

# Not Your Mother's Scare Tactics: The Changing Landscape of Fear-based Messaging Research

Since the 1960s, substance misuse prevention practitioners have relied heavily on scare tactics and fear-based messages as core elements of prevention programming.<sup>i</sup> Focused on eliciting an emotional response, these messages have historically been moralistic in nature, exaggerating the harmful effects of substance use<sup>ii</sup> and often failing to include factual information about the dangers of use.<sup>iii</sup> Moreover, most messages have focused entirely on abstinence rather than on reducing rates of misuse or the harmful consequences of use.<sup>iv</sup>

Though practitioners often turn to this type of messaging reflexively, a significant body of evidence suggests that scare tactics and fear-based approaches have not been effective in preventing substance misuse and, in some cases, have contributed to increased rates of use.<sup>v</sup> Much of what is known about the ineffectiveness of scare tactics, however, stems from research conducted more than 20 years ago.

To learn about more current thinking, we conducted a systematic review of the recent literature, examining associations between scare tactics, fear-based messages, and substance misuse. Informed by this research, this brief addresses three main questions:

- [What are scare tactics and fear-based messages, and how have they changed over time?](#)
- [Are these types of messages effective?](#)
- [What are the implications of these approaches for prevention?](#)

## OUR SEARCH METHODOLOGY

To identify the articles that informed this brief, we searched over a dozen databases, using combinations of 39 different keywords related to scare tactics and fear-based messages. We then culled our results to include only those studies that (1) were published in an English-language, peer-reviewed journal between 2005 and 2015; and (2) analyzed the direct effects of the scare tactic or fear-based message on behavior change. We also reviewed literature reviews and meta-analyses to determine if any of the articles referenced met our inclusion criteria. We excluded qualitative and descriptive studies, as well as dissertations, book reviews, and commentaries.

Due to the relatively low number of articles that met our inclusion criteria, we included studies conducted both inside and outside the United States. Sixteen articles met our eligibility criteria. Study summaries are included in the appendix.

### WHAT ARE SCARE TACTICS AND FEAR-BASED MESSAGES—AND HOW HAVE THEY CHANGED OVER TIME?

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While the terms *scare tactics* and *fear-based messages* are often used interchangeably—and do have similarities—they do not necessarily refer to the same practice.

- **Scare tactics** use shocking or graphic images and statements to deter people from behaving in ways that will lead to negative outcomes. They are intended to produce visceral, emotional reactions by showing, for example, gruesome pictures of drunk driving victims or images of a cancerous mouth on a cigarette warning label. Scare tactics are meant to shock viewers into changing their behavior. They are informed by 'Inverted-U' Drive theories, which assert that producing a negative emotional response (for example, fear and revulsion) is enough to produce behavioral change.<sup>vi</sup> To be effective, the communication must be designed in a way that is believable and makes the threat seem "real."<sup>vii</sup> This "believability" factor is a barrier that scare tactics have historically had difficulty overcoming.<sup>viii</sup>
- **Fear-based messages** are designed to produce a visceral reaction about the consequences of substance misuse, operating on the assumption that people will change their behavior in order to reduce their negative reaction. They are based on the assumption that if people receive messages that promote fear and anxiety about engaging in a specific behavior, such as drinking and driving, then they will be motivated to abstain from that behavior so as to minimize this anxiety.<sup>ix</sup> Fear-based messages are more likely than scare tactics to include accurate factual statements on the potential harms associated with substance use. Common examples of this type of messaging include public service announcements on the effects of fetal alcohol syndrome and warning labels for tobacco products that include the message "Smoking causes lung cancer."

When comparing past and present research findings, it's important to note that these strategies have evolved over time. In the past, both strategies were more likely than they are today to exaggerate the harmful effects of substance use. They were less likely to make logical connections between the use of a substance and the factual and feasible negative consequences of its use, and tended to focus on abstract concepts of danger (e.g., a broken egg representing the effects of illicit drug use). These approaches stand in sharp contrast to many modern scare tactics and fear-based messages, which emphasize factual accuracy and believability regarding use and misuse.

### ARE THESE TYPES OF MESSAGING EFFECTIVE?

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**General Effectiveness.** There is little evidence contradicting the belief that traditional scare tactics and fear-based messages— that is, those that are moralistic, exaggerative, or abstract—are ineffective or even harmful.<sup>x</sup> However, there is some evidence that current strategies, which depict

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more realistic presentations of the dangers of substance use, may have potential for reducing individuals' intentions to use substances.

Specifically, eight of the 16 studies included in our review demonstrated the effectiveness of scare tactics, fear-based messages, or a combination of the two in changing intention to use. One study, for example, found that individuals viewing scare tactics or fear-based messages were more likely to report increased intention to end substance use,<sup>xi, xii</sup> increased intention to seek additional information on the dangers of substance use,<sup>xiii</sup> or negative emotions towards substance use<sup>xiv</sup> than those viewing positive or benign prevention messages.

Yet our search also produced four studies with clear evidence to the contrary. For example, one study found that call volume to a national tobacco “quitline” in the United Kingdom was lower during a fear-based social marketing campaign than during a positive, emotion-based social marketing campaign.<sup>xv</sup> This demonstrated that instilling fear decreased the likelihood that individuals would contact the quitline for help.

Finally, four studies found mixed evidence of effectiveness. When compared to positive prevention communications, these studies found that scare tactics and fear-based messages were either ineffective at reducing substance use or increasing behaviors that protect against subsequent use, or that their effectiveness was mitigated by type of tactic or message, or by the population of interest. For example, one study found that fear-based messages were more effective among individuals with a “chronic prevention focus” (that is, motivated to pursue personal safety and security in the decision-making process), while positive messages were more effective among individuals with a “chronic promotion focus” (that is, motivated to pursue personal growth and development in the decision making process).<sup>xvi, xvii</sup>

**Table 1: Identified Studies, by Approach and Effectiveness of Approach**

Communication Approach	Studies Demonstrating Effectiveness	Studies Demonstrating Ineffectiveness	Studies with Mixed Evidence
Scare Tactic	2	0	1
Fear-Based Messaging	4	3	3
Fear-based Messaging and Scare Tactics, Combined	2	1	0
<b>Total</b>	<b>8</b>	<b>4</b>	<b>4</b>

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**Location.** Findings from our review revealed that studies conducted in the United States were less likely than those conducted outside the U.S. to find that scare tactics and fear-based messages were effective at either reducing substance use or increasing behaviors that protect against subsequent use. However, due to the small number of studies included in the search, it is not possible to determine whether this is a significant difference, potentially caused by different sample characteristics, or a fluke result (see Table 2, below).

**Table 2: Identified Studies, by Location and Effectiveness Finding**

Location	Studies Demonstrating Effectiveness <sup>1</sup>	Studies Demonstrating Ineffectiveness	Studies with Mixed Evidence
United States	3	2	3
Europe, Canada, or Australia	6	2	1

**Type of Substance.** All but one of the studies produced by our search focused on strategies to prevent the use of legal products such as tobacco or alcohol (see Table 3, below). The remaining study focused on marijuana use, a substance illegal at the federal level but legalized for recreational use in a few states. The paucity of research on the effectiveness of these strategies for preventing illicit drug use make it difficult to say whether the results of these studies are generalizable to illicit drug use or the misuse of legal drugs (such as the non-medical use of prescription drugs).

**Other Factors.** We did not detect any noticeable differences in results related to other factors, such as mean or median age of the study sample or communication format (that is, if the message was delivered in print, video, or audio).

**Table 3: Identified Studies, by Substance Studied and Effectiveness Finding**

Substance	Studies Demonstrating Effectiveness	Studies Demonstrating Ineffectiveness	Studies with Mixed Evidence
Alcohol	3	1	1
Tobacco	5	3	2
Marijuana	0	0	1

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<sup>1</sup> One study that found results of effectiveness used a sample from both the United States and Canada. It is counted twice in the table above.

## WHAT ARE THE IMPLICATIONS OF THESE APPROACHES FOR PREVENTION?

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The findings from this systematic research review are mixed and limited. Given these limitations, practitioners interested in using scare tactics and/or fear-based messaging as part of their comprehensive prevention plan should:

- *Proceed with caution.* Organizations should approach scare tactics and fear-based messages just as they would any prevention strategy—by first determining the appropriateness of the strategy for the environment in which it will be used. Selected strategies should address identified needs, as well as relevant risk factors. A close review of the studies included in this brief can help practitioners identify those approaches with the greatest likelihood of effectiveness, given the local context and conditions.
- *Think carefully about the content you include and language you use.* Scare tactics and fear-based messages of the past were predominantly ineffective because they exaggerated the harmful effects of substance use and failed to connect use with factual and feasible consequences. To increase their likelihood of effectiveness, new messaging should:
  - Be believable
  - Not exaggerate the harms of use
  - Not produce feelings of denial, reactance (i.e., being manipulated), or lack of control.<sup>xviii</sup>
  - Incorporate scientifically accurate information
  - Generate the impression that message creators want to help, rather than intimidate or scare.<sup>xix</sup>
- *Incorporate into other prevention practices with more established credibility.* For example, fear-based messaging may be integrated within a well-crafted social marketing campaign, a communication process that has demonstrated evidence of effectiveness.<sup>xx,xxi,xxii</sup> Social marketing uses techniques adapted from commercial marketing to encourage positive, voluntary behavior change. This strategy involves disseminating messages that reinforce the benefits of engaging in a specific behavior while minimizing the perceived negative consequences typically associated with behavior change.
- *Consider alternatives.* Given the dearth of current research in this area, prevention practitioners who are considering the use of scare tactics or fear-based messaging may want to abstain from doing so until further research is conducted. It is clear that more research on the topic is needed, with a particular focus on the specific content and context of the communication (for example, whether the strategy relied on a traditional or more modern approach). Until this research is conducted, it is impossible to know whether or not scare tactics and fear-based messaging can be added to our growing list of effective, evidence-based prevention approaches.

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## APPENDIX

Population	Communication Type	Summary of Tactic	Effectiveness	Citation
<b>Alcohol use during pregnancy</b>				
Women age 18-45 (Australia)	Fear-Based Message	Written public service announcement (PSA) describes the dangers of fetal alcohol syndrome (FASD)	More effective at causing participants to report intentions to abstain or reduce substance use than a control or a PSA designed to cause positive emotion	France et al., 2014 <sup>xxiii</sup>
Women age 18-25 (United States)	Fear-Based Message	Written messages describes the dangers of drinking during pregnancy, either with or without a case-study example of FASD	With a case-study, messages were more effective at causing participants to report increased intentions to seek more information on FASD and greater perceived danger of FASD than a message about the benefits of not drinking during pregnancy  Without a case-study, messages were less effective.	Yu, Ahern, Connolly-Ahern, & Shen, 2010 <sup>xxiv</sup>
<b>Alcohol misuse</b>				
Undergraduate students (Netherlands)	Fear-Based Message	Video messages describe alcohol misuse; designed to produce negative emotions; shown during a commercial broadcast	More effective at causing increased negative discussion of alcohol misuse than non-emotional messages providing information about alcohol misuse <sup>2</sup>	Hendricks, van den Putte, & de Bruin, 2014 <sup>xxv</sup>
Undergraduate students (United States)	Fear-Based Message	Written PSAs describe the dangers of alcohol misuse with either high or low levels of efficacy	None of the PSA types studied (including positive ones about the benefits of not misusing alcohol) demonstrated any effectiveness at causing increased reported intentions to reduce alcohol use or other measures not explained by other variables. However, PSAs which suggested an ability to prevent danger however did motivate underage students to seek additional information.	Quick & Bates, 2010 <sup>xxvi</sup>

<sup>2</sup>Increased effectiveness was found among participants who reported elevated fear after viewing the message chosen for them. Compared to those who viewed the informational appeal, elevated fear was found among those who viewed a disgust appeal message (message containing repulsive objects like bodily fluids that purportedly causes withdrawal or avoidance) and not those who viewed a fear appeal message (message designed to increase sense of danger and feelings of doom); which suggests a problem with message design.

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Population	Communication Type	Summary of Tactic	Effectiveness	Citation
<b>Alcohol use and driving</b>				
Undergraduate students (United States)	Scare Tactic	Written PSA includes an image of a car crash caused by drunk driving, accompanied by one of two messages: that the reader could prevent the crash from occurring or had no control over it.	Both types of PSAs were more effective at causing participants to ignore or react more slowly to alcohol-related terms or advertising than informational-appeal PSAs that focus on the dangers of drinking and driving	Nielsen & Shapiro, 2009 <sup>xxvii</sup>
<b>Tobacco</b>				
High school students (Germany)	Fear-Based Message	Live two-hour presentation from medical professional on the dangers of smoking; followed by a video depicting a pulmonary endoscopy. Students then participated in an interview with a volunteer patient with terminal lung cancer	No difference in effectiveness found at causing increased reported intentions to remain non-smoking, increased knowledge of dangers of smokers, or other measures at two-months post-baseline compared to reading a short booklet with information about quitting smoking.	Thrul, Buhler, & Herth, 2014 <sup>xxviii</sup>
Young adult smokers (Canada)	Fear-Based Message and Scare Tactic	Health warning, relative health risk message, and/or graphic image included in smokeless tobacco packages	All combinations of packaging were more effective at causing participants to report decreased appeal of smokeless tobacco than control; inclusion of the graphic image was the most effective variable	Callery, Hammond, O'Connor, & Fong, 2011 <sup>xxix</sup>
National population (United Kingdom)	Fear-Based Message	Televised tobacco control campaign of videos designed to cause negative emotions	Campaign was significantly less effective at causing increased call traffic to a national quitline than a campaign of videos designed to elicit positive emotions.	Richardson et al., 2014 <sup>xxx</sup>
Adult smokers (United States and Canada)	Scare Tactic	Images of varying graphicness (low, moderate, and high) of cancerous mouths, accompanied by health warning label, included in tobacco packages	Each increase in graphicness was associated with an increased level of fear; higher fear was found to be more effective at producing increased reported intentions to quit smoking.	Kees, Burton, Andrews, & Kozup, 2010 <sup>xxxi</sup>

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Population	Communication Type	Summary of Tactic	Effectiveness	Citation
Undergraduate women (France)	Fear-Based Message and Scare Tactic	Messages incorporated into a magazine about the dangers of smoking, either with or without a preventative explanation, and with or without accompanying pictures of cancerous mouths	Fear-based, negative consequences messages were more effective at causing increased reported intentions to quit smoking than messages about benefits of not smoking. Messages accompanied by photos were more effective at causing such increased reported intentions than messages without pictures.	Verhiac, Chappe, & Meyer, 2011 <sup>xxxii</sup>
Young adults ages 18-26 (Belgium)	Fear-Based Message	Message using the fear-relief model <sup>3</sup> about the dangers of smoking and the ability to avoid it by quitting smoking	Messages were more effective at causing increased reported intentions to quit smoking and reported intentions to seek additional informational about the dangers of smoking than messages using a sadness-joy model <sup>4</sup> for individuals with a chronic prevention focus. For individuals with a chronic promotion focus, sadness-joy messages were more effective.	Adams Faseur, & Guens, 2011 <sup>xxxiii</sup>
Undergraduate students (United States)	Scare Tactic	17-minute dramatization of a teacher suffering from terminal lung cancer linked to cigarette use ( <i>Hugh McCabe: The Coach's Final Lesson</i> )	An edited version of the film that removed the most graphic scenes was more effective at causing increased reported intentions to quit smoking than the control. The unedited version had no effect compared to the control; except that viewers reported a likelihood to attempt to convince others to quit smoking.	Schmitt & Blass, 2008 <sup>xxxiv</sup>
Nationwide sample (United States)	Fear-Based Messages	Video messages about the dangers of smoking, with varying levels of intent to also cause disgust	All messages were more effective at causing increased reported intentions to quit smoking than a humor-based message. (No differences were found between the fear-based messages due to differing levels of disgust)	Halkjelsvik & Rise, 2015 <sup>xxxv</sup>

<sup>3</sup> The fear-relief model uses messages that focus first on creating fear in the viewer with the threat of severe health risks (e.g., lung cancer) and then offer solutions with a feasible behavior (e.g., don't smoke).

<sup>4</sup> The sadness-joy model uses emotional messages that focus first on creating sadness in the viewer that comes with negative health consequences and then creating joy in the viewer when offering solutions to the reducing the negative health consequence.

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Population	Communication Type	Summary of Tactic	Effectiveness	Citation
Women who recently took a cervical smear test (United Kingdom)	Fear-Based Message	Leaflet about the dangers of cervical cancer and its link to smoking; either with or without a detailed explanation of the link	Both leaflets were more effective at causing increased reported understanding of the dangers of smoking than a control; the leaflet with the detailed explanation was more effective than the one without it.	Bishop, Marteau, Hall, Kitchener, & Hajek, 2005 <sup>xxxvi</sup>
Undergraduate students and a nationwide samples (United States)	Fear-Based Message and Scare Tactics	Graphic full-color pictures of smokers with cancer, or similar black-and-white pictures, or various warning labels included in tobacco packaging	Individuals who did not smoke thought the pictures would be effective at reducing rates of smoking; however, among smokers there were no differences in reported intentions to quit smoking among the different test groups or the control.	Byrne, Katz, Mathios, & Niederdeppe, 2015 <sup>xxxvii</sup>
<b>Marijuana</b>				
Undergraduate students (United States)	Fear-Based Message	Video PSA about the dangers of marijuana use; and either high or low levels of persuasion that marijuana is a threat	All PSAs studied (including positive ones about the benefits of not using marijuana) were more effective at causing increased reported perceptions of danger regarding marijuana use and decreased positive attitudes towards marijuana use than the control.  High threats were more effective than low threats, but PSAs on benefits of not using were more effective than PSAs on dangers of using.	Zimmerman et al., 2014 <sup>xxxviii</sup>

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