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Original article

Cigarette Packaging: Youth Perceptions of "Natural" Cigarettes, Filter References, and Contraband Tobacco

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A B S T R A C T

Purpose: The current study examined youth perceptions of appeal and harm of cigarette packaging with "natural" tobacco descriptors and references to filtration, as well as contraband tobacco in generic packaging.
Methods: In a between-group experiment, 7,647 youth were randomized to view a pair of cigarette packages and rate perceptions of appeal and relative risk.
Results: The findings indicate that packages with "natural" descriptors were rated as significantly more appealing and less harmful. Packages with filter references were rated as significantly less harmful, whereas contraband cigarettes were rated as significantly less appealing than leading brands.
Conclusions: The findings suggest that cigarette packaging can enhance the appeal of cigarettes and may promote false beliefs about the reduced harm of brands. The lower appeal of contraband cigarettes suggests that other factors, such as reduced price and ease of access, likely account for contraband use among youth.

IMPLICATIONS AND CONTRIBUTION

Cigarette packaging with "natural" tobacco descriptors and references to filtration properties can enhance the appeal of cigarettes and may promote false health beliefs. The findings from this study provide evidence about the impact of current industry practices, and may have implications for regulatory actions, including plain packaging.

In Canada, as in most Western countries, smoking initiation occurs before the age of 18 years for most established smokers. In 2011, one in four Canadian youth (24.3%) reported smoking a whole cigarette [1]. Trying a cigarette for the first time represents the beginning of a process that may result in regular smoking, and typically continues from youth into young adulthood [2]. Therefore, despite restrictions on tobacco marketing to minors, youth remain critically important to the long-term viability of the tobacco industry.

Given restrictions on traditional advertising, cigarette packaging has become a particularly important form of marketing [3]. Previous research has shown that tobacco packaging strongly influences perceptions of risk, brand appeal, and interest in trying tobacco products [4,5]. Many themes depicted on tobacco packages mirror those in traditional advertising, including elements that reassure consumers about the health risks of smoking. Package descriptors, such as "light," "mild," and "low tar" are among the most notable examples, and were incorrectly perceived by many smokers as indicators of reduced harm relative to "regular" cigarettes [5]. These terms are currently prohibited in more than 50 countries on the grounds that they are inherently misleading, including Canada, in which "light" and "mild" descriptors were removed from packages in 2007 [6].

To date, there is relatively little evidence on perceptions of other prominent marketing themes that remain on packages, particularly among youth. For example, an increasing number of major brands feature references to cigarette filtration technology [7]. Major Canadian brands such as du Maurier and international brands such as Kent include references such as "3-Tek triple filter," "advanced filter technology," and "activated charcoal filter." References to filtration as a form of marketing are not

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new; rather, they became prominent in the 1950s, rising in parallel with health concerns associated with smoking [4]. Advertising commonly referred to new filter technology, including charcoal, chambered filters, or filters that trapped gases. For instance, British American Tobacco produced various filtered iterations of its "less harmful" Kent product, despite the absence of evidence of reduced risk [4]. Internal tobacco industry documents also indicate that filter references help to reassure consumers about the risk of their products [4,8]. To date, however, there is little independent research on consumer perceptions of these products, particularly in the absence of the prohibited terms "light" and "mild."

The theme of "natural" tobacco is also prominent on cigarette packaging. In the 1980s, the natural and organic food movement spread through Western markets, making organic foods increasingly desirable among consumers [9]. Concerns about freshness and taste, as well as cleanliness and safety, became mainstream. Research has shown that Western consumers commonly exhibit a "natural" preference, in which they regard foods that are not altered by chemicals or genetically modified as healthier [10,11]. A similar preference may have been created in the tobacco industry, involving the use of "natural" tobacco descriptors to establish brand identity. Terms such as "nature" and "natural" became more prominent in the 1970s and 1980s, often to denote product attributes, whereas "additive-free" came into effect in the 1990s and early 2000s [12]. Currently, major brands such as Natural American Spirit and Lucky Strike feature references to "organic" and "additive-free" tobacco. Given that "additive-free" cigarettes are no less harmful than regular cigarettes, marketing of "natural" cigarettes may provide false reassurance to health-concerned smokers [4,12]. However, to date, the authors are unaware of any consumer research studies on "natural" or "organic" cigarettes in Canada or among youth in other countries, despite the prominence of these products on the market.

Perhaps the most notable trend in cigarette branding in Canada is the use of contraband tobacco. Contraband tobacco has been identified as a priority for tobacco control, given that it undermines many effective policy measures. In the mid-2000s, estimates suggested that contraband tobacco accounted for as much 40% of the market, followed by recent decreases to approximately 15%–20% [13]. Among youth smokers, estimates of contraband use range from 4% to 43% [1,14,15]. In Canada, much of the contraband tobacco market is concentrated on First Nations reserves and is widely associated with these communities, as opposed to large multinational tobacco companies. To date, there is no evidence to indicate whether consumers perceive contraband tobacco as more or less harmful than legal or "regular" brands. Anecdotal evidence suggests that some smokers associate contraband tobacco with fewer additives and a more "natural" product based on associations with First Nations. Alternatively, more established smokers anecdotally report that contraband tobacco is of lower quality and potentially more harmful because of less oversight by regulators.

The current study sought to examine youth perceptions of brand appeal and risk for three types of cigarette package designs: (1) "natural" tobacco product descriptors, including additive-free tobacco, organic tobacco, and premium quality tobacco; (2) references to filtration, including 3-Tek triple filter, advanced filter technology, and activated charcoal filter; and (3) contraband tobacco compared with popular "legal" brands. Based on previous literature and industry marketing practices, it was hypothesized that participants would perceive cigarette packages with "natural" tobacco product descriptors and filter references as more appealing and less harmful than cigarette package controls, whereas contraband tobacco would be perceived as less appealing and less harmful than regular cigarette package controls. In addition, it was hypothesized that most participants would agree that cigarette package design can make smoking more attractive to youth.

Methods

Study design and protocol

The researchers designed a between-group experiment as part of a large school-based survey administered in Ontario, Canada, in 2009–2010. The School Health Action, Planning and Evaluation Systems (SHAPES) tool was used to collect data from youth in grades 5–12 using a self-completed questionnaire (http://www.shapes.uwaterloo.ca). In the current study, a convenience sample of schools was selected in Hamilton and Thunder Bay at the discretion of local health units. The study involved a one-page supplement on cigarette package design. Respondents viewed images of two cigarette packages printed on the supplement and responded to three questions (described below). The study received approval from the Office of Research Ethics at the University of Waterloo. Approval for SHAPES data collection was obtained from the province and from each participating school board, with schools requiring active information with passive consent.

Participants

Participants were recruited from two sites: Hamilton and Thunder Bay in Ontario, Canada. In 2011, smoking prevalence rates among people aged ≥12 years for the City of Hamilton and Thunder Bay District Public Health Units were 19.5% and 25%, respectively [16].

The authors recruited students from grades 9 to 12 to participate in the study. All surveys used in-class self-administered questionnaires. In Hamilton, eight of 10 schools that were approached participated in the SHAPES survey, whereas in Thunder Bay, all nine schools that were approached participated. All classes in each of the schools took part in the survey, and all consenting students were eligible to participate. A total of 7,647 respondents completed the survey. Individuals were excluded from the analysis owing to missing or inconsistent information regarding grade, age, or sex (n = 76); missing responses to the three survey questions (n = 499); and incomplete reporting of smoking status or smoking susceptibility measures (n = 95).

Cigarette packages

Participants were randomized to one of 45 experimental conditions, each consisting of a different pair of cigarette packages. Cigarette packages featured branding from leading cigarette brands in Canada and were modified according to experimental condition. Each experimental condition included a control package and a modified package. Participants were asked to view and compare the packages on appeal and relative risk (described below). Several conditions were then grouped together to form a product set. In this report, data for 11 of the 45 conditions are presented according to their relevance to three