

Health Education, Public Information, and Communication in Schistosomiasis Control in Brazil: a Brief Retrospective and Perspectives

Virgínia T Schall

Laboratório de Educação Ambiental e em Saúde, Departamento de Biologia, Instituto Oswaldo Cruz, Av. Brasil 4365, 21045-900 Rio de Janeiro, RJ, Brasil

In recent years, the strategy for the control of schistosomiasis has placed increased emphasis on the role of health education, public information, and communication. This should, not only bring about specific changes in behavior aiming at disease prevention, but also stimulate participation of the community in health programs. Beyond this, it is desirable that both community members and researchers should seek better life conditions through a transformative social action. The present paper addresses these concerns; first, by critically reviewing some health education programs that were developed in Brazil, and, secondly, by analyzing and suggesting ways to improve this area.

Key words: schistosomiasis - health education - information - communication

As schistosomiasis control strategies presently emphasize man in lieu of other elements of the transmission chain, the importance of information to populations in endemic areas must never be underestimated, paying attention to a progressive point of view.

Since 1984 morbidity control has been receiving greater emphasis by the WHO (Technical Report Series 1985, 1993), which should stimulate primary health care programs. These programs "has placed increased emphasis on the role of health education and safe and adequate domestic water supplies, as well as sanitation, in the maintenance of control of schistosomiasis" (WHO 1993), which all require the participation of the population and the essential circulation of information.

Schistosomiasis, which is generally restricted to populations of the less affluent classes, is related to poor life conditions, to areas lacking basic services, and to lack of information and instruction. In these conditions people become infected through water-linked activities, such as work, personal hygiene, laundry, fishing and recreation. The scarcity of latrines enhances transmission probabilities through indiscriminate defecation habits, generally carried out close to water bodies.

Education, information and communication strategies in control programs should, therefore, not only bring about specific changes in behavior aiming at disease prevention, but also stimulate participation of the community in health programs.

This participation should thus promote a wider consciousness of the biosociocultural factors involved in the transmission of the disease, which would constitute a transformative social action searching improvement of life conditions.

TRADITIONAL INFORMATION AND PARTICIPATORY INFORMATION

Historical background - Historically, the control of schistosomiasis in Brazil has been largely associated with chemotherapeutic measures, either in the treatment of patients or in the eradication of vector snails of schistosomes. Although sanitation and sanitary education have always been pointed out as fundamental prophylactic measures in order to eliminate the disease (Barbosa 1975), they have actually never been extensively and continuously carried out.

Since the sixties, control campaigns in Brazil have emphasized integration of health education with other measures. However, a great distance remains between planning and the actual execution, which has been concerned with immediate targets and which has been vertically carried out through traditional techniques.

A dearth of publications exists, dealing with educational actions and information in the control of schistosomiasis. Among the articles reviewed that of Garcia (1966) stands out for its modern theoretical approach and for its consciousness of the limits to the execution of measures, which is hampered by discontinuous government policies. This author focusses her attention on the following roles of the educator: as the investigator of human factors pertinent to schistosomiasis epidemiology; as coordinator of the planning, produc-

tion and evaluation of educational material through the lens of current communication theories; as evaluator of working procedures, including creation of comparative pilot projects and control of intervening variables; as evaluator of methods for training auxiliary personnel in schistosomiasis campaigns and technicians in the area of education and communication.

However, only a reduced number of practical educational actions reflects these intentions so widely and clearly. Such is the case of the excellent work by Hollanda (1958), which was carried out in northeast Brazil, and which ranks among the best ones of its time, according to the WHO. A 1958 report by Hollanda reveals her wide vision and experience in the prevention of schistosomiasis. Although her emphasis is laid on behavior, as recommended by specialized literature, she also committed herself to social issues and the importance of participation of the population in control programs. She further examined the theme of disease, associating it with (1) patterns of adaptation to the environment; (2) socioeconomic organization and means of subsistence; (3) conceptions of reality and the system of knowledge and ideas about nature; (4) relationship modes between different social groups; (5) mentality and characteristic attitudes of the dominant classes.

Quoting her work on communities in endemic areas: "Restructuring of behavior which conditions schistosomiasis and other verminous diseases proceeded not only through the impact of new knowledge and conceptions of nature, but mainly through psychologically satisfactory participation in socially prestigious activities, through which the population developed itself and the community organized itself for the solution of its basic problems.

Since then the limits of health education work have been reported, which are imposed by economical circumstances of the study areas and by structure, resources and orientation of medical and educational care services in endemic areas." (Hollanda 1958).

Garcia (1966) refers to economical circumstances of populations stricken by schistosomiasis and the role of information to them: "What use would health be to people who are totally excluded from developing areas in the country; who are doomed to illiteracy, to famine, to slave work and unemployment; who can only resort to magical healing practices in case of disease and who attribute it to supernatural causes?... Disease may even be an excuse to failure in life when it is used as a defense mechanism."

Educational actions in the seventies and eighties - Although, even nowadays, these questions pose an enduring challenge some successful un-

dertakings are herein reported. The Project for the Environmental Control of Schistosomiasis (1970), for example, was carried out in Calciolândia, Arcos, State of Minas Gerais by a multidisciplinary team of researchers of the Centro de Pesquisa René Rachou (Fundação Oswaldo Cruz) and of SUCAM (Superintendência de Campanhas - Ministry of Health). After identification of ecological and behavioral factors linked to disease acquisition, educational action included an initial identification of knowledge modes of the population on schistosomiasis. This enabled workers in the project to (a) help people understand what happened in the region in terms of intestinal parasitic diseases and other water-transmitted diseases, able to be controlled by basic sanitation (adequate water supply and proper sewage facilities), and (b) develop attitudes involving responsibility relative to individual and collective health. Research work was carried out through individual contact and group meetings, when many resources were utilized, such as films, slides, display of affected and non-affected mice livers, live vector snails, discussion and question-answer practices. Some documents with prevalence rates before and after the program were also distributed, which should stimulate maintenance of disease control. An educational staff bridged contacts between the population and health personnel. Their action included stimulation of the movement towards building of the regional leisure center, of a swimming pool and other facilities for the population.

Of major importance in this experience was the consideration of knowledge varieties among community members and their possibilities of transforming reality. This would be possible through new knowledge about the disease and its association with environmental changes which would allow confirmation of acquired behavior patterns.

Although this has been a successful project, with a significant decrease in prevalence levels, it was only an isolated experience. Considering the national context, the Ministry of Health has concluded that up to the mid-seventies control efforts in Brazil "have failed to stop expansion of schistosomiasis southwards and to avoid the risks of its reaching the Amazonian region." (Coutinho & Pimont 1981). This inspired a new model of fight against the disease, in which sanitary, as well as medical and educational, actions were associated, leading to the creation, in 1976, of PECE (Ministry of Health's Special Program for Schistosomiasis Control).

Besides traditional control measures (treatment of patients and control of vector molluscs) the objectives of this program included improvement of basic sanitation conditions and health education actions.

The health education program was centered on behavioral objectives, aiming at a change of habits, as well as on conceptual objectives, through comprehension of basic notions about schistosomiasis, aiming at adoption of behavior patterns relevant to control.

Mass-media (MM) broadcastings were among the information activities developed, as well as the use of amplifiers, distribution of some publications to the general population and organization of lectures and film projections to previously constituted groups. Other materials were produced, such as posters, folders, the documentary film "O Mal do Caramujo" - The snail and illness - , records and cassettes for radio and loudspeakers' use and slide series. Specific resources were also distributed in schools, such as "Rules and instructions for school health agents, small biographies of great sanitarians, cartoons, album and a reference guide of instructions to the teacher". (Coutinho & Pimont 1981).

The great effort spent on development and use of various methods and materials did not prevent the occurrence of "discrepancy, among population members, of what is known, on one hand, and what is done, on the other." (Coutinho & Pimont 1981), which was observed in Touros (State of Rio Grande do Norte), one of the areas under the action of PECE. As the authors explain, "the transmitted message is of apparently no use in an environment where it is utopian to expect that people avoid the same waters upon which they take their subsistence and where they have their leisure". Environmental alterations are thus necessary, which are associated to acquired knowledge and which allow for new alternatives to old practices. Moreover, educational processes should be characterized by participatory communication, in which the teacher-as-informer is turned into teacher-as-amuser, and the pupil-who-hears into pupil-who-investigates. This is a shared point of view among most authors who deal with educational practice, be it general or specific, as is the case of health education.

As recommended by Maria do Carmo (1987), it is necessary to ask and hear what the population has to say in order to develop joint creative actions. These actions would combine scientific and technological knowledge with life knowledge of the population, aiming at more realistic and appropriate solutions.

As observed by Loureiro (1989) in regard to current trends in health education, emphasis of the educational process shifted from a search of change in behavior to conscious participation of individuals as part of their social group. This has been demonstrated by that author's practical experience, in which popular culture is emphasized, to the point

of constituting the axis of the integrated process of education, participation and organization (Cadernos de Educação no. 2, 1985).

NEW PERSPECTIVES IN HEALTH EDUCATION - CONSIDERATION OF POPULAR KNOWLEDGE AND COMMUNITY PARTICIPATION

Progressive awareness of social aspects revealed the inadequacy of traditional education in relation to (a) its political character, unconnected to the populations' own concerns; (b) its technical character, unable to promote changes in attitude, by resorting only to vertically transmitted scientific knowledge; (c) historical inertia, which is reflected in outdated educational practices and programs.

According to Nascimento and Rezende (1988) "The inoperativeness of traditional health education methods, which is reflected in skepticism and passivity demonstrated by the population in relation to formal orientations, conceals a resistance to inculcations and to alienating scientism, which is only able to prescribe purported solutions".

Effective health education requires that a) popular knowledge and its practices be recognized in order to be used in the search for solutions to the populations' problems; b) technical and scientific knowledge be updated, and c) emphasis be given to health promotion and improvement of life conditions. This calls for critical perception of the educator, as well as an expertise in the subject area and inherent motivation for his (her) work.

It is necessary that the educator not indulge him (her) self on being a mere informer, or helping the needed on a paternalistic basis. Rezende (1984) urges one to abandon messianism practiced by angel-like people towards the poor, which simply reveals a domineering relationship. This tends to include teaching of health care practices, to underestimate popular knowledge, and to consider technical knowledge as inaccessible except to themselves. The educator thus enforces the great internal contradiction of the system, i.e., by ignoring knowledge derived from popular practices he also denies access of the dominated people to technical resources and to so-called scientific practices.

As regards schistosomiasis, community participation in the information and communication processes is a priority. Community participation implies self-responsibility for health aspects, which is expressed through some activities linked to improvement of life conditions and to well-being. Tanner et al. (1986) state that community participation in schistosomiasis control is only possible either when the population sees in this disease a health problem, or when it identifies the influence of the disease on its well-being, for example, when it affects the population's productivity or economic

and social development. If disease is considered a priority to the population, then it will turn into a dynamic question for the development of the community.

Consciousness-raising about the importance of schistosomiasis may be attained through information and communication processes. If knowledge is to be conquered by the population, it is necessary that the latter participates in its diffusion, in the preparation of materials, or in the use of them. What counts is the adequacy of the language and the means through which information is diffused in the sociocultural context of the chosen population. Also important is that the relationship between disease and life conditions of the community be understood, so that scientific as well as popular knowledge may mingle. It is thus expected that these conditions help individuals of the population understand disease as an expression of multiple factors, especially of socioeconomic and cultural nature. As a result, it is also expected that the population participates in the organization and implementation of transformative actions on the adverse conditions associated to disease.

HEALTH EDUCATION FOR CHILDREN - INFORMATION AND COMMUNICATION PROCESSES IN SCHOOL

Children and adolescents represent an important population sector in transmission and maintenance of schistosomiasis in endemic areas in Brazil. Epidemiological studies show high prevalence rates in the 6 to 20 year-old age group (Castro-Filho & Silveira 1979), as well as higher percentages of treatment resistance and higher rates of *Schistosoma mansoni* egg elimination, when compared to adults (Katz et al. 1978). Moreover, this population sector is more frequently exposed to lake, stream and river waters, especially where no other leisure alternatives exist. Moreover, this sector does not understand what are the consequences of indiscriminate defecation habits, which happens more frequently than among the adult sector of the population. Physiology and behavior contribute thus to the active participation of children in the maintenance of the transmission cycle of schistosomiasis.

A suggested means of reaching a greater number of children is to include information about the disease in school programs. The educational process in schools has more chances of attaining continuity and consistency than information programs adopted in campaigns. These programs are usually of a transient nature, employing MM resources in a vertical manner, having a lower effectivity.

Considering the low instruction levels of the majority of the Brazilian population and the high levels of school evasion, the greatest probability of

finding a child at school is restricted to the first grades of elementary school, when health education is most important.

As demonstrated by Werner and Bower (1985), children act as a bridging element towards their families and the rest of their community, to which they retransmit learned knowledge. In some of these cases effective changes are observed.

In order to be effective, information and communication processes must take into account the reality of students and their community, as well as their habits, beliefs, cognitive characteristics, motivation and concerns. These processes must also pay attention to children and adolescents' development phase, investigate their intuitive concepts about health and disease, and their perception of reality, so that no conflict or inoperativeness of information follows.

Investments on development and training of teachers is also a priority, in order to attain efficient and lasting educational actions. These investments would also stimulate the onset of a critical consciousness. Only the teacher - and not anybody from outside the community - may deflagrate an informative and formative process through a politically-oriented work, since "learning about health is learning about living" (Hollandia 1981).

Experience has demonstrated that training courses which include both theoretical classes and practical activities are most effective. Thus, basic contents on disease must be attached to texts dealing with the relationships between students and teachers, as well as to educational methods and to use of artistic and cultural resources. After each unit teachers should report how to teach on health topics through the use of different creative activities, such as games, story-telling, dramatizations, puppet shows, other types of shows, excursions and handicraft techniques, all of which related to community health questions, schistosomiasis included (Schall et al. 1987, 1993).

It is important to stimulate teachers to plan and carry out practical projects in cooperation with the students, since by establishing close communication with the community the information process would be more concrete.

Teachers should yet be warned about the need to amplify information about health and disease and to orient it towards the search for collective solutions, if the relationships between man and nature, and mankind are to be taken into account.

An amplified health education considers the individual as an ecosystem, or a microcosm. His (her) body is an environment where populations of microorganisms live in close associations, constituting a microbiota. Disease happens whenever there is a disruption or imbalance of these biota elements, including the social context.

If one considers an individual as an ecosystem that is integrated to the total environment, this individual will only develop values, attitudes and positive actions towards this environment after he (she) has developed them towards him (her)self.

It is thus vital to stimulate in children a positive self-image since early childhood, leading them to value themselves and to perceive themselves as part of a wider context. They should also understand that to every action by themselves a reaction ensues, either from somebody else, or from the environment.

Knowledge of facts and concepts about the environment is an aid to attain understanding and to develop positive attitudes in the scope of social consciousness. These attitudes, in turn, will affect necessary actions of behavior towards the total environment and towards the disease in question, accomplishing the educational process.

MASS MEDIA AND OTHER MATERIAL RESOURCES

Besides the fundamental role played by school on health education, MM have been amply utilized in the global process of health promotion.

Experiments have demonstrated that some changes in health attitudes, such as quitting smoking habits, diet alterations, may be attained through the intervention of MM. This points to the need of immediate environmental support, i.e., the environment must offer opportunity and support in order to effect and sustain behavior transformation. Otherwise, there will only occur a cognitive change, with no translation of information into action. In this case the educational proposal fails in its final objective, and cognitive dissonance ensues.

Before television is used in informative campaigns an evaluation should be made, which would take into account the percentage of the population who has TV sets, as well as the target age group, hours and days of the week when TV watching is most frequent, favourite TV programs, traditions and beliefs, or otherwise stated, popular knowledge which may interfere in the health education process. In Egypt, several short (2 min) health education films have been made featuring well known Egyptian actors. Since these films have been shown regularly on national television, the number of children being examined annually, has doubled (WHO 1993). This was a well succeeded communication strategy that was followed by a positive change of attitude of the population improving the disease control.

Besides being carefully planned, the communication process must be continually evaluated in order to check the effects and interactions taking place, as well as feedback from the target popula-

tion, its acceptance and response to the introduced program.

Participation of professionals of various areas, such as scientists, technicians, educators, social workers, communication specialists and population representatives is fundamental to preparation of any program, so that information on health aids in better life conditions. The integration of different professionals may avoid common distortions, which occur in programs prepared by scientists who ignore MM language, or in "translations" of scientific information by communication technicians who ignore Science's rules.

CHOOSING THE BEST STRATEGY AND FINAL COMMENTS

Since Brazil is a developing country the role of communication technology is questioned because a great proportion of the population is not yet ready to fully understand the effects of this communication. As regards information about schistosomiasis it remains to be defined the best medium through which communication may proceed. The following questions should be addressed, though, in order to establish the best method: what for?, why?, under what conditions?, who?, through what means? and what action forms?

Camargo (1985) argues that no previous answers exist, each case requiring a careful analysis. A diagnosis of the situation is also required, so that planning alternatives may be produced and the most appropriate communication strategy be selected.

As regards schistosomiasis, MM capable of combining information with entertainment may, in the case of being adequately carried out, contribute to the development of attitudes, especially among children, through simultaneously informative and formative messages. This is the basic trend of the project "Ciranda da Saúde", which employs pleasant texts and amusing activities in schools, with promising results (Schall et al. 1987, 1993).

Information which stimulates discussion among adults may lead to alternatives to solution of problems and decision-making processes, bringing up new elements formerly ignored or unrelated to disease.

Considering the high percentage of adult illiterates in endemic areas, some materials have proved to be efficient in communication processes, as pointed out by Fávero (1984). Among these materials rank (a) posters, considered the best communication medium in rural areas, and capable of being made with the participation of population members; (b) display of photographs showing environments where disease is transmitted, so that the population may recognize itself; (c) production of theater plays on the theme; (d) slide series,

preferably with no associated sound, as this may inhibit participation or create confusion due to technical problems in its transmission or to speech regionalism.

For each used strategy is very important to maintain a continuous process of evaluation, paying attention to the baseline data that have to be collected before the implementation of the new measures. This evaluation system contributes to the necessary changes or improvements of the program in order to reach the planned objectives.

Some suggestion presented above are detailed in a book published by WHO (1990) in which several practical examples are given to help the educators on his/her task. This is a useful guide to develop several educational activities since the educator consider the reality of the community from which he/she has to start the program, and with the active participation of the population, oriented to a transformative social action and searching best life conditions.

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