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ABSTRACT

Making others especially fearful of what can happen if they ignore the advice given in a health-threat warning (fear appeal) encourages their acceptance of the message most of the time, though occasionally this strategy backfires. Current formulations of fear appeals are unable to reconcile these findings satisfactorily. The drive model notion that high fear arousal leads to "defensive avoidance" is not well supported by previous research; the parallel response model assertion that fear control behavior interferes with adaptive responding to health-threat warnings remains untested; and protection motivation theory is more concerned with isolating important components of health-threat warnings than with accommodating these apparently discrepant findings. A new conceptualization of health-threat warnings emphasizing the importance of perceived control over health is presented. Its essence is that health-threat warnings can diminish or enhance perceived control over health by lowering or raising perceptions of response and personal efficacy. It is shown that a model incorporating these two control constructs is capable of generating strategies for enhancing the persuasive impact of health-threat warnings in situations where other models encounter difficulties. (Author)

A Conceptualization of Threat Communications and Preventive Health Behavior

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A Conceptualization of Threat Communications and Preventive Health Behavior

If we wish to encourage others to engage in behavior that will improve their chances for leading healthy lives, does it make sense to threaten them explicitly with the danger of not following our advice? Most health and safety educators would probably answer this question in the affirmative. They show their driver education classes films which graphically depict the hazards that await those who drive while intoxicated, attempt to persuade people to stop smoking by depicting the disastrous consequences of lung cancer, and in general, urge others to adopt their recommendations by making them fearful of what may happen if they do not. But are fear appeals of this sort effective, that is, do they encourage more compliance or attitude change than communications which arouse little or no fear?

Though it is generally acknowledged that information per se is incapable of changing attitudes or influencing behavior to any great extent, and that some form of motivation or arousal is required (Cohen, 1957; Kelley, Kegeles, Lund, & Weisenberg, 1976; Klapper, 1960; Rayner & Cohen, 1971; Rosenberg, 1956), there is conflicting evidence as to whether the arousal of fear is positively, negatively, or curvilinearly related to persuasion. Though researchers generally find the arousal of fear to be positively related to persuasion (see Higbee, 1969; Janis, 1967; Leventhal, 1970; McGuire, 1969 for a comprehensive review of this

literature) they also find fear arousal to be negatively related to persuasion (Berkowitz & Cottingham, 1960; Dabbs & Leventhal, 1966; Goldstein, 1959; Haefner, 1965; Janis & Feshbach, 1953; Janis & Terwilliger, 1962; Leventhal & Niles, 1964; Leventhal & Trembly, 1968; Leventhal & Watts, 1966; Kornzweig, Note 1; Niles, Note 2; Watts, Note 3). Adding further confusion to this picture are data which show that fear arousal is less important than other message factors in persuading people to take care of their health (Evans, Rozelle, Lasater, Dembrowski, & Allen, 1970; Leventhal, Singer, & Jones, 1965; Leventhal, Jones, & Trembly, 1966; Leventhal, Watts, & Pagano, 1967; Rogers & Mewborn, 1976; Rogers & Thistlethwaite, 1970).

Current formulations of fear appeals are unable to reconcile these findings satisfactorily. The drive model notion that high fear arousal leads to "defensive avoidance" is not well supported by previous research; the parallel response model assertion that fear control behavior interferes with adaptive responding to health-threat warnings remains untested; and protection motivation theory is more concerned with isolating important components of health-threat warnings than with accomodating these apparently discrepant findings. A new conceptualization of health-threat warnings emphasizing the importance of perceived control over health will be presented. We will refer to this conceptualization as the personal effectance model. Its essence is that health-threat warnings can diminish or enhance perceived control over health by lowering or raising perceptions of response and personal efficacy. We will show that such a model is capable of generating strategies for enhancing the persuasive impact of health-threat warnings in situations where other models encounter difficulties.

The Personal Effectance Model

If people believe that their health is not seriously endangered, that health outcomes are independent of behavior, or that for one reason or another they will be unable to carry out recommended responses, they are not likely to accept advice to safeguard their health (Bandura, 1977; Rayner & Cohen, 1971; Wallston & Wallston, in press). The personal effectance model adopts this "common sense" approach to health-threat warnings and predicts that health-threat warnings will motivate health behavior to the extent they convince people that 1) their health is endangered, 2) recommended responses are efficacious, and 3) they are capable of carrying out these responses. It follows that communicators should be careful that their messages do in fact encourage people to believe that efficacious responses are available and that they are perfectly capable of performing these responses. It would appear, however, that communicators should be particularly careful when attempting to persuade people of the danger a health-threat presents, for there is evidence suggesting that high fear arousing health-threat warnings can actually persuade people that response or personal efficacy is low. Before examining this evidence, we first will consider how health-threat warnings in general may be likely to discourage people from believing that they are able to control the health-threat in question.

Some health-threat warnings, for example, might convey the impression that adherence to the recommendations will be difficult, or might not offer evidence to the contrary, and thus may be likely to diminish the perception of personal efficacy. For instance, a communication concerned with the dangers of smoking may convey the impression that abstinence will be difficult because it requires a good deal of self-control. While it may be important for people to realize that a strong committment is required to stop smoking, it is also important that they not be discouraged needlessly about their chances for success.

Also, if health-threat warnings are unclear about who may benefit from following recommended responses, they may fail to reach individuals who incorrectly believe the message does not apply to them. Anti-smoking messages, for example, may fail to convey the impression that certain individuals, such as those who have been smoking for a number of years, might still benefit from a reduction in smoking. Such messages may also neglect to point out that serious health problems may be developing in the absence of symptoms thereby encouraging people to believe that their health is not endangered and consequently that health and behavior are not closely related.

It is also conceivable that health-threat warnings may lead individuals to focus on their vulnerability to health-threats in general. A consideration of one's susceptibility to the often unpredictable and debilitating misfortunes of life, regardless of how improbable these events may be objectively, seems likely to encourage the impression that one's health is not entirely under one's personal control. Health-threat warnings could discourage people from attempting to control their health then by directing attention toward situations which suggest that health and behavior are independent. If people suspect that their efforts to obtain outcomes will go unrewarded because their own or others' experiences indicate that certain classes of outcomes are difficult or impossible to control, they are not likely to try hard to secure these or related outcomes when the opportunity presents itself (Maier & Seligman, 1976; Seligman, 1975).

Because people are made uncomfortable when confronted with unpredictable and uncontrollable life-events (e.g., Bucher, 1957; Drabeck & Quarentelli, 1967), it would not be surprising if they were motivated to avoid situations which are likely to remind them of their lack of control over their lives. Health-threat warnings may do this and thus may discourage people from confronting health-hazards which threaten their images of themselves as efficacious human beings (e.g., Frankel & Snyder, in press; Snyder, Stephan, & Rosenfield, in press).

In the final analysis, however, it is immaterial whether people refrain

from playing active roles in their health care because they wish to avoid evidence of their lack of control over their lives, or because they figure that efforts to control health-threats would go unrewarded. In either case they are not going to play active roles in improving their health when they believe health outcomes are likely to be beyond personal control. But what evidence is there that warnings which emphasize the dangerous consequences of health-threats can create such an impression?

Supporting Evidence

A review of the circumstances under which high fear arousing messages are less effective than low fear arousing messages indicates that high fear arousing messages lose their persuasiveness when people are "ready" to be persuaded that they will be unable to cope with such serious threats to their health.

For instance, high fear arousing messages are less or no more persuasive than low fear arousing messages when recipients are low in self-esteem, though such messages are more persuasive when recipients are high on this dimension (Dabbs & Leventhal, 1966; Leventhal & Trembly, 1968; Kornzweig, Note 1). As others have suggested (e.g., Leventhal & Trembly, 1968), individuals low in self-esteem may experience a breakdown in coping ability when confronted with strong environmental threat. These individuals are likely to have a long history of failure in coping with threatening events and therefore are likely to believe that they are incapable of following through on recommended actions, or that these actions are not working if feedback is not immediate and positive. In other words, these individuals probably have a diminished sense of personal efficacy when faced with challenging circumstances.

Individuals who are especially vulnerable to a health-threat also appear

unable to respond adaptively after receiving high fear arousing health-threat warnings. Though one might suspect that vulnerability to a health-threat would be positively related to the acceptance of recommended actions (e.g., Hochbaum, 1958; Rogers, 1975; Rosenstock, 1974), there is evidence suggesting that vulnerability is negatively related to the acceptance of recommendations, especially when health-threats have been portrayed as very serious.(Berkowitz & Cottingham, 1960; Leventhal, Jones, & Trembly, 1966; Leventhal & Niles, 1964; Leventhal & Watts, 1966; Rogers & Mewborn, 1976; Kornzweig, Note 1; Niles, Note 2; Watts, Note 3).

If health-threat warnings fail to motivate protective actions because they convey the impression that health is beyond personal control, then the efficacy of recommended actions should influence whether recommendations are accepted or rejected. Specifically, highly efficacious responses should alleviate feelings of helplessness if such feelings are generated by the specified health hazard and not by a more diffuse consideration of health hazards in general.

More often than not, investigators have found that when the threat is specifc and well defined, increases in the efficacy of coping responses lead to corresponding increases in message acceptance (Chu, 1966; Rogers & Deckner, 1975; Rogers & Mewborn, 1976; Rogers & Thistlethwaite, 1970). It is worth noting that Rogers and Mewborn (1976) found the efficacy of a recommendation to be a better predictor of intention to engage in a recommended preventive health action than either the seriousness or relevance of either of three health-threats (smoking, venereal disease, or careless driving).

From the above discussion it seems evident that a thorough understanding of why health-threat warnings may or may not be effective in motivating people to take care of their health requires an understanding of how these communications affect perceptions of control and how such perceptions relate to the acceptance of recommendations. Researchers who have looked at the effects of giving people health-threat warnings designed to enhance the perception of control have found that precise information concerning how to perform recommended responses, which they refer to as specific action instructions, clearly enhances the acceptance of recommendations (Leventhal, Singer, & Jones, 1965; Leventhal, Jones, & Trembly, 1966; Leventhal, Watts, & Pagano, 1967). Specific action instructions probably encourage a sense of personal efficacy and may enhance response efficacy as well by indicating that health outcomes are dependent upon specific health behaviors.

Research on the effects of action instructions indicates that if health professionals are to encourage people to do things to improve their health, they need to offer them strategies for doing so. Communications urging people to lose weight or to reduce the number of stressful situations in their lives, for example, without instruction on how they might accomplish these goals, seem unlikely to promote the impression that people are really capable of controlling their weight or blood pressure. As Bandura (1977) points out, to suggest to people that they are able to control important outcomes "... without arranging conditions to facilitate effective performance will most likely lead to failures that discredit the persuaders and further undermine the recipients' self-efficacy" (p. 198).

Concluding Remarks

The personal effectance model provides a simple guideline for those interested in motivating others to participate actively in the care of their health -- increase perceived control over health by increasing perceptions of response and personal efficacy. This strategy would seem to be particularly useful when people are apt to question the utility of following recommendations, as they would, for example, when the efficacy of the recommended response is low. Communicators could draw attention away from this discouraging circumstance by focusing instead on information that would enhance expectations of success. For instance, they could present information about similar individuals who had been successful in their own attempts to control the health-threat in question. Information of this type (e.g., a case history) is often more salient than statistical information (e.g., Nisbett, Borgida, Crandall, & Reed, 1976), and it seems reasonable to hypothesize than an appropriate case history could encourage people to believe that they too are capable of overcoming a health-threat.

Communicators also should provide people with specific action instructions so that they know exactly what they must do to protect their health. Such information may not only increase perceptions of personal efficacy but may increase perceptions of response efficacy as well. Of course, specific statements concerning response efficacy would also accomplish the latter if response efficacy were in fact high. But even if response efficacy were high there may still be individuals who would anticipate being one of the few for whom the recommended response is ineffective. We would suggest that

communicators demonstrate how specific health outcomes depend upon specific health behaviors if they suspect that information concerning response efficacy is being ignored or considered irrelevant. For example, dentists could demonstrate the contingency between brushing and flossing and plaque by having their patients chew disclosing wafers which reveal areas of unremoved plaque. In situations where it may not be practical to provide such personalized feedback communicators could suggest a simple "contingency test" for people to employ on their own.

Other conceptualizations of health-threat warnings seem to have more difficulty in generating strategies for formulating practical and effective health-threat warnings. The drive model, for instance, implies that we should be careful not to frighten people excessively lest we encourage them to be defensive. Aside from not being specific about what the optimal level of fear arousal should be in various situations, such advice overlooks the difficulty inherent in telling people about potentially serious health-threats without frightening them very much. Not only would it be difficult to determine the optimal level of fear arousal in any given situation, but it would seem inevitable that communicators must frighten people quite a bit if they are to be truthful in their portrayal of health-threats like lung cancer, venereal disease, hypertension, and so on.

Both the parallel response model and protection motivation theory also have difficulty in generating communication strategies when circumstances are less than ideal. When specific action instructions are inappropriate, as they are when the message is required to be brief and recommendations are complex, or when the recommended response is not efficacious, these perspectives

are not very explicit about alternative ways to encourage people to accept the advice given in health-threat warnings. The parallel response model does imply that communicators need to discourage recipients of health-threat warnings from focusing on their fear even though it suggests that attempts to control fear might lead to danger control responses (Leventhal, 1971). We would agree that people should be discouraged from focusing on their fear but would also suggest that it is important to recognize the reasons why health-threat warnings may frighten people.

Health-threats may be frightening not only because they threaten people with physical harm but also because they threaten their perceptions of control and consequently their images of themselves as efficacious human beings. Communicators could play down the seriousness of health-threats (e.g., the apparent danger) in order to allay peoples' fear, but this would reduce the motivation for doing something about the health-threat in the first place.

Rather than play down the seriousness of health-threats communicators would be better off trying to persuade people of their potential for controlling them. If people can be convinced of their ability to control a health-threat, it would no longer overwhelm them and make them feel helpless nor encourage them to behave defensively in order to protect their self-concepts. In conclusion, the personal effectance model not only offers a number of hypotheses for how health-threat warnings can diminish perceptions of control, but also a basis for developing communications that will enhance these perceptions and hence encourage people to respond adaptively when informed of a threat to their health.

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Reference Notes

1. Kornzweig, N.D. Behavior change as a function of fear-arousal and personality. Unpublished Doctoral Dissertation, Yale University, 1968.

2. Niles, P. The relationship of susceptibility and anxiety to acceptance of fear-arousing communications. Unpublished Doctoral Dissertation, Yale University, 1964.

3. Watts, J. C. The role of vulnerability in resistance to fear-arousing communications. Unpublished Doctoral Dissertaion, Bryn Mawr College, 1967.

References

Bandura, A. Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 1977, 84, 191-215.

Berkowitz, L., & Cottingham, D. The interest value and relevance of fear-arousing communications. Journal of Abnormal and Social Psychology, 1960, 60, 37-43.

Bucher, R. Blame and Hostility in disaster. American Journal of Sociology, 1957, 62, 467-475.

Chu, G. G. Fear arousal, efficacy, and immenency. Journal of Personality and Social Psychology, 1966, 4, 517-524.

Cohen, A. R. Need for cognition and order of communication as determinants of opinion change. In C. Hovland (Ed.), Order of Presentation. New Haven: Yale University Press, 1957.

Dabbs, J. M., & Leventhal, H. Effects of varying the recommendations in a fear-arousing communication. Journal of Personality and Social Psychology, 1966, 4, 525-531.

Drabeck, T., & Quarentelli, E. L. Scapegoats, villains, and idsasters. Trans-Action, 1967, 4, 12-17.

Evans, R. I., Rozelle, R. M., Lasater, T. M., Dembrowski, T. M., & Allen, B. P. Fear arousal, persuasion, and actual versus implied behavioral change: New perspective utilizing a real-life dental hygience program. Journal of Personality and Social Psychology, 1970, 16, 220-227.

Frankel, A., & Snyder, M. L. Poor performance following unsolvable problems: Learned helplessness or egotism? Journal of Personality and Social Psychology, in press.

Goldstein, M. J. The relationship between coping and avoiding behavior and response to fear-arousing propaganda. Journal of Abnormal and Social Psychology, 1959, 58, 247-252.

Haeffner, D. P. Arousing fear in dental health education. Journal of Public Health Dentistry, 1965, 25, 140-146.

Higbee, K. L. Fifteen years of fear arousal: Research on threat appeals: 1953-1968. Psychological Bulletin, 1969, 72, 426-444.

Hochbaum, G. Public participation in medical screening programs: a socio-psychological study. Public Health Service Publication No. 572. Bethesda, Maryland: U.S. Government Printing Office, 1958.

Janis, I. L. Effects of fear arousal on attitude: Recent developments in theory and research. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology (vol. 3), New York: Academic Press, 1967.

Janis, I. L., & Feshbach, S. Personality differences associated with responsiveness to fear-arousing communications. Journal of Personality, 1954, 23, 154-166.

Janis, I. L., & Terwilliger, R. F. An experimental study of psychological resistance to fear-arousing communications. Journal of Abnormal and Social Psychology, 1962, 65, 403-410.

Kelly, T. A., Kegeles, S. S., Lund, A. K., & Weisenberg, M. Knowledge and attitudinal effects of a children's dental slide show. Journal of Preventive Dentistry, 1976, 3, 30-34.

Klapper, J. T. The Effects of Mass Communications. Glencoe, Ill.: Free Press, 1960.

Leventhal, H. Findings and theory in the study of fear communications. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology, (vol. 5), New York: Academic Press, 1970.

Leventhal, H. Fear appeals and persuasion: The differentiation of a motivational construct. American Journal of Public Health, 1971, 61, 1208-1224.

Leventhal, H., Jones, S., & Trembly, G. Sex differences in attitude and behavior change under conditions of fear and specific instructions. Journal of Experimental Social Psychology, 1966, 2, 387-399.

Leventhal, H., & Niles, P. A field experiment on fear arousal with data on the validity of questionnaire measures. Journal of Personality, 1964, 32, 459-479.

Leventhal, H., Singer, R. P., & Jones, S. Effects of fear and specificity of recommendations upon attitudes and behavior. Journal of Personality and Social Psychology, 1965, 2, 20-29.

Leventhal, H., & Trembly, G. Negative emotions and persuasion. Journal of Personality, 1968, 36, 154-168.

Leventhal, H., & Watts, J. C. Sources of resistance to fear arousing communications on smoking and lung cancer. Journal of Personality, 1966, 34, 155-175.

Leventhal, H., Watts, J. C., & Pagano, F. Effects of fear and instructions on how to cope with danger. Journal of Personality and Social Psychology, 1967, 6, 313-321.

Maier, S. F., & Seligman, M. E. P. Learned helplessness: Theory and evidence. Journal of Experimental Psychology: General, 1976, 105, 3-46.

McGuire, W. J. The nature of attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), The Handbook of Social Psychology (vol. 3), Reading, Mass.: Addison-Wesley, 1969.

Nisbett, R. E., Borgida, E., Crandall, R., & Reed, H. Popular induction: Information is not necessarily informative. In J. S. Caroll & J. W. Payne (Eds.), Cognition and Social Behavior. Hillsdale, N.J.: Erlbaum, 1976.

Rayner, J. I., & Cohen, L. K. School dental health education. In N. D. Richards & L. K. Cohen (Eds.), Social Sciences and Dentistry: A Critical Bibliography, Federation Dentaire Internationale. The Hague, Netherlands: Sigthoff, 1971.

Rogers, R. W. A protection motivation theory of fear appeals and attitude change. Journal of Psychology, 1975, 91, 93-114.

Rogers, R. W., & Deckner, C. W. Effects of fear appeals and physiological arousal upon emotion, attitudes, and cigarette smoking. Journal of Personality and Social Psychology, 1975, 32, 222-230.

Rogers, R. W., & Mewborn, C. R. Fear appeals and attitude change: Effects of a threat's noxiousness, probability of occurence, and the efficacy of coping responses. Journal of Personality and Social Psychology, 1976, 34, 54-61.

Rogers, R. W., & Thistlethwaite, D. L. Effects of fear arousal and reassurance on attitude change. Journal of Personality and Social Psychology, 1970, 15, 227-233.

Rosenberg, M. J. Cognitive structure and attitudinal effect. Journal of Abnormal and Social Psychology, 1956, 53, 367-372.

Rosenstock, I. Historical origins of the health belief model. In M. H. Becker (Ed.), The Health Belief Model and Personal Health Behavior. N.J.: C. B. Slack, Inc., 1974.

Seligman, M. E. P. Helplessness. San Fransisco: W. H. Freeman, 1975.

Snyder, M. L., Stephan, W. G., & Rosenfield, D. Attributional egotism. In J. H. Harvery, W. J. Ickes, & R. F. Kidd (Eds.), New Directions in Attribution Research (vol. 2), N.J.: Erlbaum, in press.

Wallston, B. S., & Wallston, K. A. Locus of control and health: A review of the literature. Health Education Monographs, in press.

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