazines as Motor Trend, Outdoor Life, and Road and Track and adult-oriented magazines such as Field and Stream and Time. The 2006 Sports Illustrated Swimsuit Edition, which typically garners around 10 times the readership of an average Sports Illustrated edition, featured a full-page ad for US Smokeless Tobacco Company's Wintergreen Timber Wolf.

Although adolescents are exposed to many ads in the course of a year and the effectiveness of a single campaign can vary widely, the overriding point is that smokeless tobacco ads are still being run and they reach

TABLE 1-Adolescent Readership (Aged 12-17 Years) and Adolescents as a Percentage of Total Readership (Persons Aged 12 Years and Older) of Youth- and Adult-Oriented Magazines With Advertising by Smokeless Tobacco Companies: January 1993-December 2002

	Adolescent Readers <sup>a</sup> (Adolescents as % of Total Readership of Magazine)										
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Yearly Average
Youth-oriented											
magazines											
Car and Driver	1700.0 (20.64)	1465.3 (18.31)	1307.1 (16.51)	1391.9 (16.83)	1196.5 (14.60)	1225.8 (14.82)	1455.8 (16.98)	1783.0 (18.68)	1732.1 (16.49)	1621.7 (14.95)	1487.92 (16.88
ESPN										2177.7 (20.25)	2177.70 (20.25
Hot Rod	2368.3 (29.43)	2294.9 (28.15)	2316.5 (26.83)	2271.4 (25.45)	2035.1 (22.57)	2068.5 (23.33)	2214.6 (26.98)	1909.6 (24.56)	1577.7 (19.32)	1431.7 (17.16)	2048.83 (24.38
Motor Trend	1652.8 (24.82)	1393.2 (22.12)	1374.3 (19.78)	1288.1 (18.44)	1074.5 (16.60)	1141.3 (16.26)	1379.4 (18.86)	1359.7 (18.19)	1161.1 (14.85)	1229.8 (14.74)	1305.42 (18.47
Outdoor Life	1477.2 (15.53)	1579.3 (18.00)	1508.0 (18.60)	1309.8 (18.76)	1048.9 (15.79)	954.0 (14.18)	1237.1 (18.49)	1147.5 (17.67)	758.9 (11.13)		1224.52 (16.46
Popular Science	1950.9 (21.26)	1906.0 (20.80)	1740.7 (18.76)	1651.5 (18.56)	1475.4 (18.51)	1565.7 (20.09)	1571.5 (19.92)	1225.3 (16.73)	1246.4 (16.18)	1301.9 (15.29)	1563.53 (18.61
Road & Track	1515.3 (22.58)	1233.9 (20.63)	1277.3 (20.97)	1331.2 (21.55)	1126.9 (17.59)	959.8 (15.13)	1072.7 (18.83)	1026.5 (18.40)	927.0 (15.65)	810.9 (12.87)	1128.15 (18.42
Rolling Stone	1951.8 (20.01)	1868.8 (18.50)	1899.9 (18.38)	2176.5 (20.67)	2216.6 (20.22)	2218.5 (20.27)	2565.3 (23.73)	2405.1 (22.85)	2122.6 (18.94)	1784.4 (15.30)	2120.95 (19.89
Spin			892.9 (27.03)	1050.5 (29.98)	1132.3 (31.57)	1189.2 (30.46)	1077.3 (27.38)	886.4 (24.07)	701.5 (19.67)	511.2 (15.62)	930.16 (25.72
Sport	2319.4 (34.69)	2274.1 (33.82)	2365.4 (36.05)	2482.4 (38.40)	2137.2 (33.46)	2011.0 (31.50)	2095.1 (35.34)				2240.66 (34.75
Sporting News	1412.7 (26.69)	1393.6 (27.79)	1356.1 (28.46)	1434.0 (30.77)	1207.9 (28.33)	1040.0 (24.62)	1091.3 (25.09)	788.4 (19.11)	812.1 (18.11)	807.9 (17.17)	1134.40 (24.61
Sports Illustrated	5105.4 (17.78)	5201.4 (17.99)	5280.7 (18.64)	5309.1 (19.38)	5064.6 (18.00)	5069.0 (17.09)	4961.4 (17.26)	4040.8 (15.64)	3680.3 (14.96)	3483.1 (14.25)	4719.58 (17.10
TV Guide	6623.4 (13.13)	6738.8 (13.23)	6678.9 (13.17)	6304.1 (13.00)	5933.9 (12.82)	5529.8 (12.51)	5475.3 (13.22)	4579.4 (12.02)	3934.2 (10.99)	3398.1 (10.19)	5519.59 (12.43
Adult-oriented magazines											
Field & Stream	1872.7 (11.77)	1760.1 (11.06)	1743.1 (11.37)	1738.7 (11.86)	1537.0 (10.86)	1309.5 (9.87)	1250.2 (10.18)	1158.8 (9.67)	963.8 (8.12)		1481.5 (10.53)
Maxim										948.0 (8.75)	948.0 (8.75)
Popular	1657.7 (15.00)	1616.9 (14.52)	1549.6 (13.77)	1286.0 (12.03)	1307.7 (12.35)	1378.7 (12.68)	1468.2 (13.78)	1389.0 (13.94)	1200.8 (12.13)	1136.9 (10.99)	1399.2 (13.12)
Mechanics											
Time	1948.5 (7.73)	1971.8 (7.66)	1968.6 (7.68)	1870.5 (7.52)	1627.8 (6.61)	1763.6 (6.93)	1894.7 (7.58)	1544.3 (6.61)	1396.1 (6.04)	1374.4 (5.66)	1736.0 (7.00)

Source. Data obtained from Mediamark Research Inc.

Note. A youth-oriented magazine is a publication averaging more than 2 million youth readers (younger than 18 years), or one in which youths averaged more than 15% of the readership, for the years 1993 to 2002. An adult-oriented magazine is a publication averaging fewer than 2 million youth readers, or one in which minors averaged less than 15% of the readership, for the years 1993 to 2002. If a magazine does not appear for a year, it was not listed in the Mediamark Research Inc database. aln thousands.

adolescents multiple times through a combination of both youth- and adult-oriented magazines. It is obvious that although its expenditures are much smaller than those of cigarette advertising, smokeless tobacco advertising in popular magazines deserves the attention of those interested in adolescents' exposure to tobacco and its consequences.

The STMSA appears to have had a limited effect on the advertising of smokeless tobacco products to adolescents. We document that both prior to and after the STMSA, smokeless tobacco companies continued to advertise in magazines with high adolescent readership. Over the 10-year period analyzed, magazines with high youth readership (for which readership figures were available) accounted for roughly 46.9% of all smokeless tobacco

expenditures in the 48 magazines measured by TNS. A large percentage of these expenditures were incurred by US Smokeless Tobacco, the only company to sign the STSMA. Even when only the years since the STSMA came into effect are considered, the 13 youth magazines identified in this study accounted for 46.2% of all expenditures. Although it is possible that some increases in spending are because of inflation, in the face of such figures it is hard to believe that the smokeless tobacco industry has adopted the standards of the STMSA.

We looked at adolescent readership in only a portion of magazines in which the smokeless tobacco industry advertised during the period 1993 to 2002; we excluded 26 magazines with smokeless tobacco expenditures because

they lacked Mediamark Research Inc readership data. These included adult-oriented titles and several magazines with suspected substantial readership among adolescents (such as Sports Afield, Playboy, and FHM). In fact, titles included in the Mediamark Research Inc database reflect only a handful of the country's more than 6000 consumer magazines. The reach and average frequency figures reported here are therefore very conservative.

Mediamark Research Inc is 1 of 2 widely used sources for magazine readership (the other is Simmons Market Research Bureau, or SMRB, which reports like data on a similar number of magazines); however, the limited number of titles it measures puts policymakers at a disadvantage when estimating actual exposure to smokeless tobacco advertising among

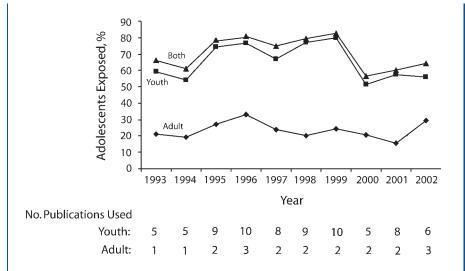


FIGURE 1—Estimated percentage of adolescents (aged 12-17 years) exposed at least once to smokeless tobacco advertising in youth-oriented magazines, adult-oriented magazines, and youth-oriented and adult-oriented magazines combined: United States, 1993-2002.

adolescents. Adolescent readership for over half of the publications for which TNS reported spending by smokeless tobacco companies could not be estimated because no recognized data source on readership exists for such titles. It is therefore highly likely that the reach and average frequency figures actually exceed those reported in this study. Similarly, TNS provides expenditure data for approximately 400 consumer magazines. Logic suggests that some smokeless tobacco expenditures are not tracked by TNS. Our findings point to the need for standardized and credible ways to measure audience sizes and expenditures for a greater number of magazines in the industry.

Different patterns of adolescent exposure to smokeless tobacco may be heightened when gender is considered. Because the ratings (i.e., the percentage of a total population that reports reading a magazine) used for the magazines were for all 12- to 17-year-olds (the cost-prohibitive nature of the data precluded obtaining gender-specific ratings), the results obviously underestimate reach and average frequency for adolescent boys and overstate them for girls. A look at the 13 magazines used by smokeless tobacco companies reveals many sports-oriented titles, which traditionally are read more by males than females. Ratings among adolescent boys were therefore probably higher than those used in this study and

would thus yield higher reach levels. Given that incidences of smokeless tobacco use are far higher among adolescent boys than among adolescent girls, future research should consider the variation of smokeless tobacco use by gender before embarking on computer programs that estimate reach.

Magazine advertisements are one part of the smokeless tobacco industry's total marketing effort. As noted, advertising and promotion expenditures by the 5 main US manufacturers of smokeless tobacco reached an all-time high of \$236.7 million in 2001<sup>4</sup>; this study considered advertisements in only a small portion of magazines. Additional areas ripe for future study include other portions of the promotional mix. Smokeless tobacco advertising in magazines appears sizable, yet it is small compared with other forms of promotion used by this industry, such as coupons, promotional allowances, value-added promotions (such as "buy one get one free"), and entertainment, which account for over 90% of the advertising and sales promotion budget.4 Many of these promotional tactics attract adolescents, and studies addressing this issue would be of interest to both policymakers and scholars.

Finally, the marketing environment for smokeless tobacco products is changing. In addition to traditional smokeless tobacco marketers such the US Smokeless Tobacco

Company, major tobacco companies such as Altria and RJ Reynolds are now testing the marketing of smokeless products as a response to increasing bans on smoking.<sup>29</sup> We argue that aggressive marketing tactics can play a role in influencing smokeless tobacco use among youths.

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#### **Contributors**

M.A. Morrison and D.M. Krugman conceptualized the overall study. M.A. Morrison led, and D.M. Krugman assisted in, the analysis and writing. P. Park assisted in collecting field data on the presence or absence of smokeless advertising in magazines, gathered literature, and updated many figures and charts.

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## **Human Participant Protection**

No protocol approval was needed for this study.

## References

- Krugman DM, Morrison M, Sung Y. Cigarette advertising in popular youth and adult magazines: a tenyear perspective. J Public Policy Marketing. 2006;25(2): 197-211
- King C, Siegel M. The Master Settlement Agreement with the tobacco industry and cigarette advertising in magazines. N Engl J Med. 2001;345:504–511.
- Krugman DM, King KW. Teenage exposure to cigarette advertising in popular consumer magazines. J Public Policy Marketing. 2000;19:183-188.
- Federal Trade Commission. Federal Trade Commission smokeless tobacco report for the years 2000 and 2001. 2003. Available at: www.ftc.gov/os/2003/ 08/2k2k1smokeless.pdf. Accessed May 8, 2007.
- Federal Trade Commission. Cigarette report for 2003. 2005. Available at: www.ftc.gov/reports/ cigarette05/05089cigrpt.pdf. Accessed May 8, 2007.
- Kury SP, Rodrique JR, Perri MG. Smokeless tobacco and cigarettes: differential attitudes and behavioral intentions of young adolescents toward a hypothetical new peer. J Clin Child Psychol. 1998;27: 415 - 422

- 7. Nemours Foundation. Smokeless tobacco. Available at: http://www.kidshealth.org/teen/drug\_alcohol/ tobacco/smokeless.html. Accessed May 7, 2007.
- National Institute on Drug Abuse. Mind over matter: nicotine. Available at: http://www.teens.drugabuse. gov/mom/mom\_nic4.asp. Accessed May 7, 2007.
- Centers for Disease Prevention and Control. Healthy youth, youth on line comprehensive results. Available at: http://apps.nccd.cdc.gov/yrbss/SelectLocyear.asp?cat= 2&Quest=Q36. Accessed August 2, 2006.
- 10. Bandura A. Social cognitive theory of mass communication. In: Bryant J, Zilman D, eds. Media Effects: Advances in Theory and Research. Hillsdale, NJ: Lawrence Erlbaum Associates; 1994:61-90.
- 11. Bandura A. Social Learning Theory. Englewood Cliffs, NJ: Prentice Hall; 1977.
- 12. Baran SJ, Davis DK. Mass Communication Theory: Foundations, Ferment, and Future. 3rd ed. Belmont, Calif: Thomson-Wadsworth: 2003.
- 13. Severin WJ, Tankard JW. Communication Theories: Origins, Methods, and Uses in the Mass Media. 4th ed. New York, NY: Longman; 1997.
- 14. Wicks RH. Understanding Audiences: Learning to Use the Media Constructively. Mahwah, NJ: Lawrence Erlbaum Associates; 2001.
- 15. Krugman DM, Quinn WH, Sung Y, Morrison M. Understanding the role of cigarette promotion and youth smoking in a changing marketing environment. J Health Commun. 2005;10:261-278.
- 16. Solomon M. Consumer Behavior: Buying, Having, and Being. Boston, Mass: Allyn & Bacon; 1992.
- 17. Slovic P. Cigarette smokers: rational actors or rational fools? In: Slovic P, ed. Smoking: Risk, Perception & Policy. Thousand Oaks, Calif: Sage Publications; 2001:97-133
- 18. American Psychological Association. Report of the APA Task Force on Advertising and Children. February 20, 2004. Available at: www.apa.org/releases/ childrenads.pdf. Accessed May 8, 2007.
- 19. United States of America et al. v Philip Morris USA Inc et al., 449 F Supp. 2d 1 772-1000 (DC DC
- 20. Food and Drug Administration. Regulations restricting the distribution of cigarettes and smokeless tobacco products to protect children adolescents, proposed rule. 60 Federal Register 155 (1995).
- 21. National Association of Attorneys General. Master Settlement Agreement. Available at: http://www.naag. org/backpages/naag/tobacco/msa/msa-pdf/1109185724\_ 1032468605\_cigmsa.pdf. Accessed May 7, 2007.
- 22. US Smokeless Tobacco Company. Smokeless Tobacco Master Settlement Agreement. Available at: http://www.ussmokeless.com/content.cfm?id=6. Accessed May 7, 2007.
- 23. National Association of Attorneys General. Smokeless Tobacco Master Settlement Agreement. Available at: http://www.naag.org/backpages/naag/ tobacco/stmsa/stmsa\_pdf/smokemsa.pdf. Accessed May 7, 2007.
- 24. Smokeless tobacco advertising expenditures before and after the Smokeless Tobacco Master Settlement Agreement: a report of the Massachusetts Department of Public Health, May 2002. Available at: http://

- www.tobaccofreekids.org/pressoffice/release503/ smokeless.pdf. Accessed August 15, 2006.
- 25. Mediamark Research Inc Web site. Available at: http://www.mediamark.com. Accessed May 7, 2007.
- 26. TNS Media Intelligence Web site. Available at: http://www.tns-mi.com/prodAdSpender.htm. Accessed May 7, 2007.
- 27. Ephron E. Caution, dangerous curves: formula reach and frequency is a rough approximation. Available at: http://www.ephrononmedia.com/index.asp. Accessed September 1, 2006.
- 28. Leckenby JD, Kishi S. How media directors view reach/frequency estimation. J Advertising Res. 1982;
- 29. Philip Morris USA. Philip Morris USA launches test market of a new smoke-free, spit-free tobacco product. Available at: http://www.philipmorrisusa.com/ en/about\_us/news\_media/pressroom/press\_releases/ articles/pr\_07\_14\_2006\_philip\_morris\_usa\_launches\_ test\_market\_of\_a\_new\_sm.asp. Accessed August 25,