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Change and continuity in the management of diarrhoeal diseases in under-five children in rural Malawi

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This paper discusses the changing perceptions about diarrhoea in under-five children in western Rumphi. While young women also subscribed to the cultural ideas about the aetiology treatment and prevention of diarrhoea, they (unlike the elderly) at the same time subscribed to the biomedical diarrhoea explanatory models learnt through radio programmes on the Malawi Broadcasting Corporation, at school and during health education programmes conducted by community health workers.

Introduction

The frequent passing out of watery stools which are either accompanied by blood or not characterises diarrhoea which is caused by pathogenic agents such as viruses, bacteria and protozoas (Saloojee, 2001). Flies constitute one of the most important agents that transfer diarrhoea-causing microorganisms from excreta to food or food utensils. The use of clean latrines for disposal of human excreta, the washing of hands after visiting the toilet and before eating, proper cleaning of eating utensils and use of clean water for drinking and cooking are some of the most important methods of preventing diarrhoea. Since a lot of fluids are lost during diarrhoeal episodes, it is important, as a therapeutic measure, to replace lost fluids through uptake of oral rehydration therapy.

As is the case with other countries in Sub-Saharan Africa, diarrhoea constitutes one of the leading causes of morbidity and mortality in under-five children, accounting for 7.4% of under-five admission in 1996 in Malawi. (Ministry of Health and Population, 1999). The improvements in access to safe drinking water in the 1990s has attributed to a drop in reported prevalence of diarrhoea from 22 percent in 1992 to 18 percent in 2000 as reported by the 2000 Demographic and Health Survey (National Statistical Office, 2001). It has been estimated that in Malawi under-five children experience approximately 6 diarrhoeal episodes annually (see Government of Malawi, 1994; Ministry of Economic Planning and Development, 1996:39). In 1981 the National Control of Diarrhoeal Diseases (CDD) Programme was established in the Ministry of Health and Population to reduce morbidity and mortality due to diarrhoea through the provision of safe water, intensification of immunisation campaigns to control measles-related diarrhoea, promotion of hygiene and sanitation measures and the use of ORT.

While Government is promoting the use oral rehydration therapy in the management of diarrhoea and different methods of preventing this disease, this paper, which is based on fieldwork conducted in western Rumphi in the area of T A Chikulamayembe, examines people's perceptions about the causes, treatment and prevention of diarrhoea and how these perceptions have changed over the years.

Materials and methods

This paper is drawn from a larger study which was aimed at determining what people in western Rumphi consider to be the most prevalent and important diseases that threaten the lives of under-five children. Diarrhoea was mentioned as one of these diseases and since the study was examining changes in people's perceptions, in-depth interviews were conducted with old men and women aged over 65 years to see how they managed diarrhoeal episodes in their under-five children. Young men and women with under-five children were also interviewed to find out how they manage this disease in their under five children at the time of the study. Key informant interviews with traditional birth attendants, traditional healers, health surveillance assistants and clinical officers/medical assistants were also conducted. Data collection period for the study lasted for close to 11 months between may 2000 and May 2002. This study was qualitative in nature.

Results

The aetiology of diarrhoeal diseases

Sexual intercourse during some prohibited periods

The biomedical idea that pathogenic agents cause diarrhoea is not universally accepted. As far as people in western Rumphi are concerned, there exist some taboos on sex and sexuality that have to be adhered to in order to prevent the onset of diseases, including diarrhoeal diseases. For example, both old and young women and men said that a woman who is breastfeeding is not supposed to engage in sexual intercourse. The belief is that once a man releases his sperms into the vagina, these sperms move around the woman's body and finally reach the breasts; thereby contaminating the breast milk. If the child feeds on the contaminated milk, he or she will suffer from diarrhoea. In addition to this, while biomedicine recommends that a pregnant woman can breast, informants, especially the elderly men and women, said that a pregnant woman is not supposed to breastfeed. Once a breastfeeding mother realises that she is pregnant, the child has to be weaned. TBAs and some elderly women explained that when a woman is pregnant the body changes as it prepares for the child in the womb: even the breast and breast milk change. They said that milk from such a pregnant woman is not white: it is a bit yellowish in colour hence contaminated. Therefore, there is no any "food" for the already born child in the mother's breasts, and if he continues breastfeeding he develops diarrhoea as he feeds on bad milk.

One day while interviewing a 28- year old woman, Nyagondwe, she held on her lap a 15-month old child. This child was pale and very thin and Nyagondwe explained that the child's mother became pregnant while she was still breastfeeding. When it was known that the mother was pregnant it was too late, as the child had already breastfed on the contaminated milk and developed diarrhoea. The child was taken away from its mother and the grandmother took over caring for the child. While this woman explained the child's condition in terms of sexual intercourse related factors, biomedically the child's symptoms indicated that he was suffering from marasmus, a nutritional disorder in which a child lacks all groups of food. As this case of a 15 month old child shows, once a woman has another child or is pregnant care for the older child decreases and grandparents who are already

weak are given the responsibility to cater for the child; hence children developing malnutrition related illnesses.

Elderly men and women argued that in the past it was very rare to break sexual taboos especially for women who had just delivered and were breastfeeding. Becoming pregnant while breastfeeding is therefore an indication of the breach of post-partum sexual taboos. Elderly men and women alleged that young men and women start having sexual intercourse when the child is still very young and breastfeeding. According to them, this is held to explain why so many children these days have poor health. Elders therefore use the child's health status as a yardstick to determine whether its parents are observing postpartum sexual abstinence. In order to prevent sexual intercourse-related diarrhoea in under-five children, informants said that people should adhere to sexual taboos as set by society. While this was the general view, some elderly women said that sexual intercourse between the breastfeeding women and her husband is not strictly forbidden but that they should practice coitus interrnptus or as one young man put it, the use of condoms as this will prevent the discharge of sperms into the vagina.

Biomedical explanatory models of diarrhoea and young women

The belief about the contamination of breast milk was expressed by both young and old interviewees. Young women also held the biomedical explanations of diarrhoea. While they subscribed to the above causes of diarrhoea, young women also mentioned other causes of the disease for example drinking of unclean or contaminated water; eating food that has gone bad or food that has been contaminated by flies because it was not covered; and non-availability of toilets, which forces people to defecate anywhere, with flies contaminating food. These young women said that they either learnt this at school or during the health education sessions conducted during under-five clinics. The old men and women attributed diarrhoea to breastfeeding while the mother is pregnant and such other explanations; and none of them mentioned that diarrhoea can also be caused by poor sanitation and unhygienic practices. They never associated diarrhoea with consumption of contaminated food, food that has gone bad or contaminated water sources. The change in perceptions about the causes of diarrhoea especially by young women accepting biomedical explanatory models is therefore evident.

Incompatibility of the food with the child

One concept that arose during the data collection period was that of foods being "compatible or incompatible with the child". Many young women said that any type of food that a child takes can cause diarrhoea pala chakurya chila chapambana nayo (i.e. if that food is not compatible with the child). The onset of diarrhoea is therefore a sign that the stomach has rejected the food that the child had taken. This belief also exists elsewhere in Africa for example in Benin, where van Reeuwijk says that food can cause one to have diarrhoea because "it did not fit" his or her stomach. In addition to this, van Reeuwijk's informants said that if one eats too much food, the stomach may therefore not contain all the food and that is when one gets diarrhoea (van Reeuwijk, 2000).

Other causes of diarrhoea in under-five children

Both old and young women observed that diseases such as malaria and measles can trigger the onset of diarrhoea in under-five children. It was also mentioned that the process of teething can also lead to the development of diarrhoea in children. Teething as a cause of diarrhoea is a widespread phenomenon in African cultures for example in Benin (van Reeuwijk, 2000), in Kenya (Barasa, 1999), in Nigeria (Deli, 1993 :525-531; Feyisetan et al, 1997:221-234) and in Burkina Faso (Curtis, 1998). The link between the development of diarrhoea and teething can be explained by the fact that teething coincides with crawling and at this stage the child moves around and as he explores his world he takes up anything and puts it in his mouth. Earth (soil) is a good route or medium for the faecal-oral transmission of diarrhoea-causing pathogens. This might explain why children might get dianhoea at this stage in their lives. One informant said that at this stage of development the gums of the child itch quite a lot Gust before the teeth come out) hence, the picking up of objects on its way and chewing on them acts like scratching the gums.

Both the indigenous and the biomedical explanatory models emphasise that diarrhoea is caused by some form of contamination and according to informants, both old and young, this disease is perceived as a way of kuchapa muthupi (cleaning the body) of the contaminants that are orally introduced. Young women especially had the view that diarrhoea can be prevented by following good hygienic and sanitation measures and these women (unlike elderly women), through the radio, being taught in primary school and the intensive health education campaigns conducted by the health surveillance assistants, understand the biomedical approach of how diarrhoea is transmitted and how it can be prevented. These agents of change have contributed to the young peoples' appropriation of the biomedical conceptualisation of diarrhoea.

Seeking treatment for diarrhoea

The use of oral rehydration therapy

Young women said that whenever their children suffer from diarrhoea they either go to the hospital for treatment where they are given oral rehydration solution (ORS) or they purchase these ORS packets from the nearby shops. These women said that they heard about ORS mostly from the Malawi Broadcasting Corporation and the community health workers. In western Rumphi, where this study was done, shop owners interviewed said that there is a very high demand for ORS and they make sure that they always have it in stock. While young women explained correctly how ORS is prepared, the problem with ORS that was observed during fieldwork was that mothers still administered ORS even after 24 hours after preparation. One community health worker said that once the solution is prepared it has to be administered within 24 hours and after that whatever remains should be thrown away and a new solution prepared. A solution kept overnight should be thrown away because in many rural homes people do not have proper facilities for storage hence the solution may become contaminated. However, due to financial constraints most mothers still used the solution after the stipulated 24 hours, hence, whose efficacy was doubtful. HSAs said that mothers are also advised to just give clean water if ORS is not available.

The elderly women never mentioned ORS as treatment for diarrhoea. ORS was only mentioned by the young women and men; only that the young men were not able to describe how ORS is prepared, saying that women were in a better position to know because they were the ones who prepared it. Elderly men and women said that they use traditional medicine to treat childhood diarrhoeal episodes.

Ceasation of sexual intercourse during breastfeeding and weaning the child when pregnant

According to informants, when it is determined that the diarrhoea is due to the child suckling on contaminated breast milk then even if one looks for medicines, the child may get better for a while, but the diarrhoea will come back. In western Rumphi there is, therefore, belief that it is important to determine the cause of that diarrhoeal episode and "treat the cause". These findings are similar to those of Ashford (who did his work in Soweto Township in Johannesburg) whose informants said that while antibiotics can cure illness, there is need for curing the cause as well (Ashford, 2000). In this context, when it is determined that the contamination of breast milk is as a result of sexual intercourse or pregnancy, then the child has to be weaned immediately or if the mother is pregnant then the child has to be taken away from the parents and raised by the grandmother as explained above. The administration of medicines while the child continues breastfeeding is a waste of time and resources as the child will not be cured.

The mis(use) of antibiotics in diarrhoeal management

This study also found that in addition to the use of ORS, there is also a very widespread use of antibiotics in the treatment of diarrhoea. Most women reported that they purchased medicines such as Chloramphenicol, Flagyl, Bactrim and Penicillin from the nearby shops in order to treat childhood diarrhoea. These antibiotics according to shopkeepers are smuggled from Tanzania through the Songwe border in Karonga. There is a general belief that antibiotics are "general players" (as one shop owner described it) and hence they can be used in the treatment of all diseases. One of the women said that specifically she goes for penicillin tablets because this medicine was perceived as very strong and equated to injections. The widespread use of antibiotics in the treatment of childhood diarrhoea has also been reported elsewhere for example in Benin (Reeuwijk, 2000). Though this is the situation, studies have however shown that the use of antibiotics is ineffective in the treatment of diarrhoeal episodes, hence expensive and a waste of money and resources and may even prolong diarrhoeal episodes (see Chetley, 1987:1; Hardon, 1987:277-292). The medical assistants interviewed also mentioned that diarrhoeal illnesses which are caused by viruses do not respond to antibiotics, and that it is a waste of resources to use them in diarrhoeal episodes. They, however, added that bloody diarrhoea is caused by bacteria and in such circumstances it is useful to use antibiotics and one of the most widely used antibiotics in the treatment of bloody diarrhoea is Nalidixic Acid. They also pointed out that in viral diarrhoea, it is important to replace lost fluids by using ORS and that in such circumstances, it is important to address the cause of diarrhoea. If the diarrhoea is due to uncleanliness in the home, the mother should be advised accordingly. When it is due to other diseases like measles, malaria or acute otitis media (ear infection), these diseases need to be treated.

The use of antibiotics in the treatment of diarrhoea has to be avoided as it may divert attention of the mothers from the essential task of replacing water and electrolytes and secondly because the widespread use of antibiotics has led to the development of resistance to these medicines (Chetley, 1987:2). The use of Chloramphenicol in the treatment of childhood diseases is not recommended except in life threatening situations as it causes anaemia and other life threatening blood disorders (Chetley, 1987:4; Hardon, 1987:277-292). While shop owners in western Rumphi play an important role in the provision of health care to people, the advice that they give to their clients for example the use of Chloramphenicol in the treatment of paediatric diarrhoeal diseases may be detrimental to the health of the under-five children. This is partly the reason some scholars have suggested that due to the role the shop owners play in health care there is a need for them to be given some basic training on drugs or medicines (see Snow et al, 1992: 237-239).

Diarrhoea that requires no treatment

In the case of children, informants said that diarrhoea can sometimes be as a consequence of teething. The general consensus among both young and old women was that it was not advisable to give the child any treatment for diarrhoea resulting from teething because one might just hurt the child. They said that even if you give the child any medication the diarrhoea will not stop until teeth come out. This form of diarrhoea does not require any medication. There are others who look for traditional medicine when a child has diarrhoea as a result of teething but most women said that it is just a waste of time because the diarrhoea will not stop until the teeth come out as in Tumbuka they say *"kasi mino nayo yanamunkhwala?"* meaning "does teething diarrhoea also require medication?". These findings are similar to those of Mull and Mull in their study in Pakistan who also found that diarrhoea can be caused by teething and such diarrhoea is not normally a cause for concern, on the contrary, it was believed that they said that it was actually harmful to try and stop it because if one did so the trapped heat might cause soreness in the eyes and fever (Mull and Mull, 1988). While in his own study, Barasa also reports that the Luo consider teething diarrhoea as normal and therefore does not require any medication (Barasa, 1999:53), he however also quotes Maina (1987) who says that among the Akamba of Kenya, teething diarrhoea is also treated.

The use of traditional medicines

While mothers with under-five children gave ORS to their children whenever they suffered from diarrhoea, traditional medicines were also used. The barks of tree species such as chikuyu (the fig tree) are crushed and soaked in water. The mixture can either be boiled or not, and the concoction is given to the child to drink. Traditional healers said that the traditional medicines that are used to treat or stop diarrhoeal episodes in both adults and children yanandi yakuwa na nkhanya ndipo yakuwawirapo meaning that 'many such medicines have an astringent taste and are bit bitter'. The 'astringent' medicine is important as it ties or binds (kukaka) {it coagulates} the supposedly loose and watery material in the stomach making it to harden in the process and it also seals any ulcers that might be in the stomach. This medicine, (it is claimed) stops the diarrhoea

Conclusion

While almost all the old men and women attributed diarrhoea to teething and children suckling on contaminated or bad milk, most young men and women, although accepting such indigenous explanatory models for diarrhoea, also attributed diarrhoea to unhygienic practices in the home and other biomedical explanatory models. The study therefore largely shows that there has been an aetiological shift from virtually polluted liquids, to biologically contaminated liquids and solids (bad milk, to bad water etc). It has been established that diarrhoea is essentially a disease which is very much associated with poverty with its resultant malnutrition, poor sanitation, housing and overcrowding, garbage disposal, poor and contaminated water sources and

the general vulnerability to infections (Helman, 1994:9-10 & 365-367; UNICEF et al, 1993:43-50; Weiss, 1988:5-16). Helman has added that the control of diarrhoeal diseases shall only be achieved when socio-economic issues have been addressed (Helman 1994:367). In western Rumphi there is a need to improve the water and sanitation issues if diarrhoea is to be contained. Though there is piped water the major problem is that this water is not in most cases treated with chemicals.

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College of Medicine Research Dissemination Conference, November 15th 2003

Dr Steve Graham
Secretary, COM Research Dissemination Conference Committee

It was generally agreed that this was the most successful annual research dissemination conference of the College of Medicine yet. The theme was "Promoting Health Research and Ethics in Malawi". There were 50 peer reviewed; 27 as oral presentations and 23 as posters. This is a larger number than previous years and each year the numbers increase. Presentations were of a high standard and covered a wide range of topics relevant to the health issues of Malawi. The abstracts are presented in this issue of the journal.

The conference was opened by Professor Kamwanja, the Pro Vice Chancellor of the University of Malawi, who was generous and enthusiastic in his praise of the research output of the College of Medicine and the College's commitment to the national dissemination of such research via mechanisms such as this annual conference and the Malawi Medical Journal.

Important areas addressed included management and prevention of HIV/AIDS, maternal health, malaria, schistosomiasis, bacterial disease and tuberculosis. While the problem of HIV/AIDS is understandably an important focus of research, a number of presentations highlighted the increasing maternal mortality in Malawi, much of which is not probably due to the impact of HIV as is often supposed but rather to problems relating to health service delivery and the growing human resources problem.

This year was also notable for the large attendance especially during the morning sessions and presentations were made by a range of health workers including medical students, clinical officers, research nurses and medical graduates. Aside from research that is based in Blantyre, there were presentations from research being undertaken in Karonga district, Mzuzu, Ntcheu and Lilongwe.

Efforts to raise funds for the event were less successful than the previous years and the major sponsor was the College of Medicine Research and Ethics Committee. The major external sponsor was Population Services International (PSI) Malawi, and we are grateful for their consistent support.

In conclusion, the conference was successful, stimulating and enjoyable and the COM Annual Research Dissemination Meeting is likely to remain the major health research dissemination meeting in the Malawian calendar.