

# *The Impact of Ad Characteristics on Adolescents' Attitudes Towards Antismoking Ads*

Domen Bajde  
Irena Vida

Smoking exerts a considerable burden not only on those who smoke but just as well on society at large. In response, governments and institutions often resort to advertising which aims to discourage smoking. Unfortunately, our knowledge of the workings of antismoking advertising is detrimentally limited. In particular, the literature delving into the impact of antismoking ad characteristics (e. g., ad content, valence, intensity) on the overall effectiveness of antismoking advertising is scarce and contradictory. This empirical study aims to enhance the knowledge of antismoking advertising by presenting results of the survey involving Slovene adolescents. The adolescents were first exposed to advertisements of different antismoking ad contents (for the purpose of this study the term 'ad content' refers to types of appeals used in antismoking advertising), ad valence and intensity, and later invited to respond to a number of questions measuring their attitudes toward the ads, their attitudes toward smoking, their intentions to smoke, etc. The results indicate that while the different intensity and valence of ads produce varying attitudes toward the ads, we could not confirm these differences based on ad content. Also, we found that adolescent smokers respond to antismoking ads differently than do their nonsmoking peers. Our findings offer several important implications for antismoking advertisers and the research community interested in the workings of antismoking advertising.

*Key Words:* smoking and adolescents, antismoking advertising, attitudes toward antismoking ads

*JEL Classification:* M3, M31

## **Introduction**

Cigarette smoking has been repeatedly shown to result in a number of serious health risks. In addition, smoking, the world's leading preventable addiction, involves a number of non-health related drawbacks such as

*Domen Bajde is a Teaching Assistant at the Faculty of Economics, University of Ljubljana, Slovenia.*

*Dr Irena Vida is a Professor at the Faculty of Economics, University of Ljubljana, Slovenia.*

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bad skin, yellow teeth, reduced athletic performance, bad breath and others. These burdens not only afflict those who smoke, but also weight society at large. For example, the unnecessary deaths, the decreased quality of life, the increase in public health costs and the significant losses in productivity represent only a few of the heavy burdens imposed by smoking (Andrews et al. 2004). In response, considerable effort has been dedicated to averting the public from consuming tobacco products. In particular, the most vulnerable groups, such as the adolescents, have repeatedly been cautioned against smoking (Smith and Stutts 2003). Undeniably, marketing communication has played a significant role in these attempts to influence consumer behavior (Wakefield et al. 2003). However, the effect of antismoking advertising could be significantly increased through a better understanding of its workings. This study aims to enrich the knowledge pertaining to anti smoking advertising by focusing on the adolescents' attitudes towards antismoking ads. The research survey is set in Slovenia, where the elected segment and its engagement with smoking have proved exceedingly problematic.

Slovenia has not been immune to the afflictions caused by smoking. For instance, according to the National Institute for Health Safety (IVZ 2007), 15 percent of preventable deaths in Slovenia can be attributed to smoking. While the overall proportion of smokers in the general population has decreased significantly during the past decade (i. e., from 28.2% in 1994 down to 23.7% in 2001), the number of teenage smokers has increased significantly in recent years (CINDI 2005). For example, the European School Survey Project on Alcohol and other Drugs reports a shocking increase in smoking among the 15- and 16-year-old group (ESPAD 2003), with the percentage of smokers in this age group having swelled from the initial 16.4% in 1994 up to 25.7% in 1999. Similarly, the Health Behaviour in School Aged Children (HBSC) – cross-national study sponsored by the World Health Organization – ranks Slovenia as the fourth among 35 countries/regions with the highest percentage of habitual 15–16 year-old smokers (IVZ 2007). Evidently, the copious efforts to discourage smoking through antismoking advertising, antismoking legislature, and other related public policies, have largely proven ineffective with the Slovene teenage segment. This empirical study offers some insights into the workings of antismoking advertising, thus attempting to contribute toward an increase in the effectiveness of the antismoking campaigns aimed at the adolescent segment. Specifically, the objectives of this research were to examine the prevalence of cigarette

smoking among various adolescent groups, to investigate differences between teenage smokers and nonsmokers in their attitudes toward smoking in general and toward antismoking advertisements, and to explore teenagers' responses to various types of antismoking advertisements developed specifically for the purpose of this study.

### **Theoretical Background**

There are a number of gaps and inconsistencies in the literature addressing the effect of antismoking ad characteristics, such as the ad content used, or the valence and the intensity of the ad on the overall effectiveness of antismoking advertising. For example, after conducting an elaborate study, Pechmann and colleagues (2003) conclude that ads depicting social disapproval of smoking are more effective than those highlighting the long-term health risks, or the shrewdness of tobacco marketing. Conversely, Goldman and Glantz (1998) argue that focusing on the tobacco industry's marketing tactics is most effective, but concur with Pechmann and colleagues' findings regarding the ineffectiveness of ads addressing health concerns. Conversely, Bierner and co-authors (2004) conclude in their research that ads focusing on health threats result in better appraisals than alternative message themes. Yet in another study, Smith and Stutts (2003) conclude that while ads communicating long-term health concerns can be effective with female adolescents, the male participants respond much better to ads addressing short-term cosmetic concerns (e. g., bad breath, yellow teeth, bad skin, etc.). Unfortunately, other ad contents used in antismoking advertising, such as depicting the negative impact of smoking on bystanders (e. g., passive smoking) and portraying the non-health related disadvantages of smoking have received limited attention in the literature (Pechmann et al. 1994; 2003).

Considerable divergence can also be observed in the literature delving into the role of ad intensity (strong vs. moderate advertisements) and ad valence (positive vs. negative advertisements). Intensity refers to the gravity of the consequences linked to the advertised behavior (Reardon et al. 2006; Wolburg 2004). In this stream of research, researchers generally resort to Rogers' (1983) protection motivation theory, which identifies four cognitive variables affecting an individual's fear arousal that in turn leads to the adoption of the advocated risk-reducing behavior: the threat severity, the audience's vulnerability to the threat, the audience's perceived self-efficacy at performing the promoted behavior and the perceived response efficacy of the promoted behavior. Studies fol-

lowing this school of thought generally found that advertisements portraying threats of high intensity yield higher fear arousal, thus increasing ad effectiveness of promoted behaviors than ads of low intensity (e. g., King and Reid 1989; Laroche et al 2001). However, evidence to the contrary can also be found in the literature (Smith and Stutts 2003; Wolburg 2004). Similar reservations apply to the literature discussing the role of ad valence (i. e., positive vs. negative framing). Antismoking advertising can either stress the benefits of avoiding tobacco (positive framing), or focus on the losses incurred by smokers (negative framing). Negatively framed antismoking ads are more customary, with the majority of antismoking stressing negative consequences of smoking, and aiming to induce fear of and distaste for smoking. Shadel (2002) argues that it is this failure to frame positive ads that frequently hinders the effectiveness of antismoking advertising. Further, it has been suggested that the effectiveness of positively/negatively framed advertising is moderated by type of benefit/threat (Robberson and Rogers 1988), type of promoted behavior (Rothman et al. 1999) and audience characteristics (Maheswaran and Meyers-Levy 1990). Accordingly, negative messages (e. g., health threats of smoking) are believed to be superior when addressing a highly involved audience, when promoting behavior with an uncertain outcome, or addressing health issues. Conversely, positive messages have been found superior in situations of low-involvement and with appeals to self-esteem.

### **Hypothesis Formulation**

The presented discrepancies in the literature prevent us from formulating an extensive number of clear-cut hypotheses, particularly as most of the existing empirical studies in the field have been conducted on respondents in Western, mature market economies rather than transformational economies of Central or South-Eastern Europe. While it is often suggested in the literature that there is a global teenage segment, recent studies suggest that adolescents from different cultures respond differently to advertising stimuli (Laroche et al. 2001; Reardon et al. 2006). As a result, the research presented here is predominately of an explorative nature. Nevertheless, our analysis will benefit from sketching out some hypotheses based on existing conceptual and empirical evidence.

The first set of hypotheses is related to differences between teenage smokers and non-smokers with respect to their attitudes towards smoking and their attitudes towards various types of antismoking advertise-

ments. Consistent with protection motivation theory, Pechmann and colleagues (2003) demonstrate that the effectiveness of antismoking advertising depends not only on the severity of risks attached to smoking as depicted in antismoking advertising, but also on the perceived vulnerability to those risks, the perceived self-efficacy at performing the advocated risk-reducing behavior, and the response efficacy of the advocated behavior, as well on the perceived benefits of smoking and the perceived cost of abstinence. It is clear that the smokers' perceptions of the benefits of smoking and the cost of quitting will not be identical to the perceptions of those who do not smoke. Thus, smokers are expected to hold a more positive attitude toward smoking, and they are also expected to react less favorably to antismoking advertising. This position is further supported by Wolburg (2004) who demonstrates that with smokers, antismoking advertising is more likely to produce defensive behavior such as defiance, denial and other types of counter-productive behavior. Such a counter-productive defensive stance is especially likely to be adopted when young smokers are exposed to exceedingly intensive antismoking advertising (Wolburg 2004). Therefore, adolescent smokers are expected to form less favorable attitudes towards antismoking ads in comparison to nonsmoking adolescents.

*HYPOTHESIS 1A Teenage smokers exhibit a more positive attitude toward smoking in comparison to their non-smoking peers.*

*HYPOTHESIS 1B Teenagers exhibiting a greater intent to smoke in the future will tend to have a more positive attitude toward smoking.*

*HYPOTHESIS 2A When exposed to antismoking ads, teenage smokers will, overall, form less favorable attitudes toward the ads than non-smokers.*

*HYPOTHESIS 2B When exposed to intensive antismoking ads, teenage smokers will form less favorable attitudes toward the ads than non-smokers.*

The second set of our hypotheses tackles the overall differences in the attitudes towards antismoking ads employing varying ad contents (i. e., themes), ad valence and ad intensity in adolescents. Although the existing literature fails to consistently confirm the prominence of specific ad content, the majority of the existing empirical findings confirm differences in appeal effectiveness (e. g., Goldman and Glantz 1998; Smith and Stutts 2003). Four distinct ad contents were used in our study: (1) health content (health threats/benefits), (2) other-centered content (pos-

itive/negative impact on bystanders), (3) social approval content (acceptance/disapproval of others), and (4) well-being content (impact on own well-being). With respect to the message valence, the literature suggests that positively framed antismoking ads are perceived more favorably by adolescents (Shadel 2002). Indirect support for positive framing of ads can also be found in Maheswaran and Meyers-Levy (1990) who argue that positively framed ads work better with low-involvement audiences, and in Rothman et al. (1999) who claim that when certain behavior has a relatively certain outcome, positive ads should be used. According to these three studies, positively framed ads will work better with the adolescent audience who exhibit a fairly low involvement in issues related to health protection. What is more, positively framed ads are expected to work better because the outcomes of smoking are perceived as relatively certain (i. e., by the time they reach their teens, the adolescents are well familiarized with the negative outcomes of smoking). On the other hand, empirical findings in studies delving into ads of varying levels of outcome intensity seem more ambivalent. While a number of moderating variables between fear arousal and ad effectiveness have been identified in the literature, strong (fear arousing) ads have been found to discourage smoking (Hale and Dillard 1995; Laroche et al. 2001). Nevertheless, the individuals' perceptions of risk often prove fairly arbitrary, and grave messages sometimes prove less effective than do more moderate ads. An excessively intensive antismoking message can provoke detrimental defiance from the audience (Wolburg 2004), indicating that intensive ads may produce negative attitudes toward antismoking ads.

Based on the existing literature we posit that the adolescents form distinct attitudes toward antismoking ads based on ad content employed, based on the ad valence and ad intensity. Specifically, we expect that some ad content categories (i. e., emphasis on health, impact on others, social approval and general well-being) will produce more approving attitudes than others. Moreover, positively framed ads are expected to produce more favorable attitudes towards the ad, and ads of different levels of outcome intensity (i. e., linked to the strength or seriousness of consequences of smoking) will yield significantly different responses of adolescents to antismoking ads.

*HYPOTHESIS 3 Overall, there will be significant differences in the respondents' attitudes towards the ads across four categories of ad contents employed in this study.*

**HYPOTHESIS 4** *Overall, the respondents exposed to positively framed ads will form more favorable attitudes toward the ads in comparison to those exposed to negatively framed ads.*

**HYPOTHESIS 5** *Overall, there will be significant differences in the respondents' attitudes towards ads of high vs. moderate intensity.*

### **Research Methods**

To test the specified hypotheses, data were generated in three Slovene high schools and technical secondary schools, surveying 480 adolescents aged between 14 and 19. Preceding discussion in this paper clearly designates this age group as exceedingly relevant (Pechmann et al. 2003; Andrews et al. 2004). The average age of the students included in our sample was 16.46 years ( $SD = 1.11$ ) with students attending the first through the fourth year of secondary schools having been approximately equally represented. Our sample of teenagers included 270 or 56.3% of boys and 210 or 43.7% of girls.

This study examines teenagers' attitudes towards smoking, their intention to smoke and their responses to various types of antismoking advertisements. The range of advertisement appeal characteristics examined here involves: (1) ad intensity, (2) ad valence, and (3) ad content (theme). As a part of a large cross-cultural project on antismoking advertising (Reardon et al. 2006), sixteen distinct print ads with matching visuals and headlines were developed to facilitate a 2 (high/moderate intensity  $\times$  2 (positive/negative ads)  $\times$  4 (ad content) experimental design. As indicated earlier, the four distinct ad content categories included: (1) health content (health threats/benefits), (2) other-centered content (positive/negative impact on bystanders), (3) social approval content (acceptance/disapproval of others), and (4) well-being content (impact on own well-being). Each of the respondents was presented with one of the sixteen advertisements. Since ads of different valence and intensity were embedded in the four ad content categories, an equal number of adolescent respondents (half of the sample,  $N = 240$ ) was exposed to one of the two valence levels (positive/negative) ads, and to one of the two levels of outcome intensity (strong/moderate) ads. Hence, one fourth of the respondents ( $N = 120$ ) was exposed to each of the ad content categories.

As for the development of advertisements, two artists were initially contracted to create the visuals, i. e., to draw black-and-white cartoon figures in support of the advertisement headlines developed by the researchers. The visuals were later judged for consistency of execution be-

TABLE 1 Construct measures

Constructs and items	Alpha
<i>Intent to smoke (definitely no/definitely yes)</i>	0.908
In the future, you might smoke one puff or more of a cigarette.	
You might try out cigarette smoking for a while.	
If one of your best friends were to offer you a cigarette, you would smoke it.	
<i>Attitude toward smoking (strongly disagree/strongly agree)</i>	*
Smoking cigarettes is:	
Good ... bad	
Appealing ... unappealing	
Pleasant ... unpleasant	
Safe ... unsafe	
Wise ... foolish	
Beneficial ... harmful	
<i>Attitude toward the ad</i>	0.839
How would you best describe the advertisement:	
Good ... bad	
Like ... dislike	
Interesting ... boring	
Appealing ... unappealing	

NOTE \* Two dimensions, see table 2.

tween ads, and the quality of headline representation. In all cases, one set of visuals was judged superior. This set was later employed in the study. In addition, the ads were further tested to ensure the appropriate variation in ad content, valence, and intensity. For example, a pilot sample of pupils ( $N = 92$ ) evaluated the intensity of ads using seven-point semantic differential scales ('plain/vivid'; 'weak/powerful'). When the  $t$ -test analyses showed higher-intensity ads to be rated significantly higher on both scales, the advertisement was accepted, otherwise changes were implemented. Similarly, these tests also included evaluations of positive vs. negative ads and ad content categories. As for the final representation of the stimuli used in the study, an example of the advertisement headline (presented along with a matching cartoon figure to a specific theme) for the *positively framed, low intensity version* was: 'Stop smoking, live healthier', and for the *negatively framed, high intensity version*, the headline read: 'Keep smoking and die!'

The questionnaire included various constructs whereby some of the item measures were taken from the literature and some of them were developed specifically for this project (see table 1). The following constructs were used in this study: a three-item scale measuring the *intent to*

smoke (Pierce et al. 1996), a seven-item semantic differential scale measuring *attitudes toward smoking* (Mitchell and Olson 1981), a nine-item scale measuring the *attitudes toward a particular antismoking ad*. Also, a classificatory question (smoker or non-smoker) and demographics were included in the survey. Considering that all scales were taken from the existing literature in the English language, the guidelines for conducting international consumer research were followed (Craig and Douglas 1999) in the development and testing of the research instrument. All items were translated into Slovene and back into English independently by two bilingual natives. The back-translated scale was then judged by researchers for meaning compatibility. The scale was also pre-tested on a convenience sample of adolescents to ensure its comprehensibility. Modifications of the scale items were made so as to comply with the consumer environment which is culturally distinct from the markets in which most of the measures were originally developed.

All multi-item scales were first tested for unidimensionality of measures and their reliability by conducting an exploratory factor analysis (the principal component method) and examining the internal consistency (coefficient alpha). In the first procedure, the items were kept if their factor loading was at least 0.45 and eliminated if they loaded similarly on more than a single factor. Results of these analyses along with the wording of specific items in each construct are presented in table 1. The three-item scale for measuring the intent to smoke proved very reliable, thus, all 3 items were retained ( $\alpha = 0.908$ ). Conversely, only 4 of the 9 items measuring the attitudes toward particular antismoking ads were retained ( $\alpha = 0.839$ ). The scale measuring attitudes toward smoking yielded two strong dimensions (see table 2): the rational dimension (eigenvalue of 3.12;  $\alpha = 0.77$ ), and the hedonic dimension (eigenvalue of 0.95;  $\alpha = 0.78$ ). As a result, our initial construct (i. e., attitude toward smoking) was broken into two attitude constructs: (1) the teenagers' beliefs regarding the (ir)rationality of smoking (4 items), and (2) the teenagers' perceptions regarding the attractiveness of smoking (2 items). Together, the two factors accounted for 67.9 percent of total variance in this construct.

### Data Analysis and Results

In this section, a review of the survey findings is offered. The results pertaining to the pervasiveness of smoking among different adolescent groups and the adolescents' intentions to smoke in the future are pre-

TABLE 2 Varimax rotated factor matrix of attitudes towards smoking items

Bipolar semantic differential items	Factor 1: Rational dimension	Factor 2: Hedonic dimension	Cronbach Alpha
Good : bad (ASMK 1)	0.685	0.422	0.78
Wise : foolish (ASMK 2)	0.620	0.378	
Beneficial : harmful (ASMK 3)	0.837	0.005	
Safe : unsafe (ASMK 5)	0.755	0.195	
Appealing : unappealing (ASMK 4)	0.210	0.855	0.77
Pleasant : unpleasant (ASMK 6)	0.198	0.875	
Cumulative variance	42.05%	25.85%	—

sented first. Next, attitudes toward antismoking ads are discussed and differences between adolescent smokers and nonsmokers are identified to tease out additional insights into the working of antismoking advertising. Finally, we concentrate on the role of ad characteristics (i. e., intensity, valence and ad content) with respect to ad attitude formation.

#### ENGAGEMENT, INTENTION TO SMOKE AND ATTITUDES TOWARDS SMOKING

First, our data analyses clearly support the grim trend of the increasing popularity of smoking in the adolescent segment. Given a choice to categorize themselves as smokers or nonsmoker, a worrisome 33.3 percent of the participants chose the 'smoker' label. The percentage of smokers is significantly higher than the percentage of teenage smokers in 1999, as reported by ESPAD (i. e., 25.7%). Although due to the methodological and sample differences the two sets of data cannot be compared directly, the data clearly confirms the efflorescence of smoking among teenagers. The percentage of smokers seems to increase with age. Whereas in the case of the 14–16 year old group the percentage of those who categorize themselves as smokers is 28%, the percentage increases to 38.6% with the '17 or above' age group. The percentage of smokers was found to be significantly higher ( $\chi^2$  test:  $p = .001$ ) with the male respondents (i. e., 39.6%) in comparison to female respondents (25.2%).

Second, the results also indicate a relatively high overall intent to smoke with only 37.1% of the respondents failing to foresee her/himself smoking in the future, 54.6% of respondents describing the probability of smoking occasionally as unlikely, and with the exact same percentage

refusing the possibility 'to smoke a cigarette offered by their best friend'. Together with the high percentage of self-professed smokers (i. e., 33.3 percent) this analysis corroborates the worrisome popularity of smoking among Slovene adolescents.

Third, teenagers' attitudes toward smoking were analyzed. As indicated in the Methodology section earlier, an exploratory factor analysis yielded two distinct attitude dimensions: (1) *rational* (e. g., harmful, dangerous), and (2) *hedonic* (e. g., smoking is unappealing, unpleasant). On average, the adolescents exhibit negative attitudes toward smoking. Smoking is generally perceived as bad, unwise, harmful, unappealing, dangerous, and unpleasant. Nevertheless, there are significant differences in the attitudes between smokers and nonsmokers. Smokers perceive smoking as somewhat less irrational ( $t = -4.13, p = 0.000$ ) and by far more attractive ( $t = -13.23, p = 0.000$ ) than do nonsmokers. Hence, our analyses support hypothesis 1a, in that teenage smokers do exhibit a more favorable attitude toward smoking in comparison to their nonsmoking peers. Moreover, a correlation coefficient between the respondents' intention to smoke in the future and their attitude toward smoking was found positive and significant ( $r = 0.425; p = 0.000$ ), thus confirming hypothesis 1b.

#### ATTITUDES TOWARDS THE ANTISMOKING ADS

In analyzing differences between adolescent smokers and nonsmokers with respect to their attitudes toward antismoking ads, we found support for our hypothesis 2a. The ad attitude scores were significantly lower with the smoker group than with the nonsmoker group ( $t = -3.67, p = 0.000$ ). It has also been found that the difference in attitudes between the two groups varies according to ad intensity. The discord in attitudes between adolescent smokers and nonsmokers is especially striking in the case of respondents having been exposed to high intensity ads ( $t = -3.99, p = 0.000$ ). Whereas nonsmokers report, on average, a positive attitude toward intensive antismoking ads, high intensity ads resulted in generally less favorable attitudes among the smokers. Conversely, the smokers and nonsmokers report a more similar attitude toward ads when exposed to moderate ads. In this case, the difference in attitudes toward ads between smokers and nonsmoker is no longer statistically significant ( $t = -1.34, p = 0.184$ ). These analyses confirm hypothesis 2b, in that smokers (in contrast to nonsmokers) demonstrate a lower level of appreciation for intensive antismoking advertising.

As reported earlier, the subjects in this study were exposed to four distinct ad content categories: (1) health content (health threats/benefits), (2) other-centered content (positive/negative impact on bystanders), (3) social approval content (acceptance/disapproval of others), and (4) well-being content (impact on own well-being). One-fourth of our sample ( $N = 120$ ) was exposed to each type of advertisement. Table 3 depicts the means scores for the construct attitude toward the ad by the category of ad content. A one-way ANOVA test was conducted to test the differences in ad attitude scores across the four ad contents. As depicted in table 3, our results do indicate that the adolescents' attitudes toward ads differ according to the ad content, but these differences are not statistically significant ( $p = 0.080$ ). Hence, our data analysis fails to support hypothesis 3.

Lastly, we analyze the adolescents' responses to antismoking ads with two levels of valence and intensity (see table 3). Our analyses show support for hypotheses 4 and 5, as both the valence and the intensity of ads have been found to significantly influence the respondents' attitudes toward the ads. Positively framed ads resulted in more favorable attitudes toward ads than negatively framed ads ( $t = -1.99, p = 0.048$ ). Overall, intensive ads produced more favorable attitudes toward the ad than did moderate ones ( $t = 2.27, p = 0.024$ ). We have shown with previous analyses (hypothesis 2b) that the preference for intensive ads is, in fact, limited to adolescent non-smokers only, whereas the smoker group exhibits aversion to intensive ads. Conversely, the positively framed ads reign supreme across both groups of adolescents, as expected.

### **Discussion**

Our analyses confirm six of the total seven hypotheses tested in this study. First, the results corroborate the worrisome popularity of smoking among adolescents. Both the high number of high school smokers and the adolescents' intent to smoke in the future furthers tress the need to actively engage in antismoking campaigns aimed at adolescents. Smoking is particularly widespread among the older adolescents (i. e., the above 17 age group) and among male adolescents. Interestingly enough, the attitude scores indicate a negative attitude toward smoking both in the non-smoking and the smoking group. Nevertheless, smokers do perceive smoking more favorably than do their nonsmoking peers. It is the perceptions regarding the hedonic elements of smoking (i. e., pleasantness and appeal) that differ most significantly across the two groups.

TABLE 3 Mean scores for the construct *Attitude toward the ad* by type of advertisement

Respondent group/type of advertisement			N	Mean*	SE	SD	
Total	Intensity	Intensive	240	4.34	0.10	1.51	
		Moderate	240	4.64	0.09	1.38	
	Valence	Positive	240	4.36	0.10	1.48	
		Negative	240	4.62	0.09	1.43	
	Ad content categories	Health	120	4.41	0.14	1.57	
		Other-centered	120	4.32	0.12	1.25	
		Social approval	120	4.45	0.14	1.52	
		Well-being	120	4.78	0.13	1.44	
	Smokers	Intensity	Intensive	83	4.85	0.16	1.42
			Moderate	77	4.81	0.15	1.33
Valence		Positive	92	4.78	0.14	1.34	
		Negative	68	4.90	0.17	1.42	
Ad content categories		Health	36	4.59	0.26	1.56	
		Other-centered	45	4.73	0.15	0.97	
		Social approval	35	4.84	0.25	1.49	
		Well-being	44	5.13	0.22	1.46	
Non-smokers		Intensity	Intensive	157	4.07	0.12	1.49
			Moderate	163	4.56	0.11	1.40
	Valence	Positive	148	4.10	0.12	1.50	
		Negative	172	4.51	0.11	1.41	
	Ad content categories	Health	84	4.33	0.17	1.58	
		Other-centered	75	4.08	0.15	1.33	
		Social approval	85	4.29	0.16	1.51	
		Well-being	76	4.57	0.16	1.41	

As a result, antismoking advertising targeting adolescent smokers would do well to aim at reducing the perceived hedonic, and social benefits of smoking, and/or at increasing the perceived hedonic/social costs of smoking.

Second, the study failed to confirm our hypothesis stating that the selected four ad contents produce different attitudes toward ads. The differences in attitudes toward ads employing different categories of ad contents were not as substantial as expected. Previous empirical research

provides inconsistent findings regarding the impact of message theme or ad content (Biener et al. 2004; Goldman and Glantz 1998; Pechmann et al. 1994; Pechman et al. 2003; Shadel 2002). However, in our study we employed experimental research design in an attempt to overcome the methodological limitations of previous studies which were confined to actual television advertisements. According to Biener and colleagues (2004), measuring individuals' responses to actual TV ads may confound the effects of message themes as a result of executional characteristics. Our findings regarding the (lack of) differences in response to various ad content categories would suggest that the content itself does not play a crucial role in advertising effectiveness. On the other hand, this failure may be attributed to the rather limited size of the sample group exposed to each individual advertisement. In view of these and other limitations specified later, further investigations will need to examine the role of ad content on teenage attitude formation towards the ad, and determine the most effective themes and types of antismoking appeals from the perspective of teenagers.

Third, the hypothesized differences in attitudes toward ads based on ad valence and ad intensity were confirmed. Positively framed ads produce superior attitudes toward ads both with smokers and nonsmokers, thus corroborating Shadel's (2002) findings that adolescents respond better to positively framed advertising. This means that more positive outcomes generally tend to raise emotional arousal more than relatively less desirable ones, which offers important implications for advertisers with regard to message framing targeted at adolescents. On the other hand, while our analyses show that more intensive ads produce overall better results than moderately framed ads in our sample, we also found that intensive ads produce very favorable attitudes merely with the non-smoker group, but less favorable attitudes with adolescent smokers. This would suggest that the two segments need to be approached differently. It is crucial for advertisers to realize that smokers and nonsmokers often respond differently to antismoking advertising. In addition to the suggested importance of the hedonic elements of smoking discussed earlier, our results suggest that highly intensive antismoking ads are less appropriate when targeting smokers.

### **Conclusions**

Despite the many efforts on the part of the academic research community to develop firm recommendations regarding antismoking advertis-

ing as well as the efforts of policy makers to prevent and reduce teenage smoking in various countries, recent studies found specific antismoking announcements to be less than effective, sometimes even counterproductive (Farrelly et al. 2002; Reardon et al. 2006). Hence, this study sought to shed some light on attitudes towards smoking and antismoking ads among adolescents in Slovenia and on the effects of different antismoking ads on teenagers' attitudes towards such advertisements. Rather than measuring antismoking advertising effectiveness directly, this research examined respondents' attitudes toward different antismoking ads as mediators of ad effectiveness. Attitudes toward advertising have been previously shown to determine the overall effectiveness of advertising (Mehta 2000). In particular, attitudes toward advertisements were found to be an important mediator of advertising effectiveness, both in terms of the impact the ads have on the audiences' cognition, and in terms of the impact such ads have on individuals' behavioral intentions (Lutz et al. 1983).

The findings of this study carry several important public policy implications, as well as some interesting pointers for further academic research on the selected topic. In particular, our study delved into the effectiveness of various types of ad contents, ad valence and ad intensity in antismoking messages. This knowledge is important in the design of public service announcements as it can facilitate policy makers and advertisers in their decision-making regarding the specific themes to be used in advertisements. Moreover, it offers insights into whether antismoking advertising should focus on the threat of smoking or the benefits of nonsmoking, and the level of relative emphasis on seriousness of the consequences that are linked to the advertised behavior while employing various themes and threats/benefits.

In addition to confirming the worrisome trends in adolescent smoking, the presented treatise puts forward several suggestions regarding antismoking advertising. First and foremost, antismoking advertising aims at changing a very complex set of attitudes and behavior. Both smoking and nonsmoking adolescents hold relatively negative attitudes toward smoking, which may signal to public policy makers that this segment is receptive to public policy announcements in general and to antismoking advertising in particular. The finding that our sample respondents generally responded significantly more favorably to positively valenced ads than to negative messages implies that the benefit-framed antismoking ads should be more effective than the loss-framed ones for the teenage

segment. Nevertheless, as we found several important differences in attitudes toward the ads between the teenage smoker and nonsmoker group, these also need to be accounted for by policy makers.

Our analyses demonstrated that the two groups (smokers vs. nonsmokers) respond differently to different antismoking appeals. Among these differences the smokers respond less favorably to intensive appeals, a pattern not found with the nonsmoking segment. This would suggest that smokers and nonsmokers should be approached by distinct antismoking campaigns, one aimed at preventing new smokers from adopting the habit and that other one focusing on persuading existing smokers to quit. Whereas both groups respond more favorably to positively framed ads, only nonsmokers exhibit a preference for intensive ads. As a result, intensive antismoking ads produce favorable responses from those who have not yet succumbed to smoking, whereas smokers are bound to react less favorably. With smokers, moderate ads can work just as well (if not better) when aiming to encourage adolescent smokers to abstain from smoking. This is consistent with Wolburg (2004), who suggested that the negative reactions of smokers to intensive ads (e. g., defiance, denial) can be avoided by employing moderate ads, and by incorporating an approach aimed at supporting the adolescents' efforts to quit, instead of merely bombarding them with deafening messages. Future research delving into the effectiveness of such 'support oriented' ad contents can offer invaluable insights into the workings of antismoking advertising with the adolescent smokers. A support oriented approach will necessarily demand a well-rounded strategy of communication with adolescents that transcends the antismoking advertising alone. Personalized communication tools such as workshops, support groups and mentoring provide necessary supplements to antismoking advertising to adolescents – yet another topic to be investigated in further research.

Clearly, much additional work is required to achieve a comprehensive understanding of the workings of antismoking advertising. In this paper we aimed to produce a much needed contribution toward a systematic study of ad characteristics and their impact on adolescents' attitudes toward antismoking advertising in Slovenia. Nevertheless, the findings of this study should be viewed keeping in mind the limitations inherent in our research. For one, the limited sample size proved detrimental in testing the hypotheses concerning the differences in teenagers' attitudes towards various themes or ad contents. A more extensive survey would have a greater chance of success in teasing out these differences.

Moreover, the sensitive nature of our topic for some teenagers (despite the assured anonymity in this research, the youngsters may conceal their smoking from their parents) may have resulted in 'socially desired' responses (Hult et al. 1999). In addition, the constructs measured in the study (i. e., attitudes and intentions) are only a crude indicator of actual behavior. In light of the growing prevalence of smoking among Slovene adolescents, however, future research opportunities into effectiveness of antismoking advertising abound.

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