Source Credibility in Tobacco Control Messaging

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Abstract

Objectives—Perceived credibility of a message's source can affect persuasion. This paper reviews how beliefs about the source of tobacco control messages may encourage attitude and behavior change.

Methods—We conducted a series of searches of the peer-reviewed literature using terms from communication and public health fields. We reviewed research on source credibility, its underlying concepts, and its relation to the persuasiveness of tobacco control messages.

Results—We recommend an agenda for future research to bridge the gaps between communication literature on source credibility and tobacco control research. Our recommendations are to study the impact of source credibility on persuasion with long-term behavior change outcomes, in different populations and demographic groups, by developing new credibility measures that are topic- and organization-specific, by measuring how credibility operates across media platforms, and by identifying factors that enhance credibility and persuasion.

Conclusions—This manuscript reviews the state of research on source credibility and identifies gaps that are maximally relevant to tobacco control communication. Knowing first whether a source is perceived as credible, and second, how to enhance perceived credibility, can inform the development of future tobacco control campaigns and regulatory communications.

Keywords

source credibility; health communication; tobacco control; tobacco use; communication campaigns

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The authors declare that there are no conflicts of interest.

Communicating about the risks of tobacco use is one of a set of key strategies to reduce rates of tobacco use across populations.[1] However, not all communications are equally persuasive. The perceived credibility of the organization delivering the message, or source credibility, is an important component of an effective media campaign.[2] Specifically, when a source is perceived to be highly credible, a message may more effectively change attitudes or behavior.[2,3] Thus the success of tobacco communication campaigns depends on multiple factors, including the perceived credibility of the organization delivering the message.[2] In this paper, we review research on source credibility as it relates to message persuasiveness and suggest opportunities to improve our understanding of the impact of source credibility on successful tobacco control media campaigns and regulatory communications. We use the United States Food and Drug Administration (FDA) as an example of a national tobacco regulatory organization seeking to have a positive influence tobacco use outcomes. Knowing how to measure and harness the effects of source credibility on message persuasiveness is critical to delivering effective tobacco control messages by national agencies and tobacco control organizations.

The FDA, under the Family Smoking Prevention and Tobacco Control Act, now has authority to regulate the manufacture, distribution, and marketing of tobacco products.[4] Whereas the FDA's oversight has applied historically only to food and drug product safety, it now regulates a class of products of which sustained use results in death and disease. Recognizing that this new role regulating health-damaging products requires new strategies for communicating with the public, the FDA has launched ongoing national education campaigns aimed at preventing tobacco use among youth.[5] The credibility of the FDA as the source of these campaigns may influence tobacco use outcomes desired by the campaigns.

MODELS OF SOURCE CREDIBILITY AND PERSUASION

Information processing models suggest the mechanics by which source credibility affects how we receive and process written and verbal information. [6] After receipt of a message, which includes being exposed to a message and attending to it, processing this message may involve thinking about the message, developing pro- and counter-arguments to the message, and experiencing an emotional response, all of which affect persuasion. Two highly recognized models that help explain how source credibility can affect message impact include the Communication-Persuasion Matrix and the Elaboration Likelihood Model of persuasion (ELM).[6] We provide a brief overview of both here as background for understanding applications of source credibility research to tobacco control.

The Communication-Persuasion Matrix delineates a 13-step persuasion process from message exposure to attitude change and, ultimately, behavior change, all of which may be affected by numerous source and message factors.[7] Specifically, the degree of persuasion may be affected by factors related to the source (eg, credibility), message (eg, repetitiveness), channel (modality of message delivery), receiver (eg, personal relevance), and destination (the type of target behavior change the message promotes, eg, long-term or short-term).[7] By delineating credibility as one of the key aspects of source, this model suggests that credibility plays a distinct role in the acceptance or rejection of a message.

The ELM explains pathways by which a message receiver processes and internalizes messages.[8] Specifically, this model holds that after message exposure, 2 routes of processing may lead to persuasion: the central and peripheral routes. The central route of processing is engaged when a message is highly relevant to an individual and elaborated on, or thought about. In this route, the receiver carefully evaluates the message on its merit; believing that the message comes from a highly credible source could be an additional factor that enhances persuasion.[9] The peripheral route is engaged under conditions of low elaboration likelihood when the message is less relevant to the individual. In this route, with less effort devoted to evaluation of the message itself, beliefs about the source (eg, degree of credibility) may be relied upon heavily as cues to accept or reject a message.[9] Thus, in both modes of processing information, source credibility perceptions can affect one's receipt of a message.

It is important to note that source credibility is distinct from message credibility and media credibility, although all are factors that may affect one's response to a message. Message credibility refers to the believability of the content of the message itself.[10] For example, in an online study of responses to messages about AIDS, knowledge of the health topic affected the perceived credibility of the message, independent of beliefs about the author's expertise.[11] Media credibility refers to the believability of information from different platforms, such as television, newspapers, or the Internet.[10] For example, several studies have found that television is perceived as a more credible medium than newspapers, perhaps because television includes a visual component.[10] Although these factors may affect persuasion, the current paper focuses on beliefs about the source of a message. To improve understanding of source credibility specifically, we next present a review of its underlying constructs and evidence of its effects.

UNDERLYING CONSTRUCTS OF SOURCE CREDIBILITY

Source credibility was initially thought to encompass the reputation and competence of an individual speaker, such as a salesperson, marketer, or politician.[12] Factor analytic methods have identified several other possible dimensions of individual source credibility, such as perceived authoritativeness, [13] objectivity,[14] dynamism (ie, energy and confidence), [15] interpersonal attractiveness,[16] and good character.[17] However, some of this work has been criticized for using exploratory methods to determine the dimensions of source credibility, rather than building measures around an existing theoretical definition.[18] Overall, trustworthiness and expertise, though named slightly differently across studies (eg, reputation and competence), remain the most frequently cited, tested, and theoretically agreed-upon dimensions of source credibility.[2,3]

Whereas early source credibility research focused on perceptions about an individual speaker,[12] these 2 primary dimensions of trustworthiness and expertise also apply to organizations as sources.[2] In this context, perceived expertise is the degree to which an organization is believed to have the experience, skills, and capacity to have accurate information, and perceived trustworthiness is the extent to which an organization is believed to present what it thinks to be correct information.[2] In the literature on organizational credibility, factors such as positive feelings towards an organization,[19] perceived congruence of an organization's values with personal values,[20] and familiarity with an organization, [21]

have been identified, too, as components of organizational source credibility. One study using individual and organizational source credibility scale items from 36 studies on marketing found 3 overall dimensions of this concept: the source's inclination toward truth (ie, trustworthiness), the potential of truth (ie, expertise), and the presentation of information (ie, message delivery factors that impact how the source is perceived, such as dynamism). [22] Although some secondary dimensions of source credibility appear to differ for individual and organizational sources, the primary dimensions of trustworthiness and expertise reflect the core definition of source credibility for individuals and organizations alike.

ORGANIZATIONAL SOURCE CREDIBILITY AND TOBACCO CONTROL COMMUNICATION

Empirical evidence outside the realm of health communication shows that source credibility affects the impact of messages from organizations, such that higher perceived organizational source credibility is associated with greater message persuasiveness. [23] For example, after viewing an advertisement from one of 2 fictitious companies, participants reported greater intent to purchase from the company with higher perceived credibility than the one with lower perceived credibility.[24] Another study of a single magazine advertisement from a real company (Mobil Oil) found that those who rated the company as having higher credibility tended to report greater intent to purchase from the company.[24]

Within the area of health communication, higher ratings of source credibility for health advertisements have been shown to be associated with greater intentions to change health behavior.[25] For example, researchers assessing FDA regulation of cold medications found that parents who trusted FDA recommendations were more likely to follow these recommendations to protect their children's health.[26] Thus, having high credibility helps organizations successfully promote behavior change in response to health communication messages.

Also in the context of health communication, whether or not an organization has a profit motive when sponsoring health-related messages affects its credibility. Experimental evidence shows that non-profits delivering health advertisements are perceived as more highly credible than for-profit institutions.[25] In one study, environmental health risk information was perceived as more highly credible if it was from a government entity (a state health department) than from a local news or industry source.[27] Similarly, a study in Israel attributing cigarette warning label messages to 3 sources: the Ministry of Health, "medical studies," or "health care system specialists," found that the Ministry of Health was perceived as most credible. [28] With respect to online information, the most highly credible sources of communication about health included one's personal doctor (an individual source), medical universities, and the federal government.[29] Such research suggests that tobacco control organizations, which are mainly non-profits or government institutions, may be well-positioned as highly credible sources.

With respect to tobacco control communication, there is evidence that source credibility may help enhance trust in a message,[28,30] although some findings are mixed.[31] One study examining changes in smoking attitudes following the receipt of written smoking

information, (eg, "smoking is related to poor health" and "smoking is enjoyable and releases tension") found that as the credibility of the source, manipulated by the experimenters, increased from low (The American Tobacco Company) to medium (Life Magazine) to high (The Surgeon General's Report), the percentage of participants trusting and agreeing with the information increased.[30] However, another study found that source credibility did not affect message quality ratings of an online lung cancer prevention message, which was attributed to either a "webpage about preventing lung cancer" or to the website of one of 3 credible organizations: the National Cancer Institute, the American Lung Association, and the American Cancer Society.[31] Although some findings are mixed, higher source credibility may increase trust and agreement with a message, key to promoting attitude and behavior change.

With respect to measuring attitude and behavior change, most research on tobacco control communication focuses on the impact of messages alone, rather than the contribution of perceived source credibility to the resulting changes. In the US, 2 federally funded national tobacco control communication campaigns were launched in recent years, including Tips from Former Smokers by the Centers for Disease Control and Prevention (CDC) in 2012[32] and The Real Cost Campaign by the FDA in 2014.[5] The CDC campaign appears to have increased positive outcomes related to smoking cessation among targeted audiences,[32] but the relative contribution of the credibility of the source of the message are unknown.

Perceptions of source credibility in tobacco control messages may be impacted by message characteristics. Presenting information as a personal experience narrative has been shown to enhance perceptions of credibility of the source.[33,34] For example, the American Legacy Foundation's "truth" campaign was intended to represent the voices of young people. Viewers may have perceived that young people were the direct source, given that the organizational source was not apparent in the messages. [35] To the youth targeted by this campaign, having relatable individuals, rather than tobacco control organizations, deliver the messages may have enhanced their impact.[33,34] By using factors known to have a positive effect on source credibility, such as narratives from people trusted by the target audience, tobacco control organizations may enhance their perceived source credibility and the impact of their campaigns.

OPPORTUNITIES FOR FUTURE RESEARCH

The state of existing research suggests a need to bridge the gap between the communication literature on source credibility and current research on tobacco control communications. Furthermore, it is important to address the challenges that emerge from synthesizing the 2 bodies of research. To accomplish these, we propose the following agenda to address 5 key topics of research.

First, more studies of source credibility and changes in long-term behavior are needed. Many existing studies in the communication literature have measured attitudes, intentions, or behaviors in the short term; tobacco control communications need to result in long-term behavior change, such as quitting smoking. On this front, future research should monitor perceptions of credibility, as is currently being done for the FDA and its recent anti-smoking

campaign,[36] along with attitude and tobacco use behavior change over time. Measurements of credibility also should be repeated over time. The FDA's credibility as an approver of prescription drugs, for example, has fluctuated in response to safety concerns about medications it approved,[37,38] making time-varying measures of source credibility important for continued research on its effects.

Second, understanding how source credibility operates for different populations is important, given evidence that there are differences in credibility perceptions among demographic groups.[29] For example, in a study of online health information, trust in medical universities was positively associated with education and income, suggesting that universities may not be as highly trusted by those with lower socioeconomic status,[29] who are at particularly high risk of smoking.[39] Also, given historical mistrust of national government organizations and the medical field among African Americans,[40,41] perceptions of source credibility of tobacco control messages from government organizations may be lower among African Americans than for other groups, and enhancing trust as a dimension of source credibility may be of paramount importance. Additionally, youth may perceive different organizations or messages to be more credible than do adults. For example, youth might discount messages from authority sources and respond more positively to peer sources. Additionally, smokers and non-smokers have been shown to differ in their credibility ratings of different sources, such that nonsmokers may be more inclined to trust government agencies than smokers.[28] Understanding the elements of the message or source that enhance credibility for specific populations can help create targeted campaigns and guard against iatrogenic effects of showing messages from sources not perceived as credible by that population.

Third, organization- and topic-specific measures of source credibility are warranted. Much of the literature on organizational source credibility is from the marketing and business fields, not public health. Individuals may judge the credibility of private corporations, on whom existing source credibility measures have been largely based, using different criteria than they would assess government or non-profit sources of information. For example, dimensions such as objectivity or intention to act in the public's interest may be more important to the perceived credibility of a government agency than to that of a private company. Even among organizations of the same type, trust has been shown to be organization-specific; a public opinion survey in 2013 showed that only 19% of respondents reported trusting the government in Washington to do what is right, but 62% held favorable views of workers at federal government agencies.[42] Among federal agencies there were differences too; the CDC was viewed favorably by 75% of participants (the highest of all agencies surveyed), and the FDA was viewed favorably by 65% of participants, but the Internal Revenue Service (IRS) was viewed as favorable by only 44% of participants.[42] Additionally, organizations may be viewed as more or less credible based on the issue being addressed.[21] Now that the FDA regulates tobacco products, beliefs about the organization as a credible source of information about tobacco specifically may have more impact on changes in tobacco use than beliefs about the organization as a source of information about food or drugs. Perceived FDA credibility may differ when the agency communicates about tobacco control regulations as compared to when it conveys the risks or effects of using products (such as cigarettes or nicotine-replacement therapies) in anti-smoking messages.

For national organizations like the FDA or CDC, future research should seek to develop strong, specific measures of the agency's perceived tobacco-related credibility.

Fourth, research should explore the impact of source credibility on persuasion across different forms of media platforms, particularly online. One study found that the effectiveness of a public service announcement was moderated by the perceived expertise of online commenters.[43] This research suggests that viewing or participating in online interactions, in the form of commenting on or reposting health messages, may affect extent of agreement with a message. Thus, source credibility, not only of the message itself, but also of others engaging with the message online, may help drive responses to tobacco control messages that use social media, as some campaigns, like the FDA's "The Real Cost," currently do. Also, the way one evaluates source credibility online may differ from that of other forms of media.[31] Future tobacco control campaigns could be informed by understanding the interplay of source credibility and message platform, particularly for online and social media platforms.

Fifth, research should identify factors that may enhance source credibility and behavior change. For example, perceived credibility may be influenced by message design factors such as the prominence of the source depiction in a message (eg, location, size, format),[44] and degree of attention or engagement of the recipient with a message (such that higher engagement enhances message recall and believability).[45] At least one study suggests that moderate (but not excessive) repetition of an anti-smoking message may increase perceptions of source credibility.[46] Another study found that logo design and presentation in an online environment could enhance views about source credibility.[47] Further research is needed to explore how to enhance perceptions of credibility in different types of media platforms. In summary, a more complete understanding of how to optimize and measure the effects of source credibility for different populations, organizations, tobacco products, and media platforms, is needed to inform future communication and regulatory efforts in tobacco control.

IMPLICATIONS FOR TOBACCO REGULATION

This manuscript provides an overview of what is known about source credibility and reviews what remains to be understood for tobacco control organizations communicating to the public. People's beliefs about the credibility of the source of a tobacco control message are likely to affect attitude and behavior changes after message exposure, beyond the effect of the perceived credibility of the message itself.[2,48] Existing research suggests complex pathways by which perceptions of source credibility may influence tobacco use outcomes following exposure to tobacco control communications.[2] In the US, public perceptions of the FDA or CDC as credible sources may generate positive reactions to tobacco use prevention messages from these organizations.

Further source credibility research is needed in the field of tobacco control. Specifically, to inform the development of future tobacco control communications, we recommend assessing the impact of source credibility on long-term behavior change in response to a message, in varied populations across which the perceived credibility of an organization may

differ, through the use of new credibility measures that are topic- and organization-specific, by measuring how credibility operates across media platforms, and by identifying factors that enhance credibility and persuasion. Tobacco control organizations and researchers should seek better understanding of source credibility to enhance the effectiveness of their campaigns and regulatory communications.

Acknowledgments

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