
ORIGINAL ARTICLE

Primary School Pupils as Health Educators*

by

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Abstract

An evaluation study of primary school pupils involved in health activities was carried out. The study showed that pupils can be used effectively as agents for transmitting health information.

Through a well designed school health program the use of primary school pupils will help improve deficiencies in the quantity and quality of existing public health education activities.

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Introduction

In rural areas primary schools are numerous and evenly distributed in contrast to the primary health centres which are thinly scattered.

School pupils are psychologically capable of being trained to get good health practices. It is anticipated that they could transmit good health practices to their families, their neighbours and to their surrounding community. In other words, they are able to change the knowledge and attitudes, and to provide new skills in the community. They are numerous and are present in almost every home.

A further advantage is that they are usually in close contact with their neighbours and this relationship will be of great help for the success of their task. It is assumed that primary school pupils in particular represent a potential and valuable resource for preventive and promotive medicine and thus can be involved in health programs.

The purpose of this present study is to evaluate how far the primary school pupils can spread the information adopted at school to their families, neighbours and community. Diarrhoea is still the leading cause of death in preschool children in developing countries, for this reason the subject of diarrhoea was chosen for this teaching program.

Materials and Methods

This study was conducted at a rural elementary school in Sidoarum village,

Godean subdistrict, Yogyakarta, Indonesia; it also involved people who lived in this area (Fig. 1.).

A module on diarrhoea (consisting of one scientific knowledge, and a description of attitudes towards and practices in this common and important illness) was given to the pupils by the school teacher, who had been trained previously by the authors. It consisted of five one hour lessons, given in a period of seven days, and including demonstrations and specific tasks to be done at home. Basic learning such as (1) the danger of diarrhoea, (2) the signs of dehydration and (3) the preparation of special drinking water containing mixed salt and sugar as an oral rehydration solution (ORS), were demonstrated (Sadjimin and Whitecar, 1979).

The pupils were then instructed to pass on the information and techniques they had learned at school to their parents and neighbours who lived close to their homes. To make this task easier the pupils also were equipped with posters showing how to make ORS.

To evaluate the impact of this learning experience on pupils, the pre-course test consisting of 13 questions was repeated at the end of the lessons. The same test questions were also given to the people before and three to ten days after receiving the information from the pupils. This community testing was conducted by medical students who had been previously trained; data about socio-economic and educational backgro-

und, and acceptance of the pupils work were also collected.

Results and discussion

One of nine teachers responsible for the school health program was chosen to teach the diarrhoea module in grade 5, a class of 46 pupils. Eleven pupils who live outside the subdistrict, and five pupils who did not attend the course completely, were excluded from this study.

Thus 30 pupils were enrolled in this study; 8 boys and 22 girls. The mean age was 12,4 years, with a range of 11 to 15 years.

The mean pre and post-course score showed a clear improvement as seen in table 1.

The number of people (non-pupils) included in this study was sixty, consisting of 24 parents and 36 neighbours, aged between 30 to 75 years old. They were mainly farmers and laborers with a small portion working as merchants. Educationally, 40 people never attended any school, of whom 34 were illiterate; 16 have been at elementary school; 2 people have been at junior high school, and 2 people have been at high school.

In carrying out their task, not all pupils worked as the teacher had instructed. Sixteen (27%) respondents received the poster without any explanation from the pupils and 7 (12%) respondents knew nothing about poster nor explanation. The 37 remaining respondents

(61%) who received both poster and direct explanation from the pupils, improved test scorings: their mean score rose from 5,35 at the pre-test to 9,49 at the post-test (table 2).

Reasons given by pupils who had not given explanations were: shy (2 pupils), fear (3 pupils), without clear reason (2 pupils); 9 pupils said that the respondents were not at home but the explanation and posters were given to other members of the family.

This happened because many people in this village were laborers who worked outside of the village and usually went home in the evening, whereas the pupils only visited once to each family.

Although the mean scores of the pre and post-tests of people, who only received posters, revealed a statistically significant difference, the improvement in the mean score was not as great as that of the respondents who received both posters and explanations (table 2). There was no improvement in the mean score of people who never received poster nor explanation.

Because the pupils had been trained previously at school, all respondents accepted the explanation given by the pupils; only nine respondents mentioned that school pupils were too young.

In table 3 the results of the pre and post-tests of parents and neighbours show a statistically significant difference, although the greater difference is found in the parents group.

During the study there were two children with diarrhoea who had been successfully treated by using oral rehydration solution given by their parents.

It is generally agreed upon that community health workers can be used effectively in health care delivery systems. One study in Kenya showed that primary school teachers were considered as a valuable resource for preventive and promotive medicine

(Achmed, 1978). In Indonesia such a program called "little doctor program" (dokter kecil) has already been launched in 1980 at several elementary schools in Jakarta, Indonesia with encouraging results (Departemen Kesehatan RI, 1981). Our study suggests that elementary school pupils can be used effectively as agents for increasing the health knowledge of the community.

TABLE 1: Results of pre and post-test of primary school pupils

	Number of correct answers (13 questions)					
	Pre - test			Post - test		
	X ± SD	%	n	X ± SD	%	n
Score t : 9.70 p < 0,01	5,8 ± 2,16	45	30	11,2 ± 2,08	86	30

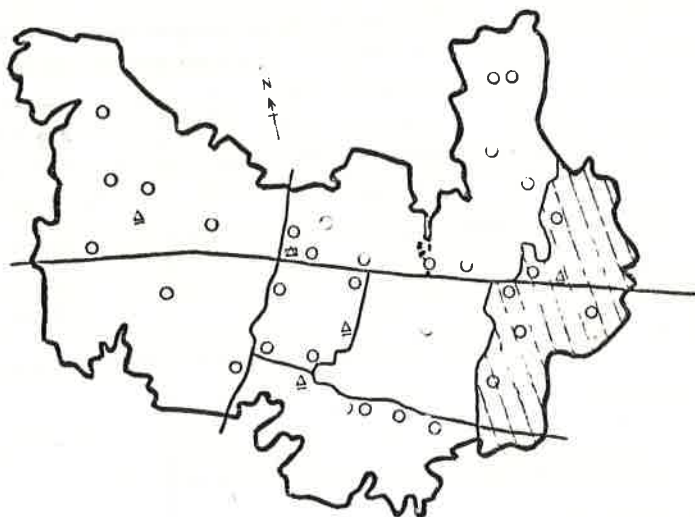
TABLE 2: Results of pre and post-test of parents and neighbours related to material given

	Numbers of correct answers (13 questions)					
	Pre - test			Post - test		
	X ± SD	%	n	X ± SD	%	n
Poster given and explained t ; 8.00 p < 0,01	5.35 ± 2.35	41	37	9.49 ± 2.04	73	37
Poster given but not explained t ; 3.13 p < 0,01	4.25 ± 2.61	33	16	6.88 ± 2.15	53	16
Poster not given nor explained t ; 0,49 p > 0,05	6.71 ± 1.03	52	7	7 ± 1.07	54	7
Total respondents t ; 7.60 p < 0,01	5.22 ± 2.42	40	60	8.5 ± 2.33	65	60

TABLE 3: Results of pre and post-test of parents and neighbours

	Numbers of correct answers (13 questions)					
	Pre - test			Post - test		
	X ± SD	%	n	X ± SD	%	n
Parents t ; 6.61 p < 0,01	5,8 ± 2,46	45	23	10,25 ± 1,98	79	23
Neighbours t ; 4,55 p < 0,01	5,2 ± 2,00	40	14	8,5 ± 1,68	65	14

FIG. 1: Map of Godean, Distribution of primary schools and health facilities



- △ Health centre
- Mother and child health clinic
- Primary school *
- # Sidoarum village
- * Total of the pupils : 8390.

REFERENCES

1. AHMED, S.: Potential contribution of primary-school teachers to the health of a developing country. *Lancet* ii: 307-308 (1978).
2. DEPARTEMEN KESEHATAN R.I.: Buku pedoman sekolah, Departemen Kesehatan RI, Jakarta (1981).
3. SADJIMIN, T. and WHITECAR, P.: *Pedoman Kesehatan*, pp. 11-35 (Essentia Medika, Yogyakarta, 1979).