# Cost-Effectiveness of Television, Radio, and Print Media Programs for Public Mental Health Education

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**Mass media campaigns to influence public attitudes and behaviors in the area of mental health must consider cost-effectiveness, which is based on actual costs, the number of people reached (exposures), and the impact of the program on the individual. Cost per exposure is a critical factor. The authors review their experience in developing media programs in several broadcast formats and in print. Their experience suggests that an effective television production has a very high per-exposure cost and that radio is a more cost-effective way to present health messages. Radio programs also have the advantage of reaching people in their homes or cars or at work. Brief segments may be particularly cost-effective because they can be can be inserted between programs during prime-time hours. Print media—newspapers, magazines, and newsletters—can be cost-effective if magazine or newspaper space is free, but newsletters can be costly due to fixed postage costs. One advantage of print is that it can be reread, clipped out, copied, and passed on. (*Psychiatric Services* 49:808–811, 1998)**

Effective use of mass media to promote mental health to a targeted population is in the formative stages. Although a small body of literature on a variety of programs exists, outcome evaluations are often impressionistic, and sound scientific methods for determining program effectiveness are still being developed (1). Population-based preventive health strategies have been used in other health areas, suggesting that they could also be used effectively in mental health. This paper reports on one aspect of the use of mass media in mental health, cost-effectiveness of broadcast media on a per-exposure basis, which is an important consideration in program development.

Mass media programs intended to influence health behaviors of the public may target two broad goals. The first is to positively influence the health behavior of the individuals exposed to the program. Models of the effective use of media from another health area include the Stanford three-community study and the Stanford five-city project, which demonstrated that the cardiovascular health of the community could be improved by educational messages conveyed by mass media, including radio, television, and print (2).

In the area of mental health, radio and television programming have been used to increase awareness and utilization of resources (3,4), to offer practical strategies for responding to children's behavioral problems (5), and to modify approaches to interpersonal problem solving (6).

A second goal of a mass media program may be to affect health policy by influencing public opinion. For example, addictive behaviors are relatively difficult to alter directly through the mass media, an expectable finding because these behaviors are often difficult to modify even with intensive one-to-one intervention. Nonetheless, mass media programs aimed at reducing smoking have been credited with being more cost-effective than many other methods of controlling tobacco use by influencing public attitudes. Changes in public attitudes have led to policy changes in areas such as the rights of nonsmokers, cigarette taxes, and bans on advertising (7,8). As a result of these changes, tobacco use declined 22.4 percent between the years 1963 and 1975 (9).

Modifying public perceptions of mental illness could promote policy changes favorable to psychiatry. Broadcast media have been shown to be effective in destigmatizing psychiatric illness (10) and promoting acceptance of people with mental disorders (6). Because policy influences decisions about issues such as parity for mental health coverage, improving public perceptions about the value of psychiatric interventions is critically important. Mental health attitudes and behaviors are complex, and early studies of mass media efforts to alter these behaviors have suggested limited results (1). However, DeJong and Winsten (11) subsequently published a more optimistic comprehensive analysis of the impact of media campaigns in the area of substance

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abuse. Their conclusions stressed that goals must be well defined and programs carefully targeted to specific audiences. They also noted that short-term media programs often fail and that the most successful public education campaigns have been carefully planned long-term efforts.

However, such long-term media efforts are costly, and it is important to consider how best to channel limited funding for maximal impact. Pharmaceutical companies no longer support such efforts as generously as in the past. Few foundations provide funding, and grant support through governmental agencies is limited and highly competitive.

Over the past eight years, we have developed a number of mental health educational programs using a variety of formats on both radio and television. We have reviewed these efforts to determine their relative cost-effectiveness in reaching large segments of the population. Determining cost-effectiveness depends on three variables: cost, the number of people reached (exposures), and the impact of the program on the individual.

Although it is difficult to determine the precise number of exposures and impact on each audience member, it is possible to draw some conclusions about cost and exposures.

## Television

Television offers real advantages as a medium for public mental health education, but it is extremely expensive. The visual appeal, or production value, of a TV program depends on production costs. Live talk shows without preproduced segments are cheapest to produce but have limited entertainment value and interest to the viewer. In preproduced programming, more money spent on production usually results in a higher-quality program. Current audience taste favors fast-paced scene changes, but every time the filming crew changes sites, production costs are added. Further, the public has become accustomed to computer-generated animated graphics to supplement scientific explanations, and these costs are enormous.

We have produced televised mental health programs in several different formats. An eight-part series used a live talk-show format to feature interviews with psychiatrists from our university, who talked to the public about particular disorders. Because we used our university studio, production costs were negligible. However, the budget to promote the series through newspaper advertisements statewide was $30,000, a minimal promotion budget. The series was aired during prime time on public television. Audience size was estimated by South Carolina Educational Television to be about 4,000 per show (32,000 for the series), or a cost per viewer of about $1 a show.

In addition, we have produced a high-production-value documentary, *The Mind's Eye: Obsessions and Compulsions,* a one-hour program shot at five locations with computerized animated graphics. The budget for this production was $186,000, of which $25,000 was for animated graphics. A documentary such as this competes against national productions, which more typically have budgets in the range of $400,000, with promotional budgets often as high as production budgets. Our program was aired on public television in six states, possibly reaching 25,000 to 50,000 viewers. The per-viewer cost, at several dollars per exposure, was clearly much higher than the live talk show series, but the impact of the show on each viewer was probably greater.

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Our experience with television's high cost per exposure parallels that of the Minnesota Heart Health Program, a community-based preventive health campaign. Early in that effort, a single half-hour television program costing $100,000 was produced. A viewer survey found that the program attracted only 1.5 percent of the viewing audience. The show was aired again later, this time with heavy promotion, and attracted 19 percent of the viewing audience. But the absolute number of households reached was only 1,000 families, at a cost of $100 per family. Based on this experience, the project directors abandoned television as an effective medium (2).

Programs using simpler technology result in lower per-viewer costs. A 1973 report of a community-oriented school consultation series, which was designed to offer mental health information to school personnel and the public, cost $30,000 for an audience estimated at 25,000. A survey of viewers indicated that 87 percent judged the series "excellent" and found it particularly helpful in understanding behavioral problems of children (5).

In 1969 the Ohio Department of Mental Health and Mental Retardation produced three series of film segments dealing with mental health issues to be used as public-service announcements during prime viewing hours. Each announcement was a minute or less. Both the first and the second series of announcements were not well accepted by television program managers and were not widely shown. The third series, aimed at children, was more successful. A survey revealed that 90 percent of children in the local area were familiar with the series (12). The Ohio experience demonstrates that production of brief television clips can have a variable degrees of success.

## Radio

We have used radio for ongoing mental health programming in two formats. The first is a weekly hour-long program called *What's on Your Mind?* This program, which uses a talk-show format, has aired statewide in South Carolina for six years. During the early years it had an annual budget of approximately $20,000, which covered the cost of production and a half-time administrative assistant. Production was extremely simple, with a crew consisting of the host,

an engineer, a call screener, and a director. Audience size at that time was about 10,000 per show. Fifty shows were broadcast each year, at a cost of about four cents per listener per show.

Two years ago we received a grant from the National Institute on Drug Abuse that allowed us to distribute the program nationally via satellite feed and to improve the production value of the show to the standards of national educational radio. The funding was used to support editing of the live show, which was taped in South Carolina, before relaying it to a national audience. We also hired a writer to do extensive research and writing, arrange guest interviews, and publish a free monthly newsletter for listeners. The funding also enabled us to market the program to out-of-state stations.

Our current annual budget of $83,000 supports the show, which is broadcast by 60 stations nationally. Editing is now minimal, and the writer's salary is covered by other sources. Weekly audience size in South Carolina is estimated at 25,000; we are unable to obtain reliable figures on our national audience, particularly because stations pick up or drop shows from the satellite system without informing the presenting station. Conservatively, our audience is in the range of hundreds of thousands of listeners per show each week, bringing the cost to a fraction of a penny per exposure.

To gauge the effectiveness of the program, we commissioned a commercial marketing consultant to conduct two focus groups. Participants were solicited for participation from the list of South Carolina Educational Television endowment subscribers, and they had all heard the program at least occasionally. The consultant's report noted that interest in mental health issues was relatively high, and that the favorite topics were attention-deficit hyperactivity disorder, substance abuse, relationships, and aging (13). Subscribers cited either personal or professional reasons for their interest in the show, including family members with mental problems. The study noted that the general reaction to the show was overwhelmingly positive, and participants demonstrated a surprising ability to recall details of programs from months earlier.

Participants appreciated that the host was warm and friendly, although some expressed criticism that callers were allowed to talk too long. In summarizing the findings, the report noted, "Virtually all respondents said that the show has greatly improved their understanding of mental health issues and their perceptions of people with some type of mental disorder. People also agreed that the show made them more comfortable with seeking help for themselves or loved ones" (13).

We have begun a second program-

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ming effort that may be yet more cost-effective. "An Ounce of Prevention" is a daily two-minute module broadcast every morning on South Carolina Educational Radio. One day each week is devoted to a mental health topic, while on other days the broadcast addresses physical health issues. Because the segment is aired during morning rush hour, the in-state listening audience alone is 300,000, and we have begun to pick up stations out of state. These segments are quite inexpensive, with a production budget of $35,000 annually plus the time of the host psychiatrist. Because we reach 75 million listeners each year in South Carolina, this effort costs a fraction of a penny per exposure.

**Print**

Print media—newspapers, magazines, and newsletters—are another avenue to reach large groups. Standing columns in newspapers and magazines can communicate issues on a regular basis. An advantage of print media is that it lasts, it can be reread, clipped out, copied, and passed on. A disadvantage is that, unlike radio and television, it cannot convey a host's personality or the interaction between someone suffering from a mental disorder and a psychiatrist.

As part of our public service, for the past year we have published a free monthly newsletter, *Mental Notes,* for our listeners. Production costs are negligible as we use desktop publishing and edited versions of copy from our radio program *What's on Your Mind?* Due to postage rates, our cost per reader is fixed at 19 cents per person, not very cost-efficient. However, a survey of 300 subscribers revealed that they found the newsletter helpful. Of the 130 who responded, 53 (41 percent) said they had changed their behavior due to something they had read in *Mental Notes.* Sixty (46 percent) said they had changed their attitudes toward mental health and illness, 21 (16 percent) said they had considered seeking professional counseling, and seven (5 percent) said they had sought professional counseling because of what they had read in the newsletter.

The survey results also suggest that the newsletter is an effective way to expand the radio show's reach because subscribers frequently reported sharing their copies. Asked whether they share their copies, 54 (42 percent) responded "always," 66 (50 percent) responded "sometimes," and only ten (8 percent) responded "never."

**Discussion**

Each format and each medium offers advantages and drawbacks that may be considered in the context of programmatic goals. As noted, preproduced television is expensive, in absolute and relative terms. However, television is unique in being able to achieve effects other media cannot. It can tell a story more compellingly than radio because of the use of visu-

al imagery. This quality is particularly important when using real-life patients, as physical appearance may enhance the audience's attraction to the personality. Further, certain scientific concepts, such as neurotransmitter action and neuroanatomical findings, can be explained much more clearly when backed up by graphics. In addition, videotapes prepared for television can be used in many other ways. The films of the American Psychiatric Association's *Let's Talk About Mental Illness* series have been used for national screening days for both depression and anxiety, as well as in clinics, hospitals, and schools.

Two difficulties limit the usefulness of television. First, enormous competition exists for time slots. Intuitively, it would seem that airing a program during prime time would be advantageous. However, it is difficult to compete with the entertainment value of other prime-time offerings, and audience share for health programming may be limited. Second, because television is relatively expensive, it may not be feasible to produce the type of ongoing programming that has been associated with behavioral change. Production of brief public service announcements may be a more cost-effective way to use television than regular programs.

Radio, however, may reach a large audience repeatedly and inexpensively. While a single radio program may not be as memorable as a single television show (14), radio permits a host to be heard regularly and repeatedly, allowing the public to learn not only what psychiatrists do but who we are. The public's ability to make an affective connection to a personality conveyed only through voice is amply illustrated by Dr. Laura Schlesinger. Radio also has the advantage of being heard in cars, offices, and stores, often by listeners who otherwise might not make an active effort to learn about mental disorders.

Within the world of radio there are options not only of format but also of station choice. Commercial radio reaches a far larger audience than public radio. Dr. Harvey Ruben's program *Talknet,* which was broadcast on 270 NBC affiliate stations in the 1980s, reached an audience of four to five million (15). Commercial radio programming decisions are based on audience popularity, however, and entertainment value is the primary consideration in most cases. The current trend in commercial radio appears to favor hosts with controversial rather than well-reasoned views.

Public radio stations have a commitment to public service and educational priorities, and program managers may be more willing to sustain a commitment to mental health programming. Demographic studies of public radio reveal that listeners tend to be middle-aged or older and well educated. Conceivably, these audience features might mean that messages have a greater likelihood of being heard by policy makers and thought leaders.

The production of brief modules offers real opportunity for our field to reach large segments of the population affordably. Although short segments do not give the listener a chance to form an attachment to a particular host, modules can be heard by larger audiences because they can be inserted between programs during peak listening times. It would be very difficult for a new mental health talk show to break into a prime-time radio slot, as these times are given to the most popular, well-established programs. For the psychiatrist who does not have professional training in broadcast media, pretaped modules of excellent listening quality are far less formidable to produce than live interactive programs.

Finally, our less extensive experience with print media suggests that print is also an effective way to deliver mental health messages, although postage costs make some print media significantly more expensive than broadcast media on a per-person basis. An effective inexpensive use of print media would be writing a regular column for a newspaper or magazine.

## Conclusions

Mass media are an effective means to educate the public about mental health issues. However, the relative and absolute costs of different media and formats vary dramatically. Consideration must be given not only to which medium will most effectively convey a message but also how large an audience is likely to be reached. Radio, especially modular segments aired during peak listening times, may be the most cost-effective way to reach large segments of the population. ♦

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