HEALTH EDUCATION IN RURAL SURINAM: USE OF VIDEOTAPE IN A NATIONAL CAMPAIGN AGAINST SCHISTOSOMIASIS

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Videotape has been used innovatively in a health education program directed against schistosomiasis in rural Surinam.

Introduction

Surinam is situated on the north coast of South America between 1.5° and 6°N. The country is isolated from the rest of the continent by almost impenetrable tropical rain forests covering three-fourths of the national territory, language differences, and a culture reflecting a mixture of predominantly Asian, African, and Dutch elements. Nevertheless, its people enjoy relatively good health and high levels of productivity, and various of its successful experiences can serve as useful models for other parts of the developing world. The present report describes the reactions of rural dwellers in Surinam to the use of videotape in a campaign against schistosomiasis (bilharzia). It is hoped that the positive results achieved with this technique will serve as an incentive for similar undertakings in other areas.

Over 95 per cent of Surinam's total population (385,000 in 1971) is concentrated on a narrow strip of fertile land along the coast. Roughly two-thirds of the people live in the capital, Paramaribo, and its immediate surroundings. Aside from Paramaribo, there are no very large population centers in the rest of the country's 165,000 km² of territory, virtually all the nine political subdivisions (known as districts) consisting of rural areas. One of the largest of these districts, located west and southwest of Paramaribo, is Saramacca, where the project described here was carried out.

An intensive campaign against schistosomiasis was started in 1973 in Saramacca, where the problem is especially widespread. The calcium-rich water of this area provides an ideal habitat for the live snails which act as primary hosts for the blood flukes (Schistosoma spp.) that end up as parasites of man. Surveys showed that the disease was extremely prevalent in Saramacca: of the population tested in one part of the district, 41 per cent were positive.

The people of Saramacca are mostly low-income farmers of East Indian and Javanese descent whose activities frequently bring them in contact with water infested with the snail hosts of schistosomiasis. Such activities include freshwater swimming and fishing, planting of rice, and washing in creeks and ditches. The goals of the campaign were to examine every inhabitant, to treat all the cases diagnosed, and to control the contributing environmental factors by spraying contaminated snails, ensuring proper drainage of standing water and swamps (especially around houses, where many of the snails were found), providing the populace with adequate information about the disease,
helping residents to build effective latrines, and motivating people to use the public water system.

A Pan American Health Organization consultant developed the broad outlines for the campaign on the basis of years of previous in-country research. In addition to the consultant's services, PAHO provided assistance through its resident professional staff in Surinam and through fellowships for the training of Surinam personnel abroad in fields related to the project. The principal financial support for the program, which came from the Netherlands "Five-Year Plan," was supplied through the Government of Surinam.

**Health Education Activities**

In the area of health education, the campaign sought to provide the inhabitants with general facts about schistosomiasis so as to motivate them to improve their personal hygiene habits, with an explanation of the campaign's procedures to ensure public cooperation in the collection of fecal specimens, and with information about clinical examination and treatment procedures.

To help achieve these goals, the Health Education Department in the Bureau of Public Health decided to produce a videotape that could be used in combination with pamphlets and posters at schools and other community gathering places. These initial plans called for the videotape viewing to be reinforced either by a lecture or through other activities such as exercises in biology and drawing classes, poster competitions, or art exhibits.

**Producing the Videotape**

The videotape program itself was produced with very limited technical equipment and personnel: one Sony video camera and Portapak recorder, one cameraman (a member of the Public Health Bureau's staff who had received some training at the local television station—the only such installation in the three Guianas), and a member of the campaign team who gave advice and helped to carry equipment.

The tape was filmed in Saramacca itself, using local residents and members of the campaign team as actors. The first half of the tape tells about Nanka, a boy who contracts the disease while swimming in a swamp and is later treated at the schistosomiasis clinic. The second half shows the campaign team at work, explains the *Schistosoma* life cycle, and tells how to help prevent the disease by wearing boots when fishing, making well-constructed latrines with close-fitting lids, and using public water whenever possible for purposes of drinking and bathing.

After some consideration, the narrative sound track of the finished tape was dubbed in S'ranan Tongo, a language containing elements of Dutch, French, Portuguese, and West African tongues which serves as the lingua franca in Surinam. Dutch is the country's official language, but many rural people do not understand it. Ideally, Hindi, Javanese, and Dutch versions of the tape should have been available, but since the audiences were usually mixed and since most people understand S'ranan Tongo, the latter was adopted as the most reasonable compromise.

**Initial Presentation of the Videotape**

The product was first screened for the government workers of Saramacca in the presence of the campaign team and the District Commissioner. This was done in order to generate enthusiasm at the official level and to enhance the cooperation of persons in this audience later in the campaign.

The next place the tape was shown was at the annual District Fair, where it was accompanied by a photographic exhibit on schistosomiasis prevention. Later daily showings were given in the waiting room of
the campaign’s clinic, but this proved unsatisfactory. There were many distractions that made concentration difficult, most patients wanted to go straight home after receiving treatment, and many people walked out before the tape was finished.

**School Activities**

Considerable optimism was attached to plans for showing the tape in schools. For one thing, it was recognized that schoolchildren would be more apt to change their habits than adults. For another, it was felt that in a school situation more attention would be paid to the film. However, before it could be shown in the schools there were a number of practical obstacles to overcome. The language problems have already been mentioned. In addition, there was no official health education program within which it could be scheduled; outside programs, especially in the countryside, often tended to be seen as intrusions in the regular routine. Therefore it was necessary to emphasize the tape’s educational value and its relevance to subjects (such as biology) being taught in the schools. A worthwhile point in this regard, of course, was that there are few greater detriments to education than poor health and childhood disease.

In order to get permission to show the tape, the District School Inspector was contacted. He then met with the heads of all the Saramacca schools (13 elementary schools and two junior high schools). Afterwards the campaign’s health education team visited the head of each school individually to set up appointments and explain the purpose of their work.

Whenever possible the tape was shown twice, first to the teachers and the following day to the students of the fourth, fifth, and sixth grades. In a few schools the third grade was also included, but many third-graders, finding it hard to concentrate, would simply put their heads on their desks and fall asleep. This response was especially common when the quarters were cramped (three or four children to a desk) or when scheduling limitations caused the program to be shown to too many children at one time. With regard to the latter point, it was found that no more than 50 could comfortably watch a single TV monitor screen at once.

There was concern that the program might be too long or too difficult for the children to understand. In order to test their comprehension, they were given simple questions (in Dutch) to answer after viewing the tape. In the first schools the questions were also asked before the showing—in order to learn about prevailing ideas and to evaluate the tape as an educational tool. It was emphasized that they were not intended as a test but rather as an aid to the Government for improving education. The questions were as follows:

- Can you explain in a few words what schistosomiasis is?
- How can you get schistosomiasis?
- If you have schistosomiasis, how can you get better?
- How can you make sure that you don’t get schistosomiasis?

Some of the answers were very interesting: “Schistosomiasis is an insect that comes in rice or soup.” “Schistosomiasis is when you’re all white and then you don’t have any blood.” You can get schistosomiasis: “if you eat too much sugar,” “if you drink milk,” “if you walk in the heat,” “if you walk in the rain,” “if you raise cows.” And also: “You can’t get schistosomiasis if you stay home.”

In general the teachers were quite cooperative about asking their students to answer the questions, which gave them practice in Dutch composition and grammar. Nearly all the quizzes completed after the viewing showed at least a basic understanding of the schistosomiasis problem. At the same time, the answers revealed
points of weakness in the presentation. For example, the film placed so much emphasis on the need to wear boots when fishing that many viewers failed to remember later that they could also contract the disease by touching contaminated water with their hands. Another weakness occurred because time lapses were not handled with enough sophistication. That is, the character Nanka appears to notice symptoms (stomachache, diarrhea, anorexia) the same day he goes swimming in the swamp, when in fact there was a six-week incubation period in between.

Although the children were not required to answer the questions directly, they tended to do so. The campaign’s health educator explaining the queries encouraged children to answer with stories or drawings based on their own experiences. When such an answer was attempted, however, the child

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3 The person referred to throughout as the “campaign health educator” is the author.
would invariably give an image-by-image description of the taped presentation, such as:

"The boy dived into the water and his head came up out of the water again. Then he got out and waded to the shore. He scratched his foot. His foot itched. He put on his shirt and walked home. Then he sat on a chair next to a table. His mother came in with a bowl of rice. She put it on the table and he ate a few bites. He stopped eating and washed his hands. Then he went outside. . . ."

The questions were usually asked a day or two after the viewing. This time span may have been too short. It has been suggested that if a few weeks had been allowed to pass the answers might have given a better indication of what ideas the children had actually retained. Furthermore, the details of the tape would not be so fresh in their minds, so that the answers would be more likely to reflect their own experiences and beliefs.

Each showing was followed by a period in which members of the audience could ask questions. At first extreme shyness on the part of both teachers and students made for disappointing results. More worthwhile exchanges took place after the campaign's health educator decided to stimulate discussion by suggesting possible points of misunderstanding, such as:

"This film doesn't explain everything about schistosomiasis. For instance, many people think you get it by eating fish. Maybe you thought so too. . . ."

"A teacher from another school asked . . ."

"The life cycle of the worm is especially hard to understand . . ."
showing the videotape alone was not enough.

Two booklets were also distributed, one for teachers and the other for children. The teachers were asked not to distribute the children’s booklets until the quizzes had been answered. Since Saramacca children have few possessions, they were usually quite eager about having something to take home with them. Besides the booklets, a poster was put up at each school, and several sets of health education pamphlets were left at the one school where a library was in operation. Some of the teachers decided to use the booklets and the children’s viewing experience in their reading, writing, and science classes. Some of them also asked the Bureau of Public Health for specimens of snail species for the children to see or even organized field trips with their students to find snails, which were then sent to the Bureau for testing (precautions being taken at all times so that hands would not come in contact with the water or the mollusks).

The Art Contest

One of the schools asked that the tape be shown again at a “parents’ afternoon,” the day when the teachers discuss the children’s school work with their families. With the enthusiastic backing of the school principal, it was decided to take advantage of this event and hold a drawing and painting contest on the subject of schistosomiasis. The campaign agreed to provide the art supplies and the prizes. The work did not detract from other school activities, as it was incorporated into the regular drawing classes. To add variety, each grade was assigned a different medium. Third-graders pasted together construction paper and pictures cut from magazines. Fourth-graders did paintings in tempera. Fifth-graders made booklets illustrated with crayon or felt-tipped pen. And sixth-graders, divided into groups of 10, painted murals and made up slogans.

The usual school supplies for a rural child are one black pencil and a small bound notebook. Most of the children had never used paint before, and there had never been a school art exhibit or contest in Saramacca. The campaign’s health educator could sense the tremendous excitement when she brought materials or came to observe work in progress, and the results were very rewarding. The fifth-grade booklets, especially, showed real imagination and represented a great improvement over the written answers to the quizzes. The day of the event was a true success: 87 per cent of the parents and all the schoolchildren turned out, and other visitors came from the neighborhood as well. The District School Inspector was present and the District Commissioner opened the exhibit and gave out the prizes. The schistosomiasis campaign and health education teams judged the entries both on content (as showing the best understanding of the disease and its prevention) and presentation. The winning entries were saved for exhibi-
tion at the next annual District Fair. It was hoped that by that time they might be accompanied by contributions from other schools.

Evaluation of the Project

Quality of the Videotape

There is only one television station in Surinam, and it broadcasts only in Paramaribo. Thus, for many people in Saramacca the schistosomiasis videotape was their first experience with television. For them the event was perhaps as exciting as the content of the tape itself. Even though the tape suffered from distortion and a number of technical defects (shaky camera work, unnecessary zooming, wasted shots, and manual editing), these faults were accepted without much criticism by an audience unfamiliar with broadcast TV.

The health educator (a U.S. citizen with more media experience than the local people) found the story stiff and the tape slow-moving. However, the cameraman, who was of East Indian descent and had lived in Saramacca, had filmed it slowly on purpose, feeling that the people would not be able to comprehend fast-moving black-and-white images. In support of his view, none of the audience ever complained about the pace or length of the tape.

Presentation

Sufficient viewer attention was achieved only when the tape was shown to an interested audience in a place where there were few distractions and where there was enough space for comfortable viewing. Of the locales used, the schools, despite some seating difficulties and other small problems, proved to be the best.

The fact that the film was narrated in S'ranan Tongo did not do away with language difficulties altogether. It is now felt that it would have been better to use two copies of the tape—one with a sound track in Dutch, which some schoolchildren understand better than S'ranan Tongo.

By itself, a showing of the videotape seemed insufficient to ensure good comprehension. Writing about the film helped for it to be taken seriously, reinforced the information presented, aided the health educator in estimating the impact of the work, and allowed children to relate ideas in the film to their own world. Special events, notably the art contest, made it possible to enlist the active participation of everyone—children, community members, and teachers. It is felt that such special events have particular importance in a place like Saramacca, where a little expenditure goes a long way and where everyone is affected by the presence of the disease.

The Bureau of Public Health is currently considering a number of "special event" ideas that have not yet been tried out—for example, puppet shows (perhaps using Javanese wayang shadow puppets) for younger children and plays written and produced by junior high and high school students. Such presentations could be videotaped for audiences outside the local areas involved.

Concluding Remarks

The key to the effort was the enthusiastic cooperation of everyone involved—the campaign team members who provided important technical information, the teachers who incorporated the material into their classes and gave the children time to work on the activities, the children who took the schistosomiasis story home to their parents and brought their parents to school, and finally, the local officials who gave seriousness and status to the events.

The campaign worked from area to area, providing total coverage (through mollusciciding, home visits, examination of fecal specimens, and treatment) along with the health education effort. Once the workers
moved on from an area, they did not revisit it until after 12 months had elapsed. At this point it is clear that the health education activities did in fact succeed in teaching the population of Saramacca about schistosomiasis and its prevention. However, the degree of overall success achieved by the campaign in terms of reduced snail populations and lower levels of parasite eggs in human feces is not yet known.

From the beginning the people of Saramacca cooperated well in providing fecal specimens and in following through with treatment. To a large degree, this cooperation was evoked or reinforced by two campaign practices: collection of specimens during home visits and provision of transportation for all patients to and from the clinic. In the long run, of course, the success of the campaign will depend on alteration of personal hygiene habits and modification of environmental conditions; for without these long-term changes the people treated for schistosomiasis today will soon become infected once again.

In addition to health education, progress is currently being made to improve environmental conditions through a national rural water supply program under the auspices of the Ministry of District Management and Decentralization. This is an undertaking supported jointly by PAHO/WHO, UNICEF, and the Government of Surinam. The Ministry recently selected Saramacca as the next region where public water supply is to be improved. This decision, taken largely because of the schistosomiasis campaign, is a significant step forward in the effort to improve health in the area. Nevertheless, a supply of safe water by itself is not enough to prevent waterborne disease. For one thing, the people must be able to afford it. And they must be motivated to use it by learning about its advantages—in part through health education efforts such as the one just described.

**SUMMARY**

A videotaped program on schistosomiasis, coordinated with a wide range of other campaign activities, was shown at schools, clinics, and other gathering places in the rural Surinam district of Saramacca.

The usual procedure was to have two showings, the first for teachers and the second for pupils in grades four through six. The children were then asked to answer simple questions about the disease in writing. Booklets were also distributed to teachers and children, and in a number of instances follow-up activities were carried out such as classroom exercises and in one case an art contest.

By and large the tape was a success. Viewer attention was best when the audience was comfortably seated and undistracted. It was found that the viewing by itself was not enough to ensure basic understanding of the schistosomiasis problem. Writing about the event afterwards helped for it to be taken seriously, reinforced the information conveyed, and allowed children to relate the ideas presented to their own experiences. It also gave the campaign workers a basis on which to estimate the degree of success achieved. At the same time, follow-up projects such as the art contest enlisted the active participation of children, community members, and educators and added greatly to the overall educational effect.