

Original Article

CHILD-TO-PARENT EDUCATION : A PILOT STUDY

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A controlled study carried out in the hilly Konkan region on the West coast of India showed that school children have the potential for transmitting their newly acquired knowledge to their parents. Though the results indicate that acquisition of knowledge does not mean a change in attitudes concerning leprosy, child-to-parent education may show promising results in leprosy education in developing countries where most parents of school children are illiterate and are not easily reached by conventional methods of health education.

INTRODUCTION

Health education has been described as a central component of anti-leprosy activities (Mehendale 1987). Studies have shown that health education increases case detection through voluntary reporting and also increases patient compliance (Giri 1976; Lobo *et al* 1989; Lennon 1988; Mutatkar 1977; Tare 1982), but most studies have been carried out on the impact of health education on the target groups.

It would be interesting to know whether health information percolates from recipients to their family members. The purpose of the present study was to find out whether health education imparted to school children would percolate to their parents. School children were chosen for this study because they are a captive audience and are all available at one place

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during school hours. Moreover, their progress can be evaluated by periodic tests.

MATERIAL AND METHOD

The Leprosy Mission Hospital at Poladpur, which has been functioning since 1893, is a specialised centre for out-patient and in-patient care and rehabilitation, situated in the hilly Konkan region on the west coast of Maharashtra state. Two talukas of Raigad district have been allotted to this institution for implementing the National Leprosy Eradication Programme. During the commencement of this study, baseline data on knowledge and attitude of school children concerning leprosy were collected, using an objective-type questionnaire in the local language (Marathi), which included questions on cause, curability, contagiousness and cardinal recognisable features of the disease. 283 children (198 boys and 85 girls) in the 11-15 years age group participated. Since about one-half of the parents were illiterate, verbal questions were used for pre-testing. 550 parents (269 males and 281 females) were asked questions covering identical topics and, in addition, they were asked to name their source of information. For the purpose of this study, guardians and foster parents were also considered as parents.

Students in each class from the sixth to the tenth standard were randomly divided into two approximately equal groups. Children in the study group in each class received information on leprosy from a trained health educator while the control group children were taught hygiene, sanitation and oral rehydration on the same day by the same health educator. Audiovisual aids (16 mm cine films, slides and flash cards) were used for teaching both the groups. The health educator elicited the views of the students by asking questions and used these as the starting point for a process of dialogue and interaction. One-way person-to-group approach was avoided. Each educational session lasted about 45 minutes.

After ten bi-weekly educational sessions, the school children were asked to answer a post-test questionnaire which was similar to that used at the beginning of the study. The verbal questions put to the parents were the same as the pre-test questions and, in addition, they were asked to name their source of information on leprosy. The time interval between the pre-and post-tests was about 7 weeks.

As a precaution against possible bias, none of the participants in the

pre-test was told about its purpose. Since the objective was to study the spontaneous percolation of information, the health educator neither encouraged nor discouraged the students from discussing what they had learnt with others. There was no significant difference in the socio-demographic

Table I. Socio-demographic profile of parents

| Parameters | Percentage distribution | |
|-----------------------------------|-------------------------|-----------------------|
| | Study group (n=279) | Control group (n=271) |
| 1. Sex | | |
| Males | 49.46 | 48.34 |
| Females | 50.54 | 51.66 |
| 2. Education | | |
| Illiterate | 48.03 | 48.34 |
| Primary schooling | 34.05 | 33.95 |
| Secondary schooling | 17.20 | 16.61 |
| College & above | 0.72 | 1.11 |
| 3. Occupation | | |
| Labourer | 4.66 | 5.16 |
| Housewife | 49.82 | 49.44 |
| Farming | 39.43 | 37.64 |
| Teaching | 0.72 | 1.11 |
| Trading | 1.43 | 0.73 |
| Fishing | 3.94 | 5.90 |
| 4. Monthly percapita Income (Rs.) | | |
| Less than 99 | 3.59 | 4.06 |
| 100 - 199 | 67.38 | 64.21 |
| 200 - 299 | 20.07 | 22.88 |
| 300 & above | 8.96 | 8.85 |

profile between the parents of children in the two groups (Table I). Statistical analysis of the data was carried out using Chi-square test.

RESULTS

All the 283 children participating in the study answered the post-test questionnaire. However, 29 of the 279 parents of study group children and 33 of the 271 parents of control group children were not available for the post-tests, giving a compliance rate of 88.72%.

The pre-test indicated that there was no significant difference in knowledge and attitude concerning leprosy between the study and control groups of children and their parents (Table II).

Table II. Knowledge and attitudes of school children and their parents

| Question (expected correct response) | Percentage distribution of responses | | | | | | | |
|---|--------------------------------------|-----------|---------------|-----------|-------------|-----------|---------------|-----------|
| | School Children | | | | Parents | | | |
| | Study group | | Control group | | Study group | | Control group | |
| | Pre | Post | Pre | Post | Pre | Post | Pre | Post |
| | (n = 143) | (n = 143) | (n = 140) | (n = 140) | (n = 279) | (n = 250) | (n = 271) | (n = 238) |
| 1. Cause of leprosy (Germ) | 12.58* | 68.53*# | 11.42 | 17.85# | 19.35 | 35.6 | 18.82 | 18.48 |
| 2. Is it hereditary (no) | 8.39 | 58.74*# | 7.85 | 11.43# | 7.88 | 15.6 | 7.75 | 8.40 |
| 3. Is leprosy curable (yes) | 4.89 | 70.63*# | 5.71 | 16.43# | 20.79 | 39.2 | 20.29 | 20.58 |
| 4. Who spreads leprosy (untreated infectious patients) | 30.06 | 48.25 | 31.42 | 30.71 | 27.24 | 37.6 | 26.57 | 27.31 |
| 5. Does it spread quickly (not quickly) | 5.59 | 20.28 | 6.42 | 7.14 | 6.45 | 9.2 | 7.01 | 7.14 |
| 6. Is touching a patient dangerous (no) | 4.19 | 22.38 | 4.28 | 6.42 | 4.43 | 7.6 | 4.06 | 4.62 |
| 7. Should patients be segregated (no) | 6.29 | 29.37 | 5.71 | 7.85 | 6.45 | 11.6 | 6.64 | 6.72 |
| 8. How will you recognise a patient (features) | 12.58 | 64.33 | 13.57 | 24.28 | 12.9 | 25.2 | 12.54 | 14.28 |
| 9. Would you sit next to a patient in class/bus (yes) | 4.19 | 11.19 | 4.28 | 5.71 | 5.02 | 6.4 | 4.79 | 5.04 |
| 10. Would you eat in the house of a patient (yes) | 2.10 | 5.59 | 2.14 | 2.85 | 1.43 | 2.4 | 1.47 | 1.68 |

*Difference between pre-and post-test (study group students) $p < 0.05$ by Chi-square analysis;
Difference between study group and controls (post-test) $p < 0.05$ by Chi-square analysis.

The post-tests indicated that the children in the study group had considerably improved in their knowledge of leprosy but there was only a marginal change in attitude. The little improvement in knowledge of control group children was not statistically significant. Parents of study group children showed significant improvement in their knowledge of cause and curability of leprosy, but these changes were not noted in the post-test responses of parents of control group children.

During the pre-tests, none of the parents had identified their children as their source of information on leprosy. In contrast, during the post-test, 18.4% of study group parents specifically mentioned that they had received information on leprosy from their children (Table III).

Table III. Sources of information on leprosy

| Source of Information | Percentage distribution | | | |
|-----------------------------------|-------------------------|----------------------|---------------------|----------------------|
| | Study group | | Control group | |
| | Pre-test (n=279) | Post-test (n=250) | Pre-test (n=271) | Post-test (n=238) |
| Mass media | 0.36 | 0.40 | — | — |
| Newspapers | 1.79 | 2.40 | 2.21 | 1.26 |
| Posters/ slogans/ hoardings | 15.77 | 14.80 | 15.50 | 14.29 |
| Health personnel | 20.79 | 21.60 | 19.56 | 20.17 |
| School children | — | 18.40 | — | — |
| "Can't say" | 61.29 | 42.4 | 62.73 | 64.48 |

In both pre-and post-test responses, about 15% of parents identified posters, slogans and hoardings and approximately one-fifth mentioned health personnel as their source of leprosy information.

DISCUSSION

This study showed a significant improvement in knowledge of leprosy among the group children who had special health education. The marginal improvement in post-test scores by control group children may be attributed to sharing of knowledge by the two groups of children. It is not uncommon for children to discuss commercial films and the audio-visual component may have induced the two groups of children to talk about the educational

sessions. One may rule out the effect of other sources of information like the mass media because the time period between the pre-and post-tests was only about seven weeks.

This study further indicates that acquisition of knowledge does not necessarily mean a change in attitude. In spite of attending ten educational sessions, the study group children showed minimal change in attitude. It is possible that many more sessions would be necessary for repetition of the same idea.

Discussion by some children in the study group with their parents is likely to be the reason for the significant difference in the post-test responses of the parents of the two groups of students. This is supported by the fact that 18.4% of the parents specifically mentioned during the post-test that they had received information on leprosy from their children (Table III). A negligible number of parents identified television and radio (mass media) or newspapers as being their source of information on topics related to leprosy, eventhough 25.2% and 59.5% of the population of Maharashtra are exposed to TV and radio respectively (Working Group 1982).

The post-test results may be attributed to the impact made by the audio-visual component of the educational sessions and has a high recall value. Since the objective of our study was to determine the spontaneous percolation of leprosy information, the students were not particularly encouraged to discuss what they had learnt with others especially their parents. Such encouragement by the health educator may have facilitated transfer of information to parents.

CONCLUSIONS

The results of this pilot study are promising. School children are an energetic, accessible sub-group in the population, who may have the potential for spreading health information to older family members not easily reached by conventional health education programmes.

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