

Earlier enthusiasms and rejections in health education are being reevaluated in the light of scientific research. In this context a study of the place of the mass media is necessary, and the following paper deals with this question.

THE ROLE OF MASS MEDIA IN PUBLIC HEALTH

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MASS MEDIA are intensively employed in public health. Vast sums are spent annually for materials and salaries that have gone into the production and distribution of booklets, pamphlets, exhibits, newspaper articles, and radio and television programs. These media are employed at all levels of public health in the hope that three effects might occur: the learning of correct health information, the changing of health attitudes and values, and the establishment of new health behavior.

During the past decade there have been strong disagreements among public health leaders regarding the effectiveness of mass media in achieving these ends. In one camp are those who believe that mass media are highly effective and deserve recognition as the primary means of public health education. Opposed are those who strongly question such a point of view, and argue that health education must use more dynamic methods. Some educators go so far as to assign mass media a relatively limited role.

Those who support the wide use of mass media maintain that mass media provide the best means of imparting the latest scientific information to large groups of people. It has been the experience of health workers that the general public possesses a great deal of incorrect information about traditional

health problems and at the same time lacks an understanding of the advances in numerous public health fields. The mass media are assumed to be the means whereby changes in knowledge can be achieved. The correct information is supposed to produce a trigger-like reaction whereby new health facts lead to a change in health attitudes and values, which in turn bring about changes in health practices. This assumption is based partly on the observation that industry spends considerable sums of money for advertising through mass media, and would not do so unless results were achieved.

Others feel that even the best of mass media will not reach members of these groups which most need the services public health has to offer. Some more personalized approach would seem necessary both to reach such groups and to influence the values, beliefs, and attitudes which bind them to outmoded health behaviors. Furthermore, selling health is different from selling cigarettes or soaps. A business may be successful if only a small percentage of the public is influenced to become customers, and for many firms this means making only a single purchase. What a far cry this is from influencing the vast majority of our population to follow a particular health practice day after day for the rest of their lives.

The two sets of arguments seem poles apart, yet each has a ring of truth. They pose for us a most serious question to consider: What is the role of mass media in public health programs?

In approaching this question we are fortunate that a wealth of excellent research evidence is available. Since the beginning of World War II mass communications have been the subject of intensive research, and many excellent studies have been reported. It is the purpose of this paper to review some of the most significant of these studies in so far as they have a bearing on our question.

Mass Media Tend to Reach Select Audiences

There is ample evidence, and certainly no reason for presenting details, to show that the mass media in this country reach millions of people, yet they are more likely to reach persons of somewhat better socioeconomic status, educational status, and those more active in the community activities than those of lowest socioeconomic status, education, and participation in community affairs. They are somewhat more likely to reach the persons in leadership positions than those in followership positions, those who have prestige and status in their intimate groups rather than those who lack these characteristics.

This conclusion is supported by a wealth of interesting data pertaining to the number of people reached by the various media.^{9,10,13} It even applies with respect to the use of the public library.¹

The major concern, of course, is not one of reaching people but rather of reaching the desired audience. A pamphlet intended to recruit young girls into the nursing profession has no chance of achieving its purpose unless the pamphlet is read either by those individuals eligible to enter the nursing profession or by others who will com-

municate the contents to the eligible group. In many cases, when we can define precisely the desired audience, it is possible to devise ways of reaching the group through mass media. On the other hand, certain desired audiences, such as men between the ages of 50 and 60 with cardiac disorders, or the 15 per cent of the population which was not reached in the county x-ray survey, are sometimes nearly impossible to reach by means of mass media alone.

At times it is necessary to reach every citizen in the community. It may be important for everyone to take action regarding an impending epidemic, or to take essential health precautions during a period of crisis or disaster. The success of some major health effort may depend on the participation of groups that cannot be reached directly through mass media channels.

Most health workers are only too familiar with the fact that such groups as the PTA are attended by the parents who least need to be reached. The parents who would most benefit from the health talk or movie are rarely in attendance. The audience is free to select or reject.

Even when people are exposed to a communication, they may neither read nor listen to what we have to say. During one of the war bond drives in World War II every household in Baltimore, Md., received a pamphlet urging the occupants to buy bonds. After a short period of time a large number of people was interviewed, 83 per cent of whom did not recall receiving a pamphlet.³

People read, listen to, or see primarily those things with which they agree. During World War II every possible communication channel was used to persuade people in a certain community to see a particular movie, the purpose of which was to heighten citizens' identification with the war effort. Only 5 per cent of the adults in the community attended the movie. When those persons

who attended the movie and those who did not attend were interviewed, it was found that the former group had already manifested more behavior encouraged by the movie than the latter group. For example, 40 per cent of those who attended the movie had given blood to the Red Cross prior to attending the movie compared to 20 per cent of those not attending.³

Klapper, in commenting on the large number of researches on this process that he calls "self-selection," writes: "Whether a person voluntarily reads at all, what kind of material he reads, what kind he listens to, and what type of movie he chooses to see are apparently determined by his cultural status. Taste, in the widest sense of the term, seems a product of formal education rather than of attendance on given kinds of mass media material. Tastes, indeed, seem so fixed that mass media have little chance to do anything about them. For it now appears that a given kind of material distributed through the mass media, reaches only those persons who already like such material."⁹ pp. Intro., p. 11

Effects May Be Specific and Limited

If we can reach and hold our desired audience, how effective will mass media be in imparting the intended message? One of the most careful and intensive research investigations in mass communication was conducted in World War II and we believe it is significant enough to report in some detail. Hovland and his associates,⁶ working in the War Department's Information and Education Division, investigated the effectiveness of numerous training films, including the "Why We Fight" series. This series consisted of seven 50-minute films, used especially in orienting new recruits during basic training. The films outlined the history of World War II from the rise of Fascism in Italy and Germany through America's entrance into the war.

As to the general purpose of the films, Hovland states: ". . . their purpose was not purely instructional in the manner of a training film, but was rather to get across particular interpretations of facts, overcome prejudices, arouse motivations and in general to modify attitudes rather than merely to convey factual information."⁶, p. 21

Two basic assumptions were made in preparing the "Why We Fight" series. First, that a large group of men entering the Army lacked knowledge of the world events leading to America's entrance into the war. Second, that if the men understood the facts of the situation they would accept their role in the Army more readily.

Without describing in detail the experimental design and procedure of the research, it will be of value to know that for a number of the films experimental and control groups were devised; in the former were men who had seen the films while the control group consisted of men who had not seen the films. The films were pretested through interviews and questionnaires and the same methods were used in securing information after the films had been seen. The major findings of this research make a real contribution to understanding the effects of mass media.

First, the films were found in general to be quite effective in imparting factual information. Men who had seen the films increased considerably their knowledge about the war and knew much more about various national and international events than the men who had not seen the films.

Second, the films were effective in changing opinions when the opinions dealt with specific facts covered in the films. For example, a greater number of men who had seen the film "Prelude to War," as compared to those who had not seen it, agreed with the statement that the German Army had about the best trained officers in the world. Al-

though the films were effective in changing opinions, changes in opinions were not as great as changes in information.

Third, in analyzing the films in relation to motivation, Hovland writes: "The films had no effects on the items prepared for the purpose of measuring effects on the men's motivation to serve as soldiers, which was considered the ultimate objective of the orientation program."⁶ pp. 64-65

A similar method of analysis was used in the study of the reaction to a mass x-ray survey conducted with strong mass media support in Mishawaka, Ind., in 1947 and 1948. Random adult samples of approximately 400 were obtained prior to and after the intensive information campaign lasting almost a year.

"In general, the study indicates that the survey was effective in imparting specific information publicized in the survey, and was successful in motivating a little over 60 per cent of the adult population to obtain x-rays during the year. The findings suggest, however, that people were not always left with a thorough understanding of the items of information they had picked up; that the survey failed to increase knowledge or influence attitudes in areas of information and attitude not specifically covered in the survey; and that it was unsuccessful in influencing some of the basic attitudes related to tuberculosis control."⁷

Schram,¹⁴ in an evaluative review of the effects of mass media, concludes that mass media are valuable in increasing factual information and changing attitudes when the media are highly specific. He believes that ". . . the amount of attitude and opinion change tends to be proportional to the specific quality of the attitude or opinion. If the desired response is specific, it is more likely to be learned than if it is general. . . . It appears that few persons can be counted on to learn the unstated implications of a mass communication."¹⁴ p. 405

In the health field, Greenberg and his associates⁴ have attempted to determine whether the pamphlets "Pierre the Pelican" met the objectives for which they were written. This series of pamphlets distributed widely by health agencies and intended for parents of first-born children was designed to motivate parents to use certain child-rearing practices. The series consisted of 12 pamphlets, simply and attractively designed, each dealing with various areas of child growth and development. Once a month, for the first year, a pamphlet would be mailed to the parents.

Greenberg set up experimental and control groups of parents of first-born children, based on four strata according to degree of urbanization. The experimental group received the pamphlet series while the control group did not. A questionnaire-interview schedule was developed and tested in pilot studies. Skilled interviewers were selected and underwent a three-day training course. Through the interviews, information was secured in various areas of child care and training: eating, sleeping, and toilet habits; linguistic and motor development; social development; and parents' present attitudes and future plans in relation to the child's growth and development.

Preliminary analysis of the data obtained reveal few differences in parents' feeding practices existing between the group receiving the "Pierre the Pelican" series and those not receiving it. The authors conclude with the statement: "This evaluation shows that in order to affect attitudes and practices, more must be known about how to utilize the complex psychological factors which stimulate persons to action. Also, the alteration of established patterns of behavior may be too much to expect from a single instrument."⁴ p. 1155

We may summarize with reference to the health field. If mass media are skillfully prepared, we may expect health

facts to be learned. An attitude toward a health subject may be altered quite easily if the attitude is neutral in character and the subject matter of the mass media relates specifically to the health attitude. It is very difficult, however, for mass media to change attitudes imbedded in tradition and strongly held.

Many health workers have been enthusiastic about the importance of using mass media technics because of the success of mass media in the advertising field. Lazarsfeld and Merton show the fallacy of this deduction. They write: "Prevailing beliefs in the enormous power of mass communications appear to stem from successful cases of monopolistic propaganda or from advertising. But the leap from the efficacy of propaganda aimed at deep-rooted attitudes and ego-involved behavior is as unwarranted as it is dangerous. Advertising is typically directed toward the canalizing of preexisting behavior patterns or attitudes. It seldom seeks to instill new attitudes or to create significantly new behavior patterns."¹¹, p. 114

Thus, cigarette advertisers do not spend their money on attempting to convince the nonsmoker to smoke, but rather on attempting to persuade the smoker to switch his brand. The behavior change mechanism involved in this is quite different from the behavior change mechanism involved in persuading longshoremen to visit a physician at regular intervals, when longshoremen view doctors as persons you visit only when you are seriously ill.

Wiebe¹⁵ feels that radio and television can sell citizenship objectives as well as soap provided certain specific conditions exist—conditions which have been found essential in the successful merchandising of commodities. These conditions are not easily met. One important condition of selling a commodity is having a retail outlet. Retail sales people play an important facilitating role, for they supply the link between the radio and television

advertisement and the completion of the purchasing act. Retail sales clerks, often located in the nearby neighborhood, have the advertised commodity ready and attractively packaged for immediate distribution. In the field of public health, health agencies might be thought of as retail stores and health workers as sales clerks who are enthusiastic about their products and eagerly await the general public. Unfortunately, however, health agencies have very few products in attractive, easy-to-carry packages for quick and immediate delivery. The process of achieving the objective is much slower and more complex.

Personal Appeals May Influence Effects

While mass media cannot, except under most extraordinary conditions, be expected to move people to action if the action is in opposition to strong beliefs and attitudes, they can be effective in moving people to action if the desired course of action is in the direction of basic personal and social motives, and particularly if the action is supported by leaders holding acceptance and prestige in the eyes of the laymen. It is important that these leaders have the capacity to translate the action meaningfully into the behavior patterns of those concerned.

One amazingly successful demonstration of the effectiveness of mass media as a motivating force was that of Kate Smith in one of her war bond appeals. In one day, through the medium of radio, she received pledges amounting to thirty-nine million dollars. Merton,¹² in analyzing this particular radio program, studied the types of motivating themes used by Kate Smith in her appeals. Previous war bond drives had emphasized the themes of sound investment and future security, but these were entirely omitted in the Smith program. Almost one-half of her themes related to sacrifice and another third to participa-

tion and competition. These themes are illustrated in the following statements taken from her talks:

"Could you say to Mrs. Viola Buckley . . . Mrs. Viola Buckley whose son Donald was killed in action . . . that you are doing everything you can to shorten the war . . . that you are backing up her son to the limit of your abilities?"^{12, p. 52}

"We can do it together. . . . We can put this greatest of war bond drives across."^{12, p. 55}

"I was a little disappointed to discover that the good old town of New York was behind Los Angeles . . . now we're going to hold the switchboard open to give New Yorkers a chance to catch up to and surpass Los Angeles. Are you with me?"^{12, p. 65}

Although the Kate Smith program is in no way comparable to health programs, it does illustrate the point that health programs attempting to bring about some change in behavior must give attention to the motivational factors employed. Professional health workers might not be very enthusiastic about heavy emphasis upon sentimental themes, but they must realize that formal and scientific presentations will do little towards changing behavior.

It is important to recognize that Kate Smith's success did not stem solely from her ability to communicate effectively with the public and from the fact that she held unusual prestige in the eyes of laymen. The campaign which she touched off was the result of months of planning. Many persons who intended to purchase bonds held up their purchases to take advantage of the publicity in support of the program under way. Weeks of intensive work with leadership groups intermediary between the broadcast station and the lay public were involved in developing this project. Their efforts were timed with great care in order that a bandwagon type of appeal might be developed. Unfortunately, data are not available on the amount of funds spent for war bonds resulting from the pre-planning and those which resulted directly from the appeal of Miss

Smith. One must be cautious, therefore, in estimating the effectiveness of her drive even though the evidence suggests that her appeal was most potent.

Psychological Set Influences Interpretation

When unusual conditions of psychological readiness exist the mass medium may play an exceptional, and in fact frightening, role in influencing public action. This is well illustrated by the panic created by the broadcast of Orson Welles's now famous "Invasion from Mars" play in 1938. Cantril, in his study of the panic, observed that "long before the broadcast had ended people all over the United States were praying, crying, fleeing frantically to escape death from the Martians. Some ran to their loved ones, others telephoned farewells or warnings, hurried to inform neighbors, sought information from newspapers or radio stations, summoned ambulances and police cars. At least six million people heard the broadcast. At least a million of them were frightened or disturbed."^{2, pp. 291-292}

Cantril's study suggests that while no single personality variable consistently related to the panic reaction, a lack of critical ability seemed most conducive to fear under the stress situation. His study suggests that an insecure and bewildered people under pressure of domestic insecurity and international tension, lacking adequate information or appropriate standards for judging the events, and threatened by a situation in which they stood to lose all their values at once, were triggered into panic.

The credibility of persons interviewed with respect to the experts cited on the program, and the fumbling attempts of many to obtain advice from experts of their own choosing, call attention again to the importance of prestige suggestion in influencing behavior through any means of communication. Hovland and

his associates, on the basis of many studies of source credibility, conclude that "the characterization of the communicator as trustworthy or biased has relatively little effect on the learning of factual material, but markedly influences the degree to which the communicators' conclusions and recommendations are accepted."⁶ p. 107²

Trusted Informal Leaders Can Serve Key Function

The evidence suggests that achieving long-term attitude and behavior change requires communications of a more personal type to assure full understanding of the meaning of the change and to help in translating the change into the personal behavior of the individual concerned.

Other things being equal, communication is likely to be more effective if the person communicating is perceived as one who can be trusted, who is an expert, or who holds prestige in our eyes. A very popular and trusted health science writer may be more effective in communicating scientific opinions than a great scientist who lacks status in the eyes of the public. Local health leaders may be better able to capture opinion than national leaders of greater stature who lack experience in the local area. The unrecognized leader in the local group may be more effective than either of the former with the group by whom he is trusted.

It is with this informal leader that the group may be able to test out new ideas verbally or in action before trying them out in life. The discussion with him may provide an opportunity to test reality in a nonthreatening situation. It may afford also an opportunity to determine the relation of the change to the solution of the problem of concern. When this happens the person who is ego-involved in the problem may be better able to understand how it applies to him, and

therefore may be more willing to adopt the new practice.

Many of the group discussion-decision studies point to the importance of this more personal type of education as a means of providing people with a better opportunity to exchange ideas and make decisions for themselves. Workshops, buzz groups, self-surveys, are all means of reality testing which help individuals to achieve change with a minimum of personal threat. In these interpersonal situations communication is more truly a two-way process. It is in this setting that the communicator can better adapt to the needs and concerns of his audience, and can better adjust to discussion in terms of the expectations or motivations of those he is seeking to influence.

Tinker to Evers to Chance?

In what ways, then, do mass media really influence patterns of personal change? Mass media do serve a significant function in providing information and support to selected groups of the population. Often, however, they do not reach those populations with which public health is primarily concerned. When they do reach those groups, the effects have been less satisfactory than might be desired.

Research suggests that mass media have varying and often limited effects, both by failing to reach all members of the population, and because the selective nature of communication does not assure adequate exposure and reinforcement. Therefore, significant behavioral changes may not result. Among those most frequently reached, however, are persons of somewhat greater than average education and of somewhat better than average socioeconomic status. These are people who tend to be active participants in informal social webs of their communities; because of their superior education and better orientation to current affairs they are more likely to un-

derstand and accept new scientific information. They are more likely also to recognize their own community's stake in new public health approaches and to see the value of action both for themselves and on the part of those less alert and less informed.

Is it possible that these persons are key communications gatekeepers to the people of their communities? One is reminded of the famous Chicago double play team of Tinker to Evers to Chance. Are these leaders the community "Evers" who receive and evaluate communications from the mass media sources, and are in a position to selectively pass on the communications to persons who look to them for leadership?

Katz and Lazarsfeld⁸ have found that such an interrelationship between mass media sources and the interpersonal networks of communication in local areas does actually exist. In their investigations they have identified certain individuals whom they call "opinion leaders" who are more influential than other members of the population in their local settings. The opinion leaders they have identified are not status people in any formal way, rather they are the everyday type of person found in all socioeconomic groups, to whom people ask questions and to whom people listen. The research suggested that there is, indeed, a "two-step flow of communication" from the sources of mass media to these informal opinion leaders, and from these opinion leaders to persons they meet in everyday social contacts.

The significance of the Katz and Lazarsfeld investigation, as compared with some of the earlier studies in mass communication, is that the audience is perceived not as a mass of disconnected individuals, but rather as individuals who belong to groups and whose beliefs and attitudes are influenced by these groups. These are individuals also who share the values and beliefs of groups to which they belong and are better able

than outsiders to communicate effectively with members of these groups.

As Katz and Lazarsfeld suggest, there may be a hidden network of these informal opinion leaders who are themselves affected by communications received through the mass media and who in turn influence others about them. To the extent that this is true, the role of mass media in public health education may be quite different from the role we frequently assign it. It is a potent role, and a most significant one for health educators to consider; one, in fact, that none can afford to ignore.

Research is needed to learn what different types of informal leaders exist in areas of concern to public health. Are there opinion leaders who are key communication gatekeepers in child health, in chronic diseases, in alcoholism? If so, how can the mass media be employed in such a way that these opinion leaders are more effectively utilized in the communication networks they informally serve? How can we best give "Evers" the backing he deserves?

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Worth Repeating

"A crash attack on the major problems of health suits our impatient culture. But those who might be commissioned to do the research know that it is poor strategy. At present we are more limited by the state of general scientific knowledge than by want of specific instruments or difficulties in engineering Historically the methods of uncommitted wondering has been the source of major ideas. From the confusion of detail general principles emerge—not because they are summoned for some crash program but because they are already latent in the facts that are available Obviously we, in various specialties, and the public at large have a common interest in seeing that a substantial base of scholarship is supported in its own right and not as an instrument in achieving some popular goal It may indeed be proven by history that ignorance and folly, were greater evils than cholesterol or cancer."

(From "On Crash Programs," an editorial by Vincent P. Dole, M.D., in *Circulation Research*, an official Journal of the American Heart Association.)