205. Many health educators are attracted to the idea of using television and radio for health education. Aside from being glamorous and "modern", these media have the potential of reaching very large numbers of people. In the less developed countries these factors may be particularly influential, reinforced by the enthusiasm of foreign aid donors to give and countries to sell equipment.

206. However, heavy emphasis on electronic media has lately been heavily criticised. Experience in the Western industrialised world and a few Third world countries suggests that using mass media to change people's health behaviour is often disappointing. The reasons for this are extremely complex. Some claim that inappropriate comparisons have been made with commercial advertising (Tones, 1981). Others maintain that preventive medicine and health education have a relatively low status and that their messages are therefore more likely to be accepted if presented by a high-status physician in an individual interview rather than over radio or television (Bunnag, 1981). Most communication theorists argue that the opportunity for dialogue is the sine qua non of effective communication, and that mass media do not usually allow for this. The theoretical debate on the effects of the media on people's behaviour is complex however (Flay, 1981) and not considered here. What is increasingly accepted is that if the mass media have any influence on their own it tends to be in the direction of reinforcing existing beliefs and opinions, rather than in changing or converting them (McCron and Budd, 1979).

Which mass media?

207. In talking of mass media in developing countries, the emphasis is usually on radio. Other media - television, newspapers, journals and magazines, tape cassettes, slide sets, films, even billboards or people's newspapers or wall papers - are usually more limited. In fact, in a recent Commonwealth report it was stated that radio is "the medium of the people, reaching as it does across the barrier of literacy and limited in its potential penetration only by the availability of transmission equipment and of radio receivers" (Commonwealth Committee on Communication and the Media, 1980). Newspaper circulation, on the other hand, has tended to diminish over the last decade and television is still fairly limited in less developed Commonwealth countries.

208. From the response to questionnaires it appears that most Commonwealth countries regard radio as a potentially useful method for health education, although few countries have actually realised this potential. There are some important difficulties to using mass media techniques. Thus the benefits of reaching wide audiences have to be balanced against two basic problems: first the technical constraints, and second the communication process itself.

Technical constraints

209. Starting from the premise that radio carries the most promise for mass communication, we concentrate on it here. However, many of the points made are relevant for other media.

210. There are a number of obvious technological difficulties that limit coverage by radio. Underdeveloped infrastructures may mean that transmission and reception are imperfect. The production of radios and distribution networks may not be equal to meeting demand for radios or batteries. Multilingual countries cannot always satisfy all sectors of the population and often the majority of programmes are in the national (urban) language which is not common to all. Financial constraints exist in many countries which still import radios or some of the materials to make them.

The communication process

211. In terms of communication there are other problems. One major constraint of radio is the impermanence of the message. If the recipient cannot keep pace with what is being broadcast, the message is lost. The radio broadcaster cannot even know if it has been received, let alone understood. The process of communicating - from communicator to message to recipient - is compiex, and most health educators argue that one-to-one, face-to-face communication is the nearest a communicator can come to being certain that the message is understood and accepted. It is an interactive relationship. Even then there are many pitfalls: recipients may pretend to understand; may think that they understand; may understand but not agree; may understand and agree, but not always change their behaviour.

212. How much more difficult, then, to ensure that in mass communication messages are understood and well-received, let alone acted upon. Furthermore, radio (or television) is not received in isolation; it is beamed into a social setting - a family house, a bar or cafe, a school or a public square. In all these situations there are individuals with existing beliefs and values and to whom friends, workmates, teachers are still important founts of information who may influence attitudes and behaviour. People are not passive recipients in the communication process. Nor do people have equal access to media. Low status may exclude certain groups like women and children from listening to what is a highly-prized consumer item. As McCron says, there is no reason to suppose that the mass media are a particularly effective communication source. The messages received "may reinforce those obtained from primary health groups, but they may equally contradict them. Primary group contacts serve to mediate or filter mass-communicated messages" (McCron and Budd, 1981). In other words, people are active participants in a communication exchange which selects and interprets from the message in line with their existing knowledge and predispositions.

213. It thus becomes clear that messages produced nationally in urban centres may be, however factual or right minded, unacceptable or of little consequence to rural people. One of the points made in the Commonwealth report on the media is that the colonial experience has left many countries with heavily urban-biased media, and that even where the desire is to extend broadcasts to rural areas, professionals are hampered by their own attitudes and orientations. From his experience in Africa, Fuglesang reminds professionals of the rich oral traditions of many societies: "We judge people on how they express themselves in a secondary language like English or French, and we do not realise that village people, and particularly the elders, usually are highly vocal, witty and sophisticated in their speech. Parents take pride in teaching their children to speak the tribal language properly ... Radio could be so obviously the most powerful medium in any local society, if only the tribal languages in the programmes and the quality of the narrators were better" (Fuglesang, 1981).

How effective are mass media?

214. In spite of its constraints then, radio remains enormously attractive because of its relative efficiency and cheapness in reaching large audiences. Many health

educators believe in it, and indeed use it in a number of ways - for short health education talks, doctors' forums, quizzes, sometimes drama with a health message. However, there has been little evaluation of its effectiveness. One review of health and nutrition projects using mass media techniques concluded that there is almost no evidence concerning the impact of mass media health and nutrition education projects on the health status of the target audience (Leslie, 1981). In this review six health education projects - in Guatemala, Haiti, India, Kenya, Tanzania and Senegal - were assessed. Three used radio only (one included supporting literature), two used television, and one used audio-cassettes.

215. In Kenya, the target audience was rural adults and the project was a series of comedy programmes on radio into which were dispersed health messages. Extremely popular, the weekly programmes reach up to three million people and are ongoing. How much they influence people's health behaviour has not been tested.

216. The Tanzanian radio campaign has been considered earlier in this report; here there was an attempt to evaluate effectiveness. One measure used was the number of latrines built as a result of the campaign (750,000). However, it was not possible to say whether constructing latrines had improved people's health. The television programme in Senegal (see paragraph 193) was aimed at illiterate working class women, and took the form of twice-weekly television films shown in clubs on such subjects as the cause and treatment of malaria, dysentry and tuberculosis, and the promotion of less oil for cooking; certain educational goals were achieved (more women knew that the mosquito caused malaria) and women claimed to use less oil in cooking.

217. Haiti has had an annual twelve-week radio campaign for school children and their teachers on immunisation and population growth; Guatemala a three-week campaign using cassettes at community laundering places to promote vaccinations and food supplements; and in India a one-year project using television for rural adults gave information on preventive measures. Some evaluation of the projects took place in India (gains in knowledge) and Guatemala (more children were vaccinated than in areas without cassettes), but the results are disappointing. Most of the projects were not ongoing.

218. Leslie also reviews nine nutrition education projects, most of which were able to show some positive gain in achieving educational objectives. For example, after a six-week radio, television and newspaper campaign in Trinidad and Tobago to persuade mothers and pregnant women that breast-feeding is preferable to bottle feeding, it was found that more mothers were aware of the issue, and also that many introduced bottle feeding at a later age than they would otherwise have done.

219. The review of these projects demonstrates how difficult it is to evaluate the effectiveness of health education projects. Few measures get beyond counting the number of radio transmissions made or the number of people contacted; few try to test before and after the project to measure changes in attitudes or knowledge; but measuring a change in morbidity or mortality or even anthropometric change directly due to a health education campaign is methodologically difficult. Leslie concludes that by making appropriate changes in evaluation methodology it is possible to measure the cost-effectiveness of using the mass media for health and nutrition education, but the extent to which other measures of effectiveness can be used is at present uncertain.

220. In another useful assessment of health education projects and the media (Jenkins, 1982) certain conclusions are drawn which provide guidelines to the most effective use of media for health education. The evidence from reviewing a number of successful projects leads Jenkins to conclude that media in health education will have most impact where media projects are integrated with health

services. An educational effort divorced from such support is relatively ineffective. Furthermore, using media alone to project health messages is very unlikely to lead to a change in behaviour. Media can more effectively be used to produce an atmosphere in which changes can take place, or to provide reinforcement once change has occurred.

221. In gathering together her evidence, Jenkins says that, of media used, radio emerges as the most useful, reaching as it does large audiences including illiterate people, provided that broadcasts are made in appropriate languages. Television remains a realistic medium for very few developing countries. It is far more expensive than radio, and there is little difference in the effects or functions of the two broadcast media. "The one difference is that television acts like a magnet: once it is there people watch it." Cassettes have the advantage that they can be replayed, the technology is relatively simple, and where equipment is available they can be used to enable community participation in production. Finally, Jenkins comes down firmly on the side of printed materials: "Although radio comes across ... as the dominant medium .., print is by far the most important and extensively-used medium of instruction; it is less glamorous than broadcasts and its use is consistently under-reported". This is perhaps a more controversial point: in many illiterate societies the importance of story-telling may outweigh the value of visual material, whether in pictures or words. In Fuglesang's words, "It is nonsense to ask 'which medium is best? The important thing is the message design, the development of a 'people's language' which can be used in any available medium" (Fuglesang, 1981).

Conclusions

222. In reviewing the range of literature and experience on health education using mass media, two essential conclusions should guide health educators and policy makers.

223. First, radio as a general educational tool works better when complemented by printed materials and different processes of interpersonal communication, and when used for health-oriented education it should be integrated with the health services.

224. Second, while mass media **may** be useful tool in some aspects of the health educator's work, this must be carefully thought out. Unless health educators and their collabrating broadcasters have a clear image of what they are trying to do and why (which requires an understanding of the people they are trying to reach and the nature of the communication influence), any use of the mass media is likely to end in frustration.

Notes

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