REFERENCES


Rural Community Management of Diarrhoea in Zimbabwe: the impact of Health Education message on Oral Rehydration Therapy

SS MTERO,* N DUBE,** E T GWEBU**

SUMMARY

This study was conducted in June/July 1984 to gather information on the management of diarrhoea in the home and hence the impact of health workers in their promotions of oral rehydration therapy (ORT) for the Diarrhoeal Diseases Control Programme. Eight rural areas were selected, one randomly chosen from each province. A total of 480 mothers/childminders, 141 Villagers Health Workers, 78 Medical and Health Assistants and 38 Community Sisters were interviewed.

The majority (77.4 percent) of mothers/childminders interviewed were aware of the seriousness of diarrhoea and its associated consequences leading to dehydration and death. Some mothers did not appreciate the value of breast milk as nourishment for children with diarrhoea, as indicated by the 22 percent who said that the breastfeeding actually caused the diarrhoea, while 12 percent completely stopped breastfeeding because of this belief. However, the majority of the health workers interviewed (97.4 percent) were advising mothers to continue breastfeeding during and after the diarrhoea episode.

Seventy-two percent of the mothers/childminders had been taught about the use of the sugar and salt solution (SSS) in the treatment of diarrhoea by the health workers, but only 21 percent could recall the recommended standard method (6 teaspoons sugar, half a teaspoon salt in 750 ml of clean water). The majority of health workers interviewed did recommend the SSS as the first line of action in the management of diarrhoea and 75 percent of them were able to give the standard formulation.

INTRODUCTION

Diarrhoea has long been recognised as the greatest killer of infants and young children in the developing world. Diarrhoea associated mortality is primarily a result of dehydration caused by a rapid loss of fluid and electrolytes in the diarrhoeal stool. In Zimbabwe alone, diarrhoea has an estimated incidence rate in children under 5 years of age of 4.38 episodes per year per child and an associated mortality rate of 4.23 per 1000 children. In the country's two largest cities, Harare and Bulawayo, diarrhoea accounts for 12 percent and 15 percent of outpatients attendances in children under five years, respectively.

It is generally agreed that health education of mothers and childminders in particular, must play a crucial role in the prevention of diarrhoeal disease in infants and children. The Ministry of Health initiated in 1982 a national programme for the control of Diarrhoeal Disease, the major strategy being to promote home based oral rehydration therapy (ORT). This was to be in the form of a salt-sugar solution (SSS) administered to all children with diarrhoea both at home and at health centres. The
recommended method of preparation was six level teaspoons of sugar and half a teaspoon of salt in 750 ml of clean water.

In rural Zimbabwe, Village Health Workers (VHWs) are the key link between the organised village community and the local health services. Their role is promotive, educational and preventive, mobilising the community to act on issues of environmental and personal hygiene, nutrition, immunisation and mother and child health issues including ORT of the children.

This study was conducted to look at the impact of the health education on ORT by the health workers on the community, by assessing the mothers/childminders knowledge and practices in the management of diarrhoea in the home. In addition, the uniformity of the message from the VHWs themselves to the community was also assessed together with other categories of health workers out in the rural areas, viz, health assistants, medical assistants and community sisters.

MATERIALS AND METHODS

This was a nationwide survey carried out in the rural areas of Zimbabwe in 1984. A random multistage sampling technique was used to select eight areas in the country, one from each province. Each area consisted of 60 households (HH) each HH having a mother/childminder who had at least one child under 5 years of age that had suffered from diarrhoea 6 months or less prior to the interview. Final-year University of Zimbabwe students, serving as enumerators, conducted face-to-face interviews with the mothers/childminders using a prepared questionnaire that related to various issues on diarrhoeal management in the home.

In preparation for the study, the enumerators were given a 3 day training session which included a practical data collection exercise at a nearby community. The exercise doubled up as a pretest for the questionnaire. Where vague answers were given by respondents, enumerators were allowed to probe but not encouraged to prompt as this could influence the responses.

For the health workers survey, provincial health education officers were the numerators. Village Health Workers who were trained 6 months prior to the survey were asked to assemble at a specific rural health centre in the selected area and face-to-face interviews conducted. Any medical or health assistants present during this time were also interviewed. A total of 480 mothers/childminders, 141 VHWs, 78 Health and Medical Assistants and 38 Community Sisters were interviewed.

RESULTS

A. The Seriousness of Diarrhoea as Perceived by the Mothers: Mothers/childminders were asked what their perception of diarrhoeal disease was, whether they thought it was a serious problem or a nuisance. Most respondents (77.4 percent) were aware of the seriousness of diarrhoea, although 18.6 percent of them thought it was just a nuisance. Further questioning established that the majority of mothers (58.1 percent) knew of the consequences of diarrhoea; 75 percent of whom were aware that the disease could lead to death. However, there was a substantial proportion of mothers (39.4 percent) that were not sure of the effects of the diarrhoea on the child.

B. Knowledge of Community and Health Workers about the Management of Diarrhoea: (1) Diarrhoea and Breastfeeding.

Mothers were asked specifically about the relationship between diarrhoea and breastfeeding. It was established that 12.2 percent of the mothers had ceased breastfeeding because the child had diarrhoea, and out of the mothers who had responded 22.8 percent thought breastfeeding caused diarrhoea. A question on the same topic posed to the health workers however, indicated that almost all of them (97.2 percent) advocated breastfeeding during the diarrhoeal episode.

(ii) Diarrhoea and The Sugar, Salt Solution (SSS).

Mothers were asked if they had been taught about the SSS in the management of diarrhoea, who had taught them and to give precise details of the method they had been taught. Responses on the preparation of the SSS were grouped either under 'standard' method (i.e. 6 teaspoons sugar, half teaspoon salt in 750 ml of clean water) or as 'other/don't know' if they varied in any way from the above. (The standard bottle of mazoe or the cooking oil bottle has a capacity of 750 mls).

Table I shows that, although the majority of mothers (71.9 percent) had been taught about preparation of the home-based SSS only 21.2 percent of these could prepare it using the 'standard' method as advocated by the Ministry of Health.

Overall, only 15.2 percent of the 480 mothers/childminders interviewed could correctly prepare the SSS.
Similarly health workers were asked what they recommended to mothers as treatment for the diarrhoea and to give an account of how they prepared the SSS. Of the Village Health Workers, 27 percent gave formulation of the SSS which were not the 'standard' compared to 30.8 percent of the Medical and Health Assistants and 10.5 percent of the Community Sisters.

On when to administer the SSS, a variety of responses were obtained from the health workers. This question was asked in order to establish the frequency with which mothers were being taught to give SSS to children with diarrhoea. The 3 commonest responses are shown on Table 2.

DISCUSSION

It is recognised that the control of diarrhoea disease requires an understanding of traditional beliefs and practices that directly or indirectly relate to the causes, treatment and prevention of diarrhoea. This can help in formulation of clear acceptable health education messages which can be adopted by the community and lead to a positive change in behaviour.

The likelihood of individuals taking recommended action to prevent or treat a disease depends on their perceived threat of the disease. This study showed that although most mothers were aware of the seriousness and consequences of diarrhoea, there were some (18.1 percent) who considered diarrhoea a "nuisance". Such people are less likely to be receptive towards an ORT campaign and may take dangerous remedial action or not take action at all. Morley documented in the developing countries, the widespread use of starvation therapy for diarrhoea because of a misconception that giving fluids would increase the volume lost in stools.

Furthermore, a large proportion of mothers in our study did not appreciate the value of breast milk as a source of nourishment and fluids since 22 percent believed breastfeeding caused diarrhoea. As many as 12 percent stopped breastfeeding because the child had diarrhoea inspite of the finding that the majority of health workers interviewed (97.2 percent) said they advised mothers to continue breastfeeding. This included village health workers who were quite influential in their communities. It is essential therefore, in such cases, for health workers to have a full understanding of their local communities beliefs so that any health education message passed on will be appropriately presented, relevant and convincing. Breastfeeding especially during diarrhoea should be promoted and the advantages fully explained to the community, since cessation of breastfeeding could predispose the children to the vicious cycle of diarrhoea and malnutrition.

The Ministry of Health is promoting the use of the home-based sugar salt solution (SSS) as the first step towards the management of diarrhoea. Over 90 percent of all the health workers interviewed said they promoted SSS as the first line of action against diarrhoea. Seventy-two percent of the mothers/childminders interviewed had been taught about its preparation and administration by the health workers. However, only 21 percent of these could correctly describe the 'standard' method as recommended by the Ministry of Health, while 24.7 percent had no idea what the effect of this SSS was on the child. The fact that 27 percent of village health workers and 31 percent of medical assistants could not give the correct formula for SSS is cause for concern particularly since they are responsible for passing this information on.
Table II — Health Workers’ Advice on the frequency of administering SSS to a child with diarrhoea

<table>
<thead>
<tr>
<th>Question</th>
<th>When Should Mothers Administer the SSS?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After each Stool</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>VHW</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Health Medical Assit.</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Community Sister</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

to the mothers. This could probably be part of the explanation to the poor performance of the mothers on this issue.

These findings highlight the importance of a single formula being promoted so as to avoid mothers mixing various recipes which could be potentially dangerous, especially so in Zimbabwe where there is a fair amount of rural-urban migration.

It is interesting to note that a similar study conducted in Zimbabwe by de Zoysa 4 in 1983 on a highly motivated and well served community in terms of access to health centres, showed that only 12 percent of the mothers could prepare the standard home based SSS. Only a year later as shown in this study, the proportion of mothers who correctly prepared standard SSS was 15.2 percent. This 3 percent rise in the number, although slight, perhaps demonstrates the importance of health education as an essential component of any programme to improve the health of a community. With a more vigorous campaign, this number could rise.

ACKNOWLEDGEMENT

The authors wish to acknowledge the following: The Provincial Health Teams, especially Provincial Health Education Officers who participated in the research project. Special mention goes to the late Mr Albert Chambwe, Dean of Students, University of Zimbabwe, who helped in the design of the questionnaire form and the training of enumerators with the assistance of Mr Shiraz Ramji of the Epidemiology Unit, Ministry of Health. Sixteen students from the University of Zimbabwe served as enumerators, whilst Andrew Murahwa, Phillip Maluleke and Maureen Wellington deserve mention for their help in data compilation, and Joyce Munyoro for excellent secretarial services throughout the study. We thank Dr. Paul Taylor for his comments on the manuscript and the Secretary for Health for his permission to publish the paper. Funding for the study was received from the Centre for Disease Control (CDC) Atlanta, USA, under their CCCD Programme.

REFERENCES

3. Annual Reports of the City Health Departments (Harare and Bulawayo) 1983.