

Commentary

Tobacco risk perceptions and behavior: Implications for tobacco control

K. Michael Cummings

No one can seriously argue that people today aren't better informed about the dangers of tobacco compared with their counterparts a half-century ago. In fact, the declining rate of smoking in the United States over the past 50 years can be traced directly to increasing public awareness of the dangers of smoking (Pierce & Gilpin, 2001). But does this mean that today's consumers are sufficiently informed about tobacco products? According to the cigarette industry the answer is yes. Tobacco manufacturers have argued in court that they bear no responsibility for marketing what is admittedly a lethal and addictive product precisely because consumers already know the risks (Cummings, Morley, & Hyland, 2002). Some tobacco company apologists even go so far as to argue that continuing efforts to warn the public about the health risks of smoking are unwarranted because public awareness of these risks is so universal (Viscusi, 2002).

But the choices that consumers are confronted with today are very different from those of their counterparts a half-century ago. For one thing, there weren't as many products to choose from 50 years ago. Each cigarette manufacturer had a handful of brands it promoted, nearly all were unfiltered, and there was no such thing as a light cigarette. The American consumer today is confronted with over 1,200

different cigarette brand styles including 44 different styles of just one brand—Marlboro (Federal Trade Commission, 2000). Today's consumer is bombarded not only with messages about the dangers of tobacco but also with marketing pitches about how these risks can be ameliorated by choosing products that are low in tar, nicotine, and other smoke constituents (Pollay & Dewhirst, 2002).

The ten original research papers contained in this supplemental issue of *Nicotine & Tobacco Research* focus on the common theme of how today's consumer is interpreting messages about tobacco products and how these beliefs influence choices made about whether to smoke, what products to smoke, whether to quit smoking, and the use of nicotine medications.

The paper by Cummings, Hyland, Giovino et al. (2004) presents the results of a population-based survey of more than 1,000 adult current cigarette smokers to determine what people believe about the health risks of smoking and the benefits of filtered and low-tar cigarettes, as well as their awareness of and interest in trying reduced-risk tobacco products. The findings from this survey should give pause to anyone who believes that today's smokers are adequately informed about tobacco products—they aren't. Smokers are most notably confused about product features such as low-tar and filter efficacy, which in turn may immunize them against health messages about the risks of smoking.

A common thread through much of the advertising and marketing of lower-tar cigarette brands over the past 50 years has been the promise of preserving taste satisfaction while reducing perceptions of cigarette strength (Pollay & Dewhirst, 2002). Philip Morris recognized that product-line extensions, such as

K. Michael Cummings, Ph.D., M.P.H., Department of Health Behavior, Division of Cancer Prevention and Population Sciences, Roswell Park Cancer Institute, Buffalo, NY.

Correspondence: K. Michael Cummings, Ph.D., M.P.H., Department of Health Behavior, Division of Cancer Prevention and Population Sciences, Roswell Park Cancer Institute, Elm and Carlton Streets, Buffalo, New York 14263, USA. Tel.: +1 (716) 845-8456; Fax: +1 (716) 845-8487; E-mail: michael.cummings@roswellpark.org

Marlboro Lights, had the advantage of being perceived as more flavorful due to the taste reputation of its parent brand (Unknown author, 1977). However, Philip Morris also recognized that the motivation for a smoker choosing a light cigarette was the belief that the cigarette would be lower in tar and therefore less risky to smoke. The paper by Cummings, Hyland, Bansal, and Giovino (2004) uses data from the same survey as mentioned above to examine the extent to which smokers of the leading light cigarette brand sold in the United States today, Marlboro Lights, perceive lower health risks associated with using a low-tar cigarette and the extent to which they are aware of filter vents in their cigarettes. The data reveal that smokers of Marlboro Lights as well as other light cigarette brands are for the most part unaware of filter vents in the cigarettes they smoke and are misinformed about the health risks of using low-tar and filtered cigarettes. Awareness of filter vents is important because smokers may unknowingly block the filter vents during smoking, thus defeating the lower-tar benefit presumably gained by ventilation (Kozlowski, Pope, & Lux, 1988; Kozlowski, Sweeney, & Pillitteri, 1996; Kozlowski et al., 1998).

The paper by Borland and colleagues (2004) demonstrates that misperceptions about light cigarettes are not limited to the United States. The paper reports findings from a 2002 telephone survey examining beliefs about so-called light cigarettes among over 2,000 adult smokers in each of four countries: Australia, Canada, the United Kingdom, and the United States. More than half of all smokers in each country except the United Kingdom reported smoking light cigarette brands. A majority of smokers surveyed in each country except Canada continue to believe that light cigarettes offer some health benefit compared with regular cigarettes (Canada, 43%; United States, 51%; Australia, 55%; United Kingdom, 70%).

Cigarette manufacturers deny that their product advertising has misled consumers. However, the paper by Hamilton et al. (2004) suggests otherwise. This novel mall-intercept study involving 600 adult smokers in Massachusetts compared smokers' responses to advertisements for regular, light, and a new class of potentially reduced-risk tobacco products (PREPs) recently marketed by U.S. cigarette manufacturers. The findings as to smokers' perceptions of PREPs were particularly illuminating because the great majority of smokers in the study were completely unfamiliar with these products and learned of them only through the advertisements they were shown. The results indicate that smokers perceived advertisements for PREPs and light cigarettes as conveying positive messages about health and safety. This misperception existed despite the lack of an explicit message regarding safety. Of specific concern was the finding that many smokers perceived PREPs and light cigarettes as

a stepping-stone toward quitting, even though both PREPs and light cigarettes are intended to maintain nicotine addiction. These results and those presented by the previous papers support the need for regulatory measures to prohibit the use of misleading "light" and "mild" descriptors and package imagery in marketing PREPs and light cigarettes.

Internal tobacco industry marketing documents now accessible online (see <http://tobaccodocuments.org/> and <http://legacy.library.ucsf.edu/>) talk openly about marketing new cigarette brands to "alleviate smokers' guilt and reduce their desire to quit" (Goldstein/Krall Marketing Resources Inc., 1979; Levy, 1988; Lilly & Sanders, 1987). These internal documents also show how manufacturers carefully research the package design (e.g., lighter colors, more white space, use of imagery) and even the cigarette itself to reinforce the perception of a safer product (e.g., white tipping paper on the filter tip instead of the cork-colored paper used on most full-flavored cigarettes) (Pollay & Dewhirst, 2002).

A similar level of commitment to support market research is likely going to be needed to counteract the decades of misleading marketing about so-called safer cigarettes. The paper by Bansal, Cummings, Hyland, and Bauer et al. (2004) represents one of the first attempts to develop and test a brochure to educate smokers about product features such as cigarette ingredients, filters, low tar, and nicotine. Subjects in this study were over 900 adult smokers who called a quitline for assistance in quitting. The results of this experiment were informative. Study participants were universally receptive to receiving more information about the cigarettes they smoke. However, the impact of the brochures sent to them was less clearcut. Six weeks after calling the quitline, most of the study participants did not recall the specific content of the information in the brochures.

On the positive side, some evidence indicated that beliefs about the product features were altered among those who reported reading the information sheets, but the effects were small. Repeated exposures to messages conveyed in tobacco product advertising is one reason why advertising is effective. Bansal, Cummings, Hyland, and Bauer et al. (2004) demonstrates that efforts to counteract decades of misinformation conveyed in cigarette marketing will take more than a one-time intervention, no matter how well designed.

The papers by Fong et al. (2004) and Hyland et al. (2004) clearly refute the tobacco industry's claim that those who continue to smoke do so by choice. Fong and colleagues report data on smokers' regret about smoking from representative samples of adult current smokers in four countries (Australia, Canada, the United Kingdom, and the United States). The percentage of smokers who agreed or agreed strongly with the statement "If you had to do it over again, you

would not have started to smoke" was over 90% and consistent across the four countries. Regret about smoking was reported more commonly by older smokers, those who were more heavily addicted, and those who worried more about the adverse effects of smoking on their health.

The paper by Hyland et al. (2004) reports on predictors of smoking cessation in a group of 6,000 adult smokers followed over a 13-year period. The results of this long-term cohort study reveal that most smokers express a desire to quit and that concern about health is the main reason that smokers give for making quit attempt. The study also shows that most quit attempts by smokers fail and that long-term quit success is best predicted by measures of nicotine dependence.

The paper by Weinstein, Slovic, and Gibson (2004) examines data from two nationwide surveys to examine the extent to which smokers recognize the ease of addiction and the difficulty of quitting. Their analysis reveals that smokers are aware that nicotine addiction occurs quickly and that quitting can be difficult, but personally they overestimate their own ability to quit. Although optimism about quitting may be a positive attribute for adult smokers who are likely to require multiple quit attempts, for younger smokers such optimism may encourage continued experimentation with smoking until addiction is well-established.

The data presented in the paper by Murphy-Hoefer, Adler, and Higbee (2004) support the concern expressed by Weinstein et al. (2004) that younger people may not be able to make an informed choice about smoking because their risk perceptions are altered by their nonregular smoking pattern. Murphy-Hoefer et al. (2004) surveyed over 1,000 college students aged 18–24 years, asking them questions about smoking status and perceptions about the health risks of smoking and nicotine addiction. The findings show that although nearly all young adults acknowledged that smoking is addictive and dangerous, those who smoked tended to perceive health risks in a cumulative manner, thus allowing themselves to rationalize their current smoking behavior as falling below some threshold of risk. Many of the students surveyed reported infrequent bouts of smoking primarily at parties and in social situations, a pattern typical of this age group. Of concern is the finding that most did not perceive a risk to such infrequent smoking because such a pattern was not viewed as a step toward nicotine addiction. The implication of this study is that public health messages about smoking aimed at young adults need to communicate more effectively the concept that each and every cigarette smoked is doing them damage.

The U.S. Department of Health and Human Services clinical practice guideline for treating tobacco use and dependence recommends that

pharmacotherapy be made available to all smokers who wish to quit (Fiore et al., 2000). This recommendation is based on evidence from controlled clinical trials demonstrating that available forms of nicotine replacement therapy (NRT), such as gum, transdermal patch, nasal spray, inhaler, and lozenge, increase quit rates, when compared with placebos, by 50%–100% (Silagy, Lancaster, Stead, Mant, & Fowler, 2002). However, despite the positive results from these studies, most quit attempts are still made without the benefit of NRT.

The final paper in this issue, by Bansal, Cummings, Hyland, and Giovino (2004), uses data from a cross-sectional survey of over 1,000 adult smokers to examine what smokers know and believe about nicotine and nicotine medications and how these beliefs are associated with past use of NRT. The findings from this study reveal that many smokers are misinformed about the health risks of nicotine and about the safety and efficacy of nicotine medications. More than half of the smokers surveyed erroneously believed that nicotine is a cause of cancer, and many expressed concerns about the safety and efficacy of nicotine medications. Past use of NRT was associated with greater awareness of the benefits and safety of NRT.

The data and arguments presented in the papers in this special issue of *Nicotine & Tobacco Research* paint a very different picture of consumer awareness of the health risks of tobacco than the one portrayed by the tobacco industry. The findings reveal that although smokers may at a general level be aware of some of the major health risks from smoking, they remain largely misinformed about the products they use, how they become addicted, and what they can do to quit. The good news is that the vast majority of people who continue to smoke regret it, want to quit, and are open to receiving more information about tobacco products and nicotine medications. The bad news is that tobacco companies continue to aggressively market their products to younger smokers who are largely immune to health messages about tobacco risks, and they confuse adult smokers with a cornucopia of new products likely to be perceived erroneously as less harmful.

The goal of government regulation with regard to product safety is to ensure that consumers are informed about both the benefits and the inherent dangers of a product so that they can make a reasoned decision about whether to use the product (Simonich, 1991). The undeniable conclusion based on the data presented in the papers in this issue is that the government has a long way to go to achieve its goal of an informed consumer when it comes to tobacco and nicotine delivery products.

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