

ORIGINAL RESEARCH

Knowledge and perceptions of tobacco-related media in rural Appalachia

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ABSTRACT

Introduction: A critical component of the US Food and Drug Administration's new authority to regulate tobacco products is understanding communications and marketing of tobacco products and their perceived risks in different geographic, age, race, ethnic and socioeconomic groups. Such information might be particularly useful in subgroups of the population or geographic areas that experience high tobacco use and suffer a disproportionate burden from tobacco-related diseases. For certain populations, there may be additional cultural factors unique to the geographical region which may promote smoking behavior. The purpose of the present study was to examine the perceptions of tobacco-related media messages among a sample of rural Appalachian natives, a population with smoking rates higher than the national average and who are disproportionately affected by tobacco-related and other cancers.

Methods: A series of four focus group sessions were conducted in a north-central area of Pennsylvania, in one of 52 counties in Pennsylvania designated as within the Appalachian region. Participants were recruited via direct mail letters, advertisements in a local newspaper, and recruiting flyers posted at the local library. The focus groups were moderated by trained professional staff from The Pennsylvania State University's Center for Survey Research (CSR). Focus group sessions sought to examine perceptions of tobacco-related media in an Appalachian region of Pennsylvania. The sessions were audiotaped and transcribed, and the data was analyzed using qualitative approaches.

Results: Participants reported that pro-tobacco ads and favorable messages were received through the internet, direct mail, convenience stores, billboards, movies, and other sources. Anti-tobacco messages were identified primarily from television and magazines. In general, participants concluded that quitting was a matter of choice and was not influenced by pro- or anti-tobacco media.

Conclusions: These results indicate that both pro- and anti-tobacco messages from a variety of sources are highly recognized and remembered in detail in Appalachia, but the effectiveness of anti-tobacco messages is questionable within this group. It was found



that, without exception, group members reported that no media messages – either pro- or anti-tobacco – had any meaningful impact on their current behavior. Group members did, however, recognize that media messages influenced their behavior at the time they were first starting to smoke. The failure of these messages to connect with this population may reflect the lack of specific tailoring of messages to fit the distinct culture and values of this Appalachian population.

Key words: advertisements, Appalachia, focus group, media, messaging, smokers, tobacco.

Introduction

The federal *Family Smoking Prevention and Tobacco Control Act* (2009) provided the US Food and Drug Administration (FDA) with the authority to regulate the manufacture, marketing, and distribution of tobacco products. This landmark legislation formed the basis of tobacco regulatory research, which is intended to reduce the public health impact of tobacco use. A critical component of tobacco regulatory research is understanding communications and marketing of tobacco products and the products' perceived risks in different geographic, age, race, ethnic and socioeconomic groups. One commonly employed methodology in the area of tobacco use is qualitative research, such as focus groups, to gain an understanding of tobacco use patterns and perceptions. Such information might be particularly useful in subgroups of the population or geographic areas that experience high tobacco use and suffer a disproportionate burden from tobacco-related diseases. For certain populations, there may be additional cultural factors unique to the geographical region which may promote smoking behavior¹.

The tobacco industry spends millions of dollars daily differentially targeting segments of the population, such as certain ethnicities and geographical regions². The ongoing existence of such disparities highlights the need for improved tobacco control regulatory initiatives specifically tailored to meet the needs of certain subgroups of smokers. In order to reach sub-populations through specific messaging and interventions, it is first necessary to understand the mindset and culture that may affect how tobacco messages and anti-

tobacco messages are perceived³. The success of tobacco-control legislation depends, in part, upon the effectiveness of tobacco-control messages in the media and their ability to inform and motivate these specific smokers⁴. Generic tobacco-control messages may not be effective for all populations. As an example of the need for specificity in tobacco-control media messages, Blake and colleagues⁴ demonstrated that exposure to tobacco-specific information in the media affects attitudes toward tobacco control, but only in specific instances. Likewise, in Appalachia, numerous studies have demonstrated the need for culturally sensitive messages and interventions to improve the effectiveness of health education programs⁵.

Appalachia encompasses 13 US states from Mississippi to New York and is federally recognized as a medically underserved area. The rate of smoking among Appalachian residents is significantly higher than the national average⁶, which accounts for the excess incidence of lung and other cancers in Appalachia compared to other areas within those states and the nation⁷.

Psychological theories, including the social cognitive theory and persuasion theories such as the Elaboration Likelihood Model, suggest that individuals respond to messages that are geared to match the personal and social characteristics of those receiving the messages^{8,9}. Indeed, advertisers – including tobacco companies – are well aware that by understanding consumer characteristics and values, successful marketing can promote attributes of their product that match the desires of a target population¹⁰.



In order to tailor tobacco control media messages to subpopulations of smokers, it is important to understand how these populations currently perceive tobacco-related messages in the media, through which media they receive these messages, and their general receptivity towards these messages. The purpose of the present study was to examine the perceptions of tobacco-related media messages among a sample of rural Appalachian natives, a population with smoking rates higher than the national average and who are disproportionately affected by tobacco-related and other cancers.

Methods

Procedure

A series of focus groups were conducted in a north-central area of Pennsylvania, in one of 52 counties in Pennsylvania designated as within the Appalachian region. To recruit participants, direct mail letters soliciting for participation in a study of tobacco-related media were sent to a random sample of households within the target area, an advertisement was placed in a local newspaper, and recruiting flyers were posted at the local library. Requirements for participation were that participants lived in the target area and were above the age of 21 years. Those who agreed to participate were sent a confirmation letter including the date, time, and location of the sessions. Upon arrival for the focus group session, participants reviewed and signed informed consent for participation.

A total of four focus groups were held; two for individuals between the ages of 21 and 35 years and two for individuals between the ages of 36 and 64 years. The focus groups were moderated by trained professional staff from The Pennsylvania State University's Center for Survey Research (CSR). The groups commenced with a script by the moderator, which was then expanded upon in follow-up questions. Following a 10-minute ice breaker, a 45-minute session addressed topics related to media use in general and perceptions of both pro-tobacco and anti-tobacco messages,

including in which forms of media participants had seen or heard tobacco messages. Additionally, participants were asked about their perceptions of health warnings on cigarettes, the degree of attention paid to tobacco-related messages, and their likes/dislikes about the messages. All participants received a \$20 cash incentive and light refreshments. The focus group sessions were conducted as part of a collaborative project with the Tobacco-Related Messages and Media Project (TeRMM), an effort of the Tobacco Research Network on Disparities¹¹. Focus group facilitators used a moderator guide developed by TeRMM, and all groups were digitally recorded with a dual recorder system. The resulting audio files were transcribed verbatim by CSR staff.

Participants

The composition of the focus groups included 20 subjects (12 male). All subjects were white, except for one Asian/Hispanic male. Only two of the group members reported that they were not current or former smokers. All participants were between the ages of 21 and 64 years and were able to speak and read English. All participants lived within 32 km (20 mi) of the location where the focus groups were held. The focus groups were held in the public library of an Appalachian city of 10 610 residents. The population was 95% Caucasian (compared to 75% of the US population), the median household income was \$25 893 (compared to \$48 451 for the US population), and 18% of residents were living below the poverty level (compared to 12.4% of the US population). The location of the focus groups, and the 32 km radius surrounding, is served by the Appalachian Regional Commission and designated as within the Appalachian region. Furthermore, the area is listed as a rural area by the US Department of Agriculture.

Analysis of qualitative data

Transcripts from all focus groups were transcribed verbatim and formatted for entry into a SPSS Text Analytics for Surveys 3 database (IBM; <http://www.spss.com>). Software-based thematic content analyses identified key themes in



responses and distinguished between positive and negative comments for each question asked by the moderators. Key themes and categories of responses were further examined by reading text responses and extracting representative comments from group members. Dissenting remarks or responses contrary to themes extracted through the software analyses are noted in the results section.

Ethics approval

All procedures were approved by the Internal Review Board at the Pennsylvania State University, Hershey Medical Center.

Results

Media use for news

The majority of the group members utilized television as their primary source of news. Participants preferred television because it was perceived as 'fast and immediate', because it 'does not require reading', and because of a preference for visual presentation. Other participants noted that TV did not require their full attention and they could 'do other things' while they got news from the television. A small percentage of participants preferred using the internet and newspaper as news sources. Participants who preferred the internet agreed that it was used because they were 'using the computer anyway' for email, entertainment, or work. There were no differences between age groups or genders with regard to primary source of news. See Table 1 for a summary of the main findings.

Media use for entertainment

Television was the primary media source of entertainment for the vast majority of group members. Group members stated that their preference for television as a source of entertainment was based on convenience, low cost, and specific programming (eg sporting events). Group members also reported frequently using the internet and music

(specifically mentioning CDs and the radio) as sources of entertainment. No group members mentioned other media as a primary source of entertainment.

Hours of television use per day

Group members reported watching an average of 4 hours of television per day. However, there was a wide range of usage from no television use to 12 hours per day. Males reported watching an average of 2.4 hours of television per day and females reported watching an average of 5.7 hours of television per day. Overall, younger females (21–34 years) watched the most television, with an average of 6.3 hours per day, and older males (36–64 years) watched the least television, with an average of 2 hours per day. All group members, with the exception of one female in the 21–34 years age group who reported no TV use, reported watching at least one half hour of television daily.

Favored media for receiving advertising messages

Television was the preferred method for receiving advertising messages, primarily because it was 'on anyway'. Whereas most group members reported preferring television as a source of advertising messages, there was a general consensus that little attention was paid to advertising messages in general: group members noted that they were aware of advertising, but it did not greatly influence their behavior. In addition to the television, group members also noted receiving advertising messages through the internet, radio, and billboards. A few members in the group of older participants (36–65 years) mentioned receiving and responding to direct mail advertising. The males in the older group (36–65 years) were the only group of participants who indicated a preference for internet advertising, and only females indicated a preference for radio advertising.

Source of recent tobacco-related messages

Whereas a few group members reported not seeing any tobacco-related messages recently, the majority of group members had recently seen at least one tobacco-related



message on the television. Among those, all reported that the messages seen on television were anti-tobacco messages such as the *Truth* campaign advertisements. Group members also recalled seeing anti-tobacco advertisements on billboards, in magazines, and on anti-tobacco-related pamphlets in doctor's offices. Group members also talked in detail about pro-tobacco messages seen recently in convenience stores, gas stations, and at public events (eg car races, concerts). All but three group members recalled seeing some tobacco-related media messages recently; however, all reported that they did not 'pay attention' to these messages, regardless of whether the messages were anti-tobacco or pro-tobacco.

Media messages encouraging tobacco use

When asked to recall a specific media message, seen either recently or in the past, that specifically encouraged tobacco use, group members discussed tobacco company sponsorship of sporting or other events and promotional activities. Specifically, members mentioned NASCAR (National Association for Stock Car Auto Racing) and other auto racing sponsorship, as well as promotional 'tents' and other activities at races and concerts. Members also noted promotional advertising at gas stations and convenience stores. One group member noted not having to be 'physically in the store' to be reached by the tobacco ads placed on gas pumps: 'I go to get gas, and it's, like, right there. I'm filling up with gas, I turn around to try and select the gas that I want, and [the tobacco advertisement] is right there in my face.'

Group members discussed seeing cigarette use in movies and by celebrities; all group members who recalled seeing such use in this media said it was 'encouraging' of tobacco use. One group member mentioned, with agreement from many other group members, 'the cool people are still smoking'. The Marlboro Man and Joe Camel were mentioned by many group participants, only one of which was in the younger group (21–35 years), as a source of media encouraging tobacco use. All participants who mentioned these tobacco industry icons recognized these figures as long retired. However, group members noted having been specifically influenced by this advertising, and many in the older group

(36–64 years) reminisced about cigarette advertisements, recalling media campaigns for Lucky Strike, Camel, Marlboro, and other products, including quoting campaign slogans verbatim (eg 'More doctors smoke Camels than any other cigarette'). The majority of group members agreed that media exposure to messages that encouraged tobacco use had influenced their smoking habit at some point in their lives, particularly when they first started smoking. A minority of participants admitted that they were currently influenced by such media messages; however, most group members denied that seeing such messages influenced their current behavior.

Media messages discouraging tobacco use

When asked to recall a specific media message – seen either recently or in the past – that specifically discouraged tobacco use, most group members mentioned television, including the *Truth* campaign ads or special features on smoking cessation. One group member mentioned a daytime talk show that featured anti-tobacco messages and encouraged cessation, which she recorded to show a teenaged child, but claimed to be 'unaffected' with regard to her own smoking. Other group members reported seeing anti-smoking posters or brochures at schools and doctors' offices. Group members discussed seeing pictures of diseased lungs and other anti-tobacco messages, and many agreed that these messages caused them to 'think' about smoking. However, no group members had quit smoking or otherwise changed his/her smoking behaviors as a result of seeing such media messages. Group members concluded that, 'If you're going to smoke, you're going to smoke', and that little can be done to change your mind until you are 'ready to quit'.

Media messages about 'safe cigarettes'

When asked if they had heard anything about 'safe cigarettes', the majority of the group said 'no'. A few male members of the older group (36–65 years) said they had heard about 'electric' cigarettes from the internet, but knew little about the product. Other group members recalled some promotions of 'safe cigarettes' in the past, mentioning low-tar



or similar products. Overall, group members agreed that there is currently 'no such thing as a safe cigarette'.

Warning labels

Group members discussed 'extreme' forms of labeling in other countries and the lack of effectiveness of all warning labels. Some group members referred to the labeling as a 'joke' and as 'just a loophole' for the tobacco industry. Group members noted that '[you] just learn to ignore' the label and universally agreed that labeling is ineffective at deterring cigarette use.

Discussion

Main findings of the study

The present study offers insight into the perceptions of tobacco-related media among a medically underserved sample with higher-than-average rates of smoking and smoking-related cancers. For tobacco-regulatory purposes, it has been documented that the tobacco industry markets its products to increase their social acceptability and misrepresents the perceptions about the health risks from tobacco use, particularly among vulnerable populations¹²⁻¹⁵. It is critical to understand how this affects tobacco perceptions in different populations in order to enact effective tobacco-control regulations. The current focus group was conducted to assess the effects of such marketing and media in the underserved Appalachian population. These data suggest that whereas this population has exposure to both pro- and anti-tobacco media messages, their behavior is largely unaffected by this exposure. Additionally, the present study suggests potential modalities through which this population may be best reached. For example, television was the most accessed media source overall. Apart from television, many group members noted that they frequently utilized the internet. Furthermore, results suggest that this population has exposure to a wider range of pro-tobacco messages, from a wider range of sources, than to anti-tobacco messages. Despite wide-reaching limitations on tobacco advertising, focus group members recalled a great deal of pro-tobacco messages and exposure to messages supporting tobacco

use, including direct advertisements in magazines, promotional activities, and point-of-sale marketing. In contrast, only one specific anti-tobacco media campaign was recalled (*Truth*), with other, more general, approaches to promoting tobacco control being vaguely recalled (eg pictures of diseased lungs, a brochure in a doctor's office).

Tobacco is one of the most heavily promoted products in US history². In 2005, tobacco companies spent more than US\$13 billion – nearly US\$36 million every day – to advertise and promote cigarettes¹⁶. Conversely, anti-tobacco campaigns combine to spend US\$629.5 million – nearly US\$2 million per day¹⁷. Thus, the findings of the present study – that focus group members recall more pro-tobacco messages – are not entirely surprising; in 2005 tobacco companies spent US\$44.8 million to advertise in magazines, US\$30.6 million on sponsorships, US\$182.2 million to promote their products in convenience stores, and US\$9.8 million for outdoor advertisements.

Despite this advertising, focus group members did not mention being reached by several types of tobacco-industry marketing. For example, whereas the tobacco industry spends US\$51.8 million a year on direct mailings, US\$870 million on coupons, and US\$1.6 million on newspaper advertisements¹⁷, focus group members in the present study did not mention these forms of media.

In addition to the tobacco-industry-funded advertisements and promotions, focus group members seemed to notice a great deal of smoking among celebrities and in movies. Although official agreements between tobacco companies and the movie industry for 'product placement' in movies were ended by the 1998 Master Tobacco Settlement, nearly 25% of all movies characters are depicted as smoking – twice the number found during the 1970s and 1980s². Additionally, 63% of all movies depict smoking¹⁶. Such depictions in movies are not harmless, nor do they go unnoticed. Studies have demonstrated that smoking in movies influences perceived norms regarding smoking, changes beliefs about the positive effects (and rarely, the negative effects) of smoking, and influences smoking behavior among both adolescents and adults².



Table 1: Focus group findings related to media use in general and perceptions of both pro-tobacco and anti-tobacco messages (n=20)

| Focus group topic | Main finding | Sample quote |
|--|---|--|
| Favored media for news | Television | "Fast and immediate" |
| Favored media for entertainment | Television | "Convenient"; "low cost" |
| Hours of television per day | Average male = 2.4 hours Average female = 5.7 hours | – |
| Favored media for receiving advertising messages | Television | "It's on anyway" |
| Source of recent pro-tobacco messages | Event sponsorship/in-store promotions | "[at the convenience stores tobacco ads are] right there in my face" |
| Source of recent anti-tobacco messages | Television | "The <i>Truth</i> campaign" |
| Opinion of "safe cigarettes" | Most had not heard such claims recently Few have seen "electronic cigarettes" advertised on internet | "There is no such thing as a safe cigarette" |
| Opinion of warning labels | Seen as not effective | "They are a joke"; "a loophole" |

Among the notable findings is the fact that, without exception, all group members noted that no media messages – either pro- or anti-tobacco – had any meaningful impact on their current behavior. Group members did, however, recognize that media messages influenced their behavior at the time they were first starting to smoke. The fact that group members report their decision to start smoking was influenced by media messages suggests that there may remain a critical window during which smoking behavior may be more responsive to media influence. Alternatively, this could be a reflection of more pervasive and aggressive pro-tobacco media this cohort was exposed to in the years prior to greater restrictions on tobacco advertising. The failure of these messages to connect with this population may reflect the lack of specific tailoring of messages to fit the distinct culture and values of this Appalachian population. Whereas many stereotypes of Appalachian people and culture exist, most of these images are derogatory and are most often incorrect¹⁸. Nevertheless, a number of strong cultural aspects of the Appalachian region are well documented and researched. For example, the Appalachian people are often described as proud of their heritage, patriotic, highly tied to their families and the Appalachian region, self-sufficient, distrustful of outsiders, resistant to change, independent, and they often see themselves as different from other American cultures¹⁸⁻²¹.

These distinct characteristics suggest the need for tobacco-related messages to be culturally specific and sensitive in order to be effective. Indeed, a study by Ahijevych and colleagues found that among Appalachian smokers, there was a clear need for family and personal independence with regard to tobacco²². The authors concluded that any tobacco-related interventions must be sensitive to the unique culture of the region and emphasize the values of family and personal independence.

Limitations

The present study should be viewed in light of its limitations. Specifically, there are distinct subcultures within Appalachia. Appalachia is a geographically and economically diverse region, and areas where coal mining is the main source of income may be culturally distinct from areas where the primary source of income has historically been tobacco production or logging. Thus, the convenience sample may not be statistically representative of the full Appalachian region. The sample size was not large, but is similar to other focus groups on tobacco behaviors in rural settings²³.

It should be noted that the effectiveness of a media campaign cannot be assessed based solely based on individual



perceptions. For example, consumers may report that certain campaigns are 'annoying' or not effective; yet advertisers rate the campaign as a success based on brand recognition or recall. The fact that participants generally rated tobacco-related media as having no influence does not necessarily indicate that the campaigns are ineffective.

Participants were not assessed with regard to other factors that may have influenced their perceptions of tobacco-related media, such as their readiness or willingness to quit smoking. It is possible that participants in earlier stages of change (eg pre-contemplation) may perceive pro-tobacco messages differently than those in later stages of change. Additionally, environmental and contextual factors were not assessed. Nevertheless, it is believed that this sample offered key insights into exposure to, and perceptions of, tobacco-specific media.

These findings reflect factors influencing primarily combustible tobacco use. Focus groups on smokeless tobacco use conducted in rural Appalachian Ohio indicate that male peer networks are important in the initiation and continued use of smokeless tobacco, which is reinforced by culturally tailored smokeless tobacco advertising²⁴.

Conclusions

The population of the Appalachian region of the USA smokes cigarettes at a higher rate than the remainder of the country, and therefore suffers significantly higher rates of lung and related cancers. This population also has a distinct culture, and research has demonstrated that culturally sensitive health education programs are necessary to improve the effectiveness of public health efforts. The current findings highlight the fact that whereas this population is aware of both pro- and anti-tobacco messages, their cigarette smoking behaviors are not influenced by any of these messages. Furthermore, the results emphasize the need for messages that are tailored to match the cultural and personal values of this unique population.

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