HEALTH COMMUNICATION RESEARCH

A Guide to Developments and Directions

EDITED BY
Lorraine D. Jackson
and Bernard K. Duffy

GREENWOOD PRESS
Westport, Connecticut · London
Library of Congress Cataloging-in-Publication Data


p. cm.
Includes bibliographical references and indexes.
 1. Communication in medicine--Research.  I. Duffy, Bernard K.
610.8'96—dc21  98-14740

British Library Cataloguing in Publication Data is available.

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Library of Congress Catalog Card Number: 98-14280

ISBN: 0-313-29095-9

First published in 1998

Greenwood Press, 88 Post Road West, Westport, CT 06881
An imprint of Greenwood Publishing Group, Inc.
Printed in the United States of America

Health Communication Campaigns

Maria Knight Lapinski and Kim Witte

SYNOPSIS

Health communication campaigns are generally aimed at a large number of individuals, conducted during a specified time period, and consist of organized, planned, communication activities. There has recently been an emphasis on the use of theory to guide campaign development. Campaign designers commonly employ a number of micro- or individual level theories, including the health belief model, theory of reasoned action, social cognitive theory, stages of change model, models of risk communication, elaboration likelihood model, and inoculation theory. In addition, a number of theories take a large-scale or "macro"-approach to information campaigns and focus on sociocultural factors that influence the effectiveness of health communication campaigns such as the social marketing approach, diffusion of innovation theory, and so-called community empowerment approaches.

[There has been more progress in designing and conducting [health] campaigns in the past 20 years than in the [previous] 125 years.
—William Paisley, in Plau & Parrott. 1993]

Health communication campaigns, which are more numerous, sophisticated, and effective than ever before, advocate health promotion and disease prevention behaviors through the mass media, face-to-face interaction and other communication channels. Although there are a number of ideological models of health education and promotion (cf. Tones & Tifford, 1994), preventive health behaviors most frequently have been the targets of health communication campaigns
Effective health communication campaigns (Scherer & Juanillo, 1992) produce changes in knowledge, influence or clarify values, bring about changes in attitudes, beliefs or behaviors, and facilitate skill acquisition (Tones & Tilford, 1994).

Health communication campaigns typically are aimed at a large number of individuals, conducted in a predetermined time frame, and consist of organized, planned communication activities (Rogers, 1996; Rogers & Storey, 1987). Obviously, campaigns designed to educate the public about health issues are only a small portion of the health-related content that people are exposed to each day. Talk shows, advertisements, news, and other sources provide individuals with information that often contradicts or refutes the information disseminated by public health campaigns. Unfortunately, mixed messages about health behavior abound in the media, and often, the media provide a tutorial on how to live an unhealthy lifestyle (Wallack, 1990). What differentiates health campaigns from these conflicting media activities is that health campaigns intentionally attempt to bring about healthy behaviors or attitudes through some organized and planned set of communication activities.

Campaigns characteristically use multiple communication channels and can range from small to large-scale operations. Large-scale campaigns often rely on television and radio to disseminate information and messages about a particular health issue. Large-scale communication campaigns are commonly conducted by agencies or groups that either have funding from, or are members of, powerful groups such as government agencies, large corporations, or other organizations that have social power, legitimacy, resources, and access to the mass media (Salmon, 1989). In contrast, small-scale campaigns often rely on posters, brochures, videotapes, and booklets to communicate health information.

How does one determine what type of health-related information to disseminate to the public? The debate over which type of information is “pro-social” or in the “public’s best interest” and who should make this determination has been discussed at length by several authors (e.g., Downie, Fyfe, & Tannahill, 1990; Salmon, 1989). Historically, various forms of health communication campaigns were evident in the United States in the early 1700s (Scherer & Juanillo, 1992). These campaigns were concerned primarily with either convincing individuals to be immunized against smallpox or to discontinue the use of alcohol. The earliest large-scale health promotion campaigns were related to the temperature movement; by 1839 there were a number of journals dedicated to educating the public on the evils of alcohol (Scherer & Juanillo, 1992). Many health campaigns in recent years, however, have focused on uncontroversial issues such as cardiovascular disease (CVD) prevention. By the late 1980s, there were at least 10 community-based CVD prevention programs operating internationally (Winett, King, & Altman, 1989). A more controversial health-related debate has recently emerged over whether or not teenagers should be educated on how to use condoms to prevent sexually transmitted diseases (STDs) or pregnancy. Campaigns to promote needle exchanges among drug users to prevent human immunodeficiency virus (HIV) infection are often criticized as well. To disseminate health communication messages effectively, particularly when dealing with such controversial issues as those previously noted, it behooves campaign designers to consider the politics, context, and social consequences of their campaigns. By involving various constituent groups in the design and development of campaign themes, health educators can focus on distribution of the message, instead of worrying about the political fallout from a well-intentioned campaign. Once campaign designers are able to focus on message dissemination, they must consider the role of theory in designing and implementing a campaign.

An essential aspect of an effective health communication campaign is that it be driven by theory. Theories help health communicators identify and understand seemingly different behaviors and their influences. Theories also provide the tools for affecting knowledge, attitudes, and behaviors in a wide range of circumstances (Hochbaum, Sorenson, & Loring, 1992). Health educators can use theories to aid in message design, channel selection, campaign structure, methods of dissemination, and audience targeting issues (Flay & Burton, 1990).

Although theories increase the chances of campaign success (because one has guidance about what does and does not work), a number of researchers criticize the usefulness of many commonly employed theories (Freudenberg, Eng, Flay, Parcel, Rogers, & Wallerstein, 1995; Hochbaum et al., 1992). The dominant health behavior change theories have been criticized for (a) their focus on the individual and exclusion of social and environmental factors, (b) their emphasis on the one-way flow of information without consideration of the interactive nature of communication, (c) a lack of either political, administrative, or fiscal feasibility, and (d) limited applicability to unique populations (Hochbaum et al., 1992; Meyer & Dearing, 1996). Some have criticized the tendency to use or test only parts of theories in health communication campaigns instead of examining an entire model (Kirsch & Joseph, 1989). However, although there is wide room for criticism, the importance of using theory in campaign development cannot be denied. Studies have shown repeatedly that the use of theory to guide campaign message development results in a more effective and more efficient (in terms of both cost and time) campaign.

This chapter discusses a number of theories and approaches commonly utilized in health education campaigns. Examples and applications of these theories and approaches will be discussed as well. Given that each of the theories is explained in detail elsewhere in the literature, this chapter will simply provide an overview of the components of the approaches and models. This chapter is not an exhaustive review of the health behavior change theories: rather, it encompasses those theories that are employed predominantly by campaign designers. The first section of this chapter will discuss micro-level theories utilized in health communication campaigns, which include the health belief model, the theory of reasoned action, social-cognitive theory, fear appeal theory, the elaboration likelihood model, and inoculation theory. The second section will discuss macro-
level theories and approaches, including social marketing, diffusion of innovation theory, and community empowerment.

MICRO-LEVEL THEORIES OF ATTITUDE AND BEHAVIOR CHANGE

Although health communication has been primarily a practice-based field, recently there has been an emphasis on the use and development of theories of behavior change to guide campaign design and implementation. These micro-level theories, generally founded in social psychology, focus on changing an individual’s level of knowledge, attitudes, or behaviors related to some health preventive or disease preventive action.

Health Belief Model

The health belief model (HBM) (Janz & Becker, 1984; Rosenstock, 1974) is one of the most commonly used models of health behavior change and is probably the most frequently taught model in health campaign courses. Many have used it to guide the development of health campaigns and interventions, and its influence on health communication research is enormous. It was developed by a group of social psychologists in the early 1950s (Janz & Becker, 1984) as an overarching framework on how to promote preventive behaviors. In brief, the HBM emphasizes the role of certain beliefs in stimulating preventive health actions. The model suggests that preventive health behavior is influenced by five factors: (a) perceived susceptibility to a health threat; (b) perceived severity of a health threat; (c) perceived barriers to performing the recommended response; (d) perceived benefits of performing the recommended response; and (e) cues to action.

Perceived susceptibility refers to an individual’s subjective evaluation of the probability that he or she will experience a health threat. People often evaluate the likelihood that they will experience a harmful outcome of a certain action before engaging in that action. For example, before wearing a bicycle helmet people often evaluate whether or not they are likely to fall off their bicycle and hit their heads. If they feel that there is a likely chance that this event could occur, then they will be more likely to wear a bicycle helmet. Perceived severity refers to a person’s beliefs about the magnitude of the health threat. That is, is the health threat serious? For example, to determine perceived severity of a threat one might ask whether or not one perceives skin cancer, car accidents, or measles to be serious. The severity of a health threat can be evaluated in terms of physical/medical harm (e.g., disease, illness) as well as social harm (e.g., stigmatization).

Demographics and prior experiences are said to affect the four variables just described. For example, if one person knows someone who died of skin cancer while another person knows someone who simply had a cancerous mole removed, then the former is likely to have stronger perceptions of severity toward skin cancer when compared to the latter.

The perceived barriers are the potential "costs" of performing a recommended response, while perceived benefits are the degree to which the recommended response is seen as feasible and effective in reducing the health threat. The HBM suggests that an individual weights the potential benefits of the recommended response against the psychological, physical, and financial costs of the action. For example, a mother may realize the benefit of having her child immunized against childhood diseases, but she may lack the transportation, access, or the financial means to realize this benefit. In this case, the barriers would outweigh any benefits, and the child would probably not be immunized.

"Cues to action" is the least studied variable in the HBM. According to the model, cues to action are necessary to trigger the decision-making process. Cues can be external (e.g., public service announcements or brochures on the hazards of smoking) or internal (e.g., symptoms of a condition, such as a bleeding or unusual-looking mole). The model suggests that external cues, such as mass media campaigns, increase individuals’ perceptions of threat, which in turn, cause the individual to engage in the recommended response.

Rosenstock (1974) has noted that the combination of perceived susceptibility and severity provide the motivation for action, and the comparison of perceived benefits to perceived barriers provides the means or pathway to action. Thus, the stronger the perceptions of severity, susceptibility, and benefits, and the weaker the perception of barriers, the greater the likelihood that health-protective actions will be taken. One particularly potent example of how strong perceived susceptibility, severity, and benefits beliefs can overcome perceived barriers is illustrated by the ease of infant immunization by the Masai women in Kenya. These women have seen children die of childhood diseases (severity), know that anyone’s child can be stricken (susceptibility), and believe that immunizations prevent childhood diseases (benefits). Therefore, they willingly walk many miles in hot, dusty weather to rural health clinics several times during the first year of their children’s lives (barriers) in order to have their children vaccinated.

The HBM has been empirically tested as the basis for educational campaigns on a number of health behaviors, including bicycle helmet use (Witte, Stokols, Kuarte, & Schneider, 1993), vaccination for infectious diseases, adolescent fertility control (Eisen, Zelnick, & McAllister, 1985), and risky sexual practices (Vanlandingham, Sapreraet, Grandjean, & Sitiirai, 1993). Overall, perceived barriers have been the strongest predictor of whether or not individuals engage in health-protective behaviors, followed by perceived susceptibility (Janz & Becker, 1984). Janz and Becker (1984) found that the perceived severity component was the weakest predictor across studies employing the HBM.

The HBM may be viewed as the precursor of most modern health communication theories. As such, its variables and principles can be seen in many of the other models to be discussed in this chapter.
The Theory of Reasoned Action

Often, messages created for health education campaigns are based on intuitive appeal rather than on sound methodology (Fishbein & Ajzen, 1981). Even if a theory is used to develop messages, campaign designers tend to use the variables in the theory as guidelines to determine what topic to address, without giving special consideration of the actual content or words in a message. For example, campaign designers might address the severity of a health threat and the audience’s susceptibility to that health threat—the theoretical variables—in a message, but the actual words or images used to address these variables are not systematically chosen. Fishbein and Ajzen (1981) go so far as to conclude that “the general neglect of the information contained in a message and its relation to the dependent variable is probably the most serious problem in communication and persuasion research” (p. 359).

Fishbein and Ajzen (1975, 1981) suggest specific message construction techniques based on their theory of reasoned action (TRA). In the TRA (Figure 9.1), Fishbein and Ajzen (1975) propose that a person’s behavior is predicted by their intentions, which in turn, are predicted by their attitudes toward the behavior and subjective norms. Attitudes are predicted by behavioral beliefs and evaluations of those beliefs. Subjective norms are predicted by normative beliefs and the motivation to comply with those normative beliefs. Fishbein and Ajzen (1975) state that two sets of beliefs must be altered prior to behavior change: (1) beliefs about the consequences of performing a certain behavior and the evaluation of those consequences (attitudes); and (2) beliefs about what other people or referents think about the behavior to be performed and the motivation to comply with those referents (subjective norms). Only when a message targets the salient beliefs of these variables do attitudes and subjective norms, and subsequently, behavioral intentions and behavior, change.

Table 9.1 illustrates how the TRA may be used to analyze a specific audience’s behavior in terms of bicycle helmet use. Table 9.1a indicates one person’s hypothetical attitude toward bicycle helmet use. Recall that attitudes are comprised of one’s beliefs toward the attitude object (in this case bicycle helmet use) multiplied by the evaluation of the individual beliefs (whether these beliefs are good or bad). This person believes that bicycle helmets are uncomfortable, prevent injury, look unattractive, and are expensive. These are his or her salient beliefs about bicycle helmets. The strength of these beliefs (from .00 to 1.00) is indicated in the second column, and the evaluation of these attributes (ranging from -3 [unfavorable] to +3 [favorable]) is indicated in the third column. These belief strengths and evaluations are multiplied individually and then summed to create the overall attitude toward bicycle helmets. For example, this person strongly believes that wearing bicycle helmets looks unattractive (.90) and this unattractiveness is evaluated unfavorably (-2). In addition, she does not believe very strongly that wearing bicycle helmets prevents injury (.3), but anything that
Table 9.1
Hypothetical Attitudes and Subjective Norms Toward Wearing Bicycle Helmets

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Behavioral Beliefs</th>
<th>Evaluations</th>
<th>Beliefs x Examinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncomfortable</td>
<td>0.70</td>
<td>-3</td>
<td>-2.10</td>
</tr>
<tr>
<td>Prevents injury</td>
<td>0.30</td>
<td>+3</td>
<td>+0.90</td>
</tr>
<tr>
<td>Looks unattractive</td>
<td>0.90</td>
<td>-2</td>
<td>-1.80</td>
</tr>
<tr>
<td>Expensive</td>
<td>0.10</td>
<td>-1</td>
<td>-0.10</td>
</tr>
</tbody>
</table>

Attitude = -3.10

<table>
<thead>
<tr>
<th>Referents</th>
<th>Normative Beliefs</th>
<th>Motivation to Comply</th>
<th>Beliefs x Motivation to Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>My girlfriend</td>
<td>-1</td>
<td>+2</td>
<td>-2</td>
</tr>
<tr>
<td>My best friend</td>
<td>-3</td>
<td>+3</td>
<td>-9</td>
</tr>
<tr>
<td>My coach</td>
<td>+3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>My father</td>
<td>+1</td>
<td>+1</td>
<td>+1</td>
</tr>
</tbody>
</table>

Subjective norm = -10

Table 9.1b is a hypothetical example of a teen male’s subjective norm toward wearing bicycle helmets. His salient referents include his girlfriend, his best friend, his coach, and his father (the people who are most important to him, and who are most likely to influence him). His normative beliefs reflect what he thinks each of these specific referents believes about whether he should wear a bicycle helmet (ranging from -3 (should not wear) to +3 (should wear)]. His motivation to comply with each referent is indicated on a scale from 0 (not at all) to 3 (strongly). In each case, the normative belief and the motivation to comply are multiplied to yield a product. The sum of these products is his subjective norm toward wearing a bicycle helmet. The attitude and subjective norms are sometimes weighted according to their importance, and then combined, to influence intentions, which are hypothesized to then influence behaviors. This person’s scores suggest that he would not wear a bicycle helmet because both his attitude and subjective norm toward bicycle helmets are negative, resulting in negative intentions to wear helmets and negative helmet-related behaviors.

Fischbein and Ajzen (1981) argue that to change a behavior, the total set of primary (or salient) beliefs must be changed or shifted. In the examples of behavioral and normative beliefs (Table 9.1), note that if only one belief changed, the attitude or subjective norm probably would not change. Fischbein and Ajzen (1975) state that salient beliefs must be altered to effect change because they are, in essence, what ultimately cause behavior.

When constructing persuasive messages, Fischbein and Ajzen (1975) note that it is crucial to choose the “right” target variable. What is the specific goal of the persuasive message—to change attitudes, intentions, or behaviors? Exactly which behaviors are to be targeted for change? Similarly, there must be precise correspondence in specificity between the persuasive message and the targeted goal. For example, a message arguing that AIDS should be prevented will only persuade people that AIDS should be prevented. However, more often than not, practitioners will use such a message focusing on AIDS prevention when their goal is to persuade people to use condoms to prevent AIDS. The presumption is that people will infer that condoms prevent AIDS, simply because this is stated in the end of the message. Note that there is a lack of correspondence between the message (attitudes toward AIDS) and the behavioral goal (attitudes toward use of condoms).

Overall, TRA is one of the few theories to offer a systematic approach to constructing the content of a health campaign message. It has been applied to a number of health-related behaviors, including the impact of health risk messages about tap water (Griffin, Neuwirth, & Dunwoody, 1995), sexual practices and AIDS related-behaviors (Fischbein & Middlestadt, 1989; Fischbein, Middlestadt, & Hitchcock, 1991; Vanlandingham et al. 1995), childbearing intentions (Crawford & Boyer, 1985), testicular cancer prevention (Brookner & Wickerman, 1990), exercise in schoolchildren (Ferguson, Yesalis, Pomrehn, & Kirkpatrick, 1989), alcoholism (Fischbein, Ajzen, & McArdle, 1980), cigarette smoking (Norman & Tedeschi, 1989), and many others.

Social Cognitive Theory

Bandura’s social cognitive theory (sometimes called social learning theory) has been used in a wide variety of health-related campaigns. It was used in the Stanford 5-Cities project to prevent heart disease (Flora, Maccoby, & Farquhar, 1989) and more recently has been used in several AIDS-prevention projects (Bandura, 1989). The focal point of the theory is perceived self-efficacy. Self-efficacy is defined as “people’s beliefs that they can exert control over their motivation and behavior and over their social environment” (Bandura, 1989, p. 128). In other words, perceived self-efficacy is what you believe about your capability to perform a certain action (your perceived self-efficacy). Bandura (1977a, 1982) views self-efficacy as the driving force of human behavior. 

Efficacy expectations are a major determinant of people’s choice of activities, how much effort they will expend, and of how long they will sustain effort in

Flora, Maccoby, & Farquhar (1989)
dealing with stressful situations” (Bandura, 1977a, p. 194). Bandura (1977a) states that an individual’s self-efficacy perceptions are developed from four sources of information: performance accomplishments, physiological states, verbal persuasion, and vicarious experience.

Another important construct in Bandura’s theory is outcome expectations. Outcome expectations refer to an individual’s belief that a certain behavior will lead to a certain outcome. For example, “I believe that if I get a polio vaccination, I won’t get polio” is an outcome expectation. It is what you think will happen if you take a certain action. Outcome expectations are different from efficacy expectations in that the latter is a person’s belief about whether he or she is able to “successfully execute the behavior required to produce the outcomes” (Bandura, 1977a, p. 193). For example, even if outcome expectations are high (e.g., “If I get a polio vaccination I won’t get polio”), efficacy expectations may be low (e.g., “but I’m not capable of getting a polio shot because needles scare me”). In short, according to social cognitive theory, a person can believe that certain actions lead to a particular outcome (outcome expectations), but this individual may doubt his or her ability to perform the action (efficacy expectations). Thus, it is the self-efficacy perception that causes behavior.

According to Bandura (1977a), only when efficacy expectations are high will people perform the advocated behaviors. Efficacy expectations can vary on dimensions of magnitude (level of difficulty of task; people may have different efficacy expectations for simple tasks than for difficult tasks), generality (specific to general), and strength (weak to strong) (Bandura, 1977a). Many health communication campaigns promote long-lasting and stable health behaviors by increasing people’s perceptions of self-efficacy toward performing a recommended response. For example, one way to promote condom use to prevent HIV infection is to let individuals role-play romantic encounters where they gain practice and experience on how to negotiate condom use (and thereby increase their perceptions of self-efficacy). One potential element missing from social cognitive theory is a motivational factor. The model seems to assume that if people perceive the behavior that is putting them at risk and to contemplate the need for change, they will address in effective health communication campaigns. Numerous studies have demonstrated the importance of self-efficacy in health communication campaigns, including examinations of addictive behaviors such as smoking and drinking (cf. DiClemente, 1986) and AIDS-related behaviors (Bandura, 1989).

### Stages of Change Model

One of a number of stage models of behavior change, the transtheoretical model allows communicators to determine the stage in which the majority of their target audience members can be placed, along a continuum of no action to consistent action (DiClemente & Prochaska, 1985). The model, also referred to as the stages of change model (SOC), suggests there are five stages in the performance of a behavior: Precontemplation, Contemplation, Preparation, Action, and Maintenance. In the Precontemplative stage, persons do not intend to change their behavior. They may not realize they are engaging in risky behavior, or they may deny that their behavior puts them at risk for harm. For example, an individual may be at high risk for a heart attack but may not realize or may deny the fact that a high cholesterol diet is increasing his or her risk of experiencing a heart attack. In the second stage, however, this risk becomes apparent to the person. Contemplation is the stage in which individuals begin to think about the behavior that is putting them at risk and to contemplate the need for change. In this stage, for example, a person recognizes that eating foods high in cholesterol is increasing his or her risk for a heart attack. He or she also realizes that a change in the diet would be a good idea. The next stage is the stage in which individuals begin to change beliefs. In this third stage, Preparation, one makes a commitment to change and takes some action to prepare for the behavior change. The individual at risk for a heart attack may request a low-cholesterol diet from a physician and rid his or her house of high-cholesterol foods. It is in the Action stage that individuals perform the new behavior consistently. In this stage, for example, the at-risk individual may regularly eat only low-cholesterol foods and continue other changes in diet to reduce the risk of heart attack. In the Maintenance stage, the final stage of the SOC model, the new behavior is continued, and steps are taken to avoid relapsing into the formerly risky behaviors. For example, a person might join a support group to avoid falling back into former unhealthy eating habits.

The SOC model is useful to health communicators and campaign designers for several reasons. First, individuals in different stages exhibit distinct behavioral characteristics (Weinstein, 1988). Thus, researchers can effectively analyze and segment a target audience according to that audience’s different stages of change. Practitioners, then, can design messages strategically to move individuals through the stages (Maibach & Cotton, 1995). For example, if health communicators wish to design a heart-healthy campaign and they determine that the majority of the members of the target population are in the Contemplation stage, they can design messages to systematically move audience members through the Preparation, Action, and Maintenance stages. Similarly, if the majority of the target audience is in the Maintenance stage, communicators can provide messages that reinforce and support the healthy behavior.

This model has been empirically tested with a number of health topics, including smoking cessation, sunscreen use, addictive behaviors, pregnancy pre-
anxiety or fear in audiences, he can see the campaigns focus on a health risk. In outlining the terrible things that will happen if a recommended response is not or anxiety into productive behavioral action. The literature on both risk communication and fear appeals can help clarify the relationship between the emotion of fear and the behaviors resulting from that fear.

Risk Communication/Fear Appeals

Most health education campaigns either unintentionally or intentionally raise anxiety or fear in audiences, because the campaigns focus on a health risk. In most health promotion/disease prevention campaigns, campaigners are attempting to prevent a certain harm or health threat from occurring and do so by outlining the terrible things that will happen if a recommended response is not followed. Two streams of research are useful in identifying how to channel fear or anxiety into productive behavioral action. The literature on both risk communication and fear appeals can help clarify the relationship between the emotion of fear and the behaviors resulting from that fear.

The risk communication literature has focused on how laypersons and experts differ in how they perceive risks (Douglas, 1985; Kishchuk, 1987; Slovic, 1987). For example, experts tend to view health risks in a very scientific, rational manner—"there's a one in a million chance that you'll get disease X." In contrast, laypersons tend to evaluate risks in terms of whether or not they are controllable, familiar, voluntary, necessary, catastrophic, personally relevant, or representative (Kishchuk, 1987; Slovic, 1987). Slowic and colleagues (1987; Fischhoff, Slovic, Lichtenstein, Read, & Combs, 1978; Slovic, Fischhoff, & Lichtenstein, 1982) have demonstrated that these and other qualitative risk dimensions cluster into two main factors: (1) dread-common and (2) unknown-known. Dreaded risks are characterized by "perceived lack of control, dread, catastrophic potential, fatal consequences, and the inequitable distribution of risks and benefits." (Slovic, 1987, p. 283). Unknown risks are characterized as being "unobservable, unknown, new, and delayed in their manifestation of harm." (Slovic, 1987, p. 283). Thus, experts may evaluate the risk of dying in an airplane crash as low because it is a quantitatively rare event, while laypersons may evaluate the same risk as extremely high because it is an unknown and dreaded risk, with great catastrophic potential.

When risks seem unacceptably high to laypersons, these risks tend to generate fear. The fear appeal literature offers guidelines on how to develop health risk messages that motivate behavior change instead of inhibiting it. Fear appeals are defined as persuasive messages that frighten an audience into adopting a recommended response. The first part of a fear appeal typically focuses on the health threat by emphasizing the severity of the threat (i.e., its magnitude of harm) and the probability that the threat will occur (i.e., the audience's likelihood of experiencing that threat). Fear is aroused when a threat is perceived as relevant and significant. The second section of a fear appeal usually focuses on the efficacy (e.g., effectiveness) of the recommended response in (a) averting or minimizing the threat (response efficacy) and (b) messages that increase perceived self-efficacy by increasing one's perceived ability to perform the rec-ommended response. Such an increase in self-efficacy is attained by outlining specific and easy steps to avert the threat. The fear appeal may be thought of as the "cue to action" in the health belief model.

The research into fear appeals has shown them to be potent persuasive devices but only in certain conditions. The most recent fear appeal theory, the Extended Parallel Process Model (EPPM), is based on Leventhal's danger control/fear control framework and is an expansion of previous fear appeal theoretical approaches (Janis, 1967; Leventhal, 1970; Rogers, 1975, 1983). Readers will note similarities between the Health Belief Model and fear appeal theories. Fear appeal models can be thought of as experimental variants or explanatory (as compared to descriptive) versions of the HBM. Clearly, fear appeal research and the EPPM (Witte, 1992a, 1998) grew out of the HBM.

According to the EPPM (see Figure 9.2), the evaluation of a health threat initiates two appraisals, which result in either danger control (i.e., a cognitive process) or fear control processes (i.e., an emotional process). First, persons appraise the threat of the hazard by determining whether they think the threat is serious (e.g., "skin cancer can be deadly") and whether they think they are susceptible to the threat (e.g., "I'm at risk for getting skin cancer"). The greater the threat perceived, the more motivated individuals are to begin the second appraisal, which is an evaluation of the efficacy of the recommended response.

When people think about the recommended response, they evaluate its level of response efficacy (e.g., "Does sunscreen prevent skin cancer?") and their level of self-efficacy (e.g., "Am I capable of using sunscreen?"). When the threat is regarded as trivial or irrelevant (perceived as low), there is no motivation to consider the threat further; the efficacy of the recommended response is evaluated superficially—if it is evaluated at all—and no response is made to the health threat. If people do not feel at risk or do not feel the threat to be significant, they simply will ignore it.

Danger control processes will dominate, and people will act in ways that prevent the threat, as long as perceptions of efficacy are greater than perceptions of threat (e.g., "I know that skin cancer is a terrible threat that I'm at risk for, but if I have my physician screen me annually, I'll be able to prevent my dying from it"). When danger control processes dominate, individuals are motivated to control the danger by thinking of ways to protect themselves. Danger control processes are primarily cognitive processes where individuals (a) set a goal, (b) believe they can effectively deter the threat (high efficacy), and (c) deliberate and cognitively confront the danger (e.g., "I'm going to call my physician right now and request a skin cancer screening"). The cognitions or thoughts occurring in the danger control processes elicit protection motivation, which stimulates adaptive actions such as attitude, intention, or behavior changes that control the danger. Thus, when persons perceive themselves to be vulnerable
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to a serious risk, and they believe they can do something to avert that risk effectively and easily, then they protect themselves against the health threat.

At some critical point, however, when persons realize that they cannot prevent a serious threat from occurring, either because they believe the response to be ineffective or because they believe they are incapable of performing the recommended response (e.g., "Skin cancer is a terrible disease that I'll probably get, and I don't think there's anything I can do to keep from dying from it"), fear control processes will begin to dominate over danger control processes. Fear control processes are primarily emotional processes where people respond to and cope with their fear, not with the danger. Defensive motivation is elicited by heightened fear arousal, which occurs when perceived threat is high and perceived efficacy is low, and produces responses that control one's fear such as defensive avoidance or reactance. Studies have shown that fear appeals with high levels of threat (e.g., "Skin cancer is a severe disease that you are susceptible to given your history of sun exposure") and low levels of efficacy (e.g., "Sunscreen used now can't undo past skin damage due to overexposure from the sun: therefore you cannot totally prevent skin cancer") result in message rejection. Thus, when persons believe themselves to be vulnerable to a significant threat but believe that the threat is uncontrollable and unavoidable, they deny they are at risk, defensively avoid the issue, or lash out in reactance. In this case, fears about a health threat inhibit action, and health risk messages may backfire.

In short, according to the EPPM when people are faced with a health threat, they either control the danger (i.e., the actual health threat) or control their fear about the danger. They weigh their risk of actually experiencing the health threat (i.e., getting cancer) against actions they can take that would minimize or avert the health threat (i.e., "Does sunscreen really work? Can I really use it every time I'm in the sun?"). Health risks that are seen as controllable (i.e., people believe they are able to effectively avert them) are dealt with in a protective manner no matter how frightening the health threat. In contrast, health risks that are seen as uncontrollable or unavoidable cause so much fear that people plunge into potentially maladaptive coping strategies where the health threat is denied or defensively avoided.

In terms of a health communication campaign, therefore, the audience must first believe that the health threat is relevant to them and that it is a significant and serious threat. Strong perceptions of threat motivate action. It is important to note that one can have high levels of perceived severity toward a health threat but low levels of perceived susceptibility. The classic example of the relationship among these variables involves perceptions about AIDS. Many people have very strong perceived severity toward AIDS (they believe it leads to certain death), but very low levels of perceived susceptibility toward AIDS (e.g., because they believe their partner is "safe"). Alternatively, one can believe they are susceptible to harm from a threat (e.g., getting skin cancer) but believe the threat to be minimal (e.g., "I'll just have the dermatologist burn off any moles").
Therefore, it is important to promote both perceptions of severity of the threat as well as perceptions of the susceptibility toward the threat. In addition, it is critical that the message promote strong perceptions of both self-efficacy and response efficacy. Recall that threat motivates action—any action—and that perceptions of efficacy determine whether the action controls the danger (which is a health-protective response) or controls the fear (which inhibits health-protective behavior). Therefore, high threat messages must be accompanied by high efficacy messages. If it is difficult or impossible to promote strong perceptions of efficacy, then one probably should not use fear-arousing messages because they may backfire. For example, a study on the Trans-Africa Highway in Kenya showed that commercial sex workers had extremely low perceptions of self-efficacy and response efficacy toward using condoms (Cameron, Witte, Lapinski, & Nzyuko, 1996; Witte, Nzyuko, & Cameron, 1996). They felt that they would not be able to convince their partners to use condoms, and even if they did, they did not believe that condoms actually prevented HIV transmission. Because this population group had low perceptions of self- and response efficacy, any perceptions of threat would be likely to push them into fear control, where denial of the threat, defensive avoidance, or reactance would occur. Therefore, the best health communication campaign for this group would be one that focused on increasing self- and response efficacy perceptions toward positive behaviors.

Overall, health risk messages using the fear appeal approach have been shown to be effective in a variety of domains, including skin cancer prevention (Stephenson, 1993), pregnancy prevention (Witte, 1997), radon awareness (Witte, Berkowitz, McKeon, Cameron, Lapinski, & Liu, 1996), they felt that they would not be able to convince their partners to use condoms, and even if they did, they did not believe that condoms actually prevented HIV transmission. Because this population group had low perceptions of self- and response efficacy, any perceptions of threat would be likely to push them into fear control, where denial of the threat, defensive avoidance, or reactance would occur. Therefore, the best health communication campaign for this group would be one that focused on increasing self- and response efficacy perceptions toward positive behaviors.

Inoculation

While many micro-level theories and models seek to change attitudes, beliefs, or behaviors, the inoculation approach offers lessons in how to promote resistance to unhealthy attitudes and behaviors. McGuire (1964, 1968) adapted the biological concept of inoculation to persuasion by attempting to "inoculate" individuals against certain unhealthy attitudes or behaviors. To accomplish inoculation, he exposed individuals to a threat (defined as a challenge to existing attitudes), which caused them to develop and strengthen arguments as to why they held a certain attitude. He found that by strengthening healthy attitudes and behaviors, individuals were more resistant to subsequent persuasive messages or challenges that tried to persuade them to engage in unhealthy behaviors.

Inoculation has been used most recently in smoking prevention projects with teens. Pfau, Van Bockern, and Kang (1992) sought to provide teens with inoculation against trying cigarette smoking. They found that when teens with low
self-esteem (those at greatest risk for smoking initiation) were forewarned and were able to practice resisting messages, they were better able to withstand the pressure to begin smoking and were, in fact, less likely to initiate cigarette smoking. The application of inoculation theory to prevent people from ever engaging in risky behaviors (e.g., smoking, drug use) appears promising. However, more research using inoculation theory as a base is needed in the health arena in order to better understand the predictive value of the approach.

MACRO-LEVEL APPROACHES TO HEALTH COMMUNICATION

Health communication campaigns have often been based on the promotion of individual behavior change. However, a number of theories suggest that social circumstances may make behavior change difficult. These macro-level theories maintain a scope beyond that of individual-level behavior change and attempt to account for essential influences in the sociocultural environment. Macro-level theories focus on the "big picture" of health behavior change, but each theory examines this "big picture" via differing methods. Social marketing, for example, suggests a specific marketing approach for disseminating a health attitude or behavior, while diffusion of innovation theory investigates how large numbers of people adopt a new idea or product. The community empowerment approach seeks to understand factors at the level of the social system and how various components of a system can work together to provide a social and political environment that encourages healthy living. Each of these approaches will be discussed briefly below.

Social Marketing

One macro-level approach to health communication campaigns that has been widely used by health communicators in both the public and private sector of social marketing. Social marketing involves the design, implementation, and control of campaigns aimed at altering the level of acceptability of the social ideas or behaviors of a specific target group or groups (Kotler, 1984; Kotler & Roberto, 1989). Social marketing involves the application of for-profit management and marketing technologies to pre-social, nonprofit programs (Meyer & Dearing, 1996). Wallack (1989) suggests that one of the keys to this approach is the reduction of psychological, social, economic, and practical distance between the target of the campaign and the behavior.

Kotler and Roberto (1989) outline five basic steps in the social marketing management process. The first step is an analysis of the social marketing environment immediately surrounding the particular campaign. Next, the social marketer must research the target-adopter population and segment the audience into groups with common characteristics. The third step involves the careful design of the campaign's objectives and strategies. It is in this step that the social marketer must consider four concerns basic to every campaign—the factors that campaign designers refer to as the four "P's."

The four "P's" are product, price, promotion, and place, or what has been termed the "marketing mix." The product is the behavior to be changed or the product that the target audience is encouraged to adopt. Campaigns have promoted a number of health behaviors as "products," including condom use, contraception, and others. For example, in the Stanford Heart Disease Prevention Program (SHDPP), the "products" promoted were regular exercise, smoking cessation, dietary changes, and stress reduction, in order to prevent heart disease. The second "P" in the marketing mix refers to price and includes any physical, social, or psychological cost related to compliance with a campaign. In the case of the SHDPP's Smokers' Challenge (one facet of the large-scale program), the costs of joining the challenge included the money and energy expended in accepting the challenge, as well as the psychological costs of giving up smoking. The third component of the marketing mix, promotion, deals with how the product can be represented or packaged to compensate for the costs of adopting the recommended response. The Smokers' Challenge attempted to promote the campaign by removing or reducing the financial cost of the program in order to make it more appealing to target audiences (Lefebvre & Flora, 1988). Place is the final component in the marketing mix and involves the availability of the recommended response. The designers of the Smokers' Challenge attempted to make access to information about the program as simple as possible. For example, they mailed information on how to quit smoking to individuals in the households participating in the study.

The final step in the management of the social marketing process involves the planning, organization, implementation, control, and evaluation of the social marketing program. Researchers have noted the difficulties inherent in this task for community-based health communication campaigns (Lefebvre & Flora, 1988). Meyer and Dearing (1996) suggest that the final step is differentially important, depending on the resources of the organization conducting the campaign and the type of population that is being targeted. Many programs have utilized some aspect of the social marketing approach inadvertently, through the use of principles such as audience segmentation and evaluation. For example, Rogers (1996) suggests that many of the HIV/AIDS prevention programs in San Francisco are based on the principles of social marketing, although few of the designers acknowledge it. Overall, social marketing has been widely used in health communication campaigns. The most compelling application of this approach can be found in developing nations where social marketing has been used to promote family planning, infant health, and condom use to prevent HIV transmission (Rogers, 1996).

Diffusion

Diffusion of innovation theory (Rogers, 1995; Rogers & Shoemaker, 1971) examines the ways in which new ideas, practices, or objects are communicated
through certain channels over time among members of a social system. This theory has seen application in a large number of health communication campaigns. Rogers (1995) outlines four major elements in the diffusion process, described below.

An innovation is the belief or practice that is perceived as subjectively new by an individual or group. The potential adopter of the innovation will be more likely to make the decision to adopt if the innovation is seen as advantageous, compatible with the adoptees' values, noncomplex, trialable, and if it provides observable results. For example, this approach has been utilized to promote both products (e.g., condoms) and ideas (e.g., it is essential for one to wear a condom each time one engages in sexual intercourse) related to safe sexual practices. Svenkerud, Singhal, and Papa (1996) examined the use of diffusion of innovation concepts for AIDS education programs in Bangkok, Thailand. In their programs examined, they found that the economic advantages and compatibility with the values of the target were the aspects of the innovation most frequently emphasized.

The communication channel, or the means by which a message is transmitted from one individual or a group to another, is a second element of the diffusion model and one that was also viewed as important by HIV/AIDS educators in Thailand. The channels through which information about the innovation is disseminated can be face-to-face, electronically facilitated interpersonal interaction, or mass media-based. The selection of channel is contingent on the target group—some channels may be differentially effective depending on the characteristics of the target group. For example, some groups have less access to mediated channels, such as television or radio, and would be reached most effectively through posters or flyers. The most frequent transfer of ideas occurs between two individuals who are similar or homophilous (Rogers, 1995). Homophily is an important factor in the diffusion of ideas. It involves the degree to which two people consider themselves similar to one another along a number of dimensions. More effective communication occurs if the potential adopter feels that he or she is similar to the source of message. Some heterophily is effective in the diffusion process if this difference between the sender and the potential adopter is due to the sender's level of expertise regarding the innovation. It is expected, for example, that the outreach worker in an HIV/AIDS information center would have a greater level of knowledge about the disease than that worker's potential clients.

The third major element in the diffusion process is the time dimension, which is important for the innovation-decision process, the innovativeness of the target adopter, and the rate of adoption of the innovation. When the target receives the information about the innovation, the target engages in an innovation-decision process that involves a sequence of points relating to the acceptance or rejection of the innovation. The rate at which the target usually adopts new ideas relative to other members of the social system is also an important element. The adopter categories include innovators, early adopters, early majority, late majority, and laggards. The innovators are individuals who are likely to seek and adopt new ideas first; the other categories of individuals follow respectively. Another element related to the time dimension is that of an innovation's rate of adoption. Typically, when the number of individuals adopting an innovation is plotted over time, it results in an S-shaped curve (Rogers, 1995).

The final element in the diffusion process is that of the social system, which Rogers (1995) defines as a set of interrelated units engaged in joint problem-solving to accomplish some common goal (p. 23). A social system can be a small farming community in a developing country or a group of medical doctors at a hospital. Social systems are structured in various ways, have differing norms, make different decisions about innovations, and place emphasis on different opinion leaders. The opinion leaders in a social system are those who are consistently able to influence other members' attitudes and behaviors while playing an important role in the adoption decision.

Diffusion of public health information has typically revolved around two areas—the diffusion of new drugs and health information to health professionals, and the diffusion of health information (usually related to family-planning methods or decreasing risky sexual practices) to clients or patients. Svenkerud, Singhal, and Papa (1996) found that the elements of the diffusion process that were utilized most frequently by the most effective communication and outreach programs included homophily, opinion leadership, and the innovation-decision process.

Community Empowerment

A third macro-level approach to the design and implementation of health communication campaigns is that of community empowerment. The concept is based on Freire's (1973) writings in "Education for Critical Consciousness." The recent emphasis on community empowerment (although it is hardly a "new" concept) and the examination of sociocultural factors that influence health behavior appears to be a response to the frequent use of micro-level theories of behavior change in health communication. Several authors have likened this emphasis on the individual to "victim blaming" (Tones & Tilford, 1994) and argue that health communication should be based on the idea that the cultural, historical, social, economic, and political contexts in which the individual exists must be recognized (Israel, Checkoway, Schulz, & Zimmerman, 1994, p. 153).

Israel et al. (1994) make the distinction between three levels of empowerment—individual, organizational, and community. They argue that the concept of empowerment is meaningful only if these three levels are viewed as parts of a whole. Individual or psychological empowerment is similar to self-efficacy (Bandura, 1977a) and deals with the ability of an individual to make decisions and to have control over her or his own life. Organizational empowerment encompasses organizations that empower the individual, are democratically man-
trained in theoretically based campaign design should be the primary architects of the messages and promotional material as opposed to those who are experts in medicine.

Given the changing face of the U.S. population and the shrinking globe, there is a growing need to determine the most effective methods of disseminating information to individuals other than those in "mainstream" Western societies. Many of the theories and approaches discussed above have not been tested with multicultural or international samples, but attempts are often made to apply the principles to these populations. There are potential problems with such an approach. For example, the focus on individual accountability for health behaviors, which is common in many micro-level theories, may not be realistic in cultures where an individual's well-being is a function of other people in their collective (e.g., extended family).

One final area for health communicators to examine is the role of new (or fairly new) communication technology in health education campaigns. Clearly, what is "new" varies by culture and will impact the dissemination of health messages differentially. In many areas in the United States, for example, the World Wide Web provides both communicators and audiences of campaign messages with a wealth of health-related information at their fingertips. For example, many HIV/AIDS resource centers use the Internet to supply their clients with the most current information on treatment and prevention of HIV (Lapinski, 1997). The use of health communication campaigns in this medium is just emerging as an important area of research and will be the "state of the art" in future examinations of campaign effectiveness.

As Pasley noted in the opening quotation, health communication campaign research, theory, and practice has come a long way in the last 20 or 30 years. With effort, more will be achieved in promoting health and preventing disease as the twenty-first century begins.

NOTES

Portions of this chapter are drawn from Meyer and Witte, 1995. Witte, 1992a, 1992b, 1994, 1998. (Material from Meyer and Witte, 1995 is used with the permission of Hayden McNeil Publishing. For permission to photocopy this section, please contact Hayden McNeil Publishing.)

The authors would like to thank Charles Adkin and Kenzie Cameron for their advice and comments.

1. Originally, the two factors were labeled "technological risk" and "severity" (Finch et al., 1978). In later work by the same authors, the factor structure was reformulated, resulting in the shifting and renaming of dimensions.