International Journal of Tropical Medicine 4 (3): 132-135, 2009
ISSN: 1816-3319

Treatment Seeking Behaviour of Mothers for Febrile Children in Some Rural Parts of Imo State Nigeria: Implications for Home Management of Malaria in Endemic Areas

[1]M.Chukwuocha Uche, [1]O. Nwankwo Benjamin, [1]N. Amadi Agwu, [2]C. Esomonu Onyenonachi, [3]I.N.S. Dozie, [4]E. Ikegwuoha Aloy [5]O. Nwabueze Peter and [6]O. Mbagwu Smart
[1]Department of Public Health Technology,
Federal University of Technology, Owerri, Imo State, Nigeria
[2]Department of Biology, Federal University of Technology, Owerri, Imo State, Nigeria
[3]Department of Microbiology, Imo State University, Owerri, Imo State, Nigeria
[4]Department of primary Health Care, Isu LGA, Imo State, Nigeria
[5]Divine Clinics and Maternity, Egbeada, Orlu Road, Owerri, Imo State, Nigeria
[6]Environmental Health Unit, Department of Primary Health Care, Ikeduru LGA, Imo State, Nigeria

Abstract: This study was done to explore the treatment seeking behaviour of mothers for their febrile children in the rural areas of Ezinihitte LGA of Imo State Nigeria. Data was obtained by interviewing 96 mothers with febrile children with pretested questionnaires elicited in Ibo language. Ten focus group discussions with mothers as well as observations were also carried out. A high score of mother's knowledge and recognition of fever/malaria was recorded (70.8%). Mothers usually start treatment at home and within an average of three days shift to health workers or health personnel together with using health workers who visit patients at home. The majority of mothers with febrile children visit a health facility. The choice of visiting a health facility is determined by the availability and condition of health facilities, cost and satisfaction with services. As early effective treatment is the main theme of most control efforts, implementation of an effective malaria home management strategy is urgently needed to improve ongoing practices and achieve better results in endemic areas.

Key words: Malaria, treatment seeking, behaviour, mothers, febrile, children, rural, Imo state, Nigeria

INTRODUCTION

Malaria is a leading cause of morbidity and mortality in topical countries, representing 20% of all hospital admissions with a case fatality rate of 18% in Nigeria (NPC, 2005). The disease is the main cause of fever in children <5 years of age. Early diagnosis and prompt/appropriate treatment are essential to reduce morbidity and mortality related to malaria among this group (Amstrong *et al*., 2002). Early and appropriate treatment of childhood illness is by definition an illness behavior, which consists of those actions people take when they feel unwell in order to determine the nature of their sickness and to seek help (Salako *et al*., 2001). This is always influenced by several factors especially in rural areas where treatment seeking behaviour is related to cultural beliefs about the cause and cure of illness (Oberlander and Elverdan, 2000). The choice of treatment source have been found to be influenced by accessibility, disease type and severity, patients gender and parent's educational level (Miguel *et al*., 1998; Muller *et al*., 2003). Attitude towards providers of treatment is also an important factor (McCombie, 2005). Patients are more likely to start with self treatment at home as this allows them to minimize expenditure (Nyamingo, 2002; Thera *et al*., 2000; Rubebesh *et al*., 1995). In Nigeria, two third of patients in rural areas administer anti-malarial drugs without laboratory confirmation with preference to swallowing tablets (NPC, 2003).

However, with the shift to arthemisin based combination therapy (ACTs) in Nigeria, the issue of treatment seeking was considered as the cost of the drugs is higher compared to the cost of chloroqunine which was previously the drug of choice. This study aimed at identifying the basis on which fever was recognized and classified and explores factors involved in selection of different treatment in Nigeria.

Corresponding Author: Nwankwo Benjamin Osondu, Department of Public Health Technology,
Federal University of Technology, P.M.B. 1526, Owerri, Imo State, Nigeria

MATERIALS AND METHODS

This cross-sectional community based study was conducted in Ezinihitte local government area of Imo State, Nigeria. The population in the area is around 165,000, distributed over 24 rural communities. The area is holoendemic for malaria.

A total of 10 communities were found to be convenient to answer the study questions related to malaria treatment-seeking behaviour at the community level. The criterion for selection was accessibility and geographical spread of the communities to represent the entire local government area. Focus Group Discussions (FGDs) with 10 groups of mothers (average of 11 women FGD^{-1}) were carried out in the selected communities. A sample of 96 mothers who had febrile children were interviewed at home with structured pretested questionnaires elicited in Igbo language.

Ethical considerations: This study was reviewed and approved by the Institutional Review Board (IRB) of the Imo State University Owerri, Imo State. In each community the study started after receiving permission from community leaders and the consent of participants.

RESULTS

The 96 mothers interviewed had a mean age of 26.1 years, 55 (58.3%) were illiterate, 91 were solely housewives or house wives and farmers and 90 (93.8%) had 1-3 children <5 years. Based on the type of housing, family source of income and presence of domestic animals, 79 (82.3%) of mothers have low to moderate socioeconomic status.

Fever was recognized by 68 (70.8%) and by 16 (24.0%) of mothers as ahu oku meaning hot body or as a syndrome including hot body and other symptoms such as headache, restlessness etc. Malaria was correctly defined as fever or fever with other symptoms or signs and was recognized as a common cause of fever followed by chest infection. Fever was considered as a dangerous feature leading to complications such as convulsion or to death as revealed in focus group discussions. Fifty eight of interviewed caregivers (60.4%) responded to fever by seeking advice from sources other than health facilities initially; of those (90%) offered their child a drug. The mean duration before attending a health facility was 67.8 h.

The main reason cited by mothers for their attendance to health facilities was determination of the child condition. The decision for seeking treatment at health facility was the parent's decision (Table 1).

Most common options for treatment: The preferred and actual practice related to treatment of fever in children is shown in Table 2. Four main treatment options available for any patient in the area include, consulting medicine store owners, traditional medicine, use of herbs and self treatment. FGD showed that although, it was not mandatory, people when getting ill also think about consulting health workers at the few available health facilities or at health workers home as if the patient couldn't move, the health worker was asked to visit at home. Drugs are given based on the description of the patients symptoms to the care giver.

Self treatment was common. Reasons stated included: their ability to recognize malaria, lack of health care facilities and cost of travel. Sometimes parents seek advice from other members of the community. If they agreed that the sickness was malaria, they administer antimalaria drugs. People obtain drugs, commonly sulphaar®, Amalar®, Malareich® etc., chloroquine and paracetamol from chemists or patent medicine stores in the communities. Dosage is decided based on people's experiences and medicine dealers' prescription. People usually start with self treatment and then they look for treatment in nearby facilities. FGD with mothers and with mothers with sick children confirmed these trends.

Table 1: Mothers response for fever

Variables	Frequency (%)
Mothers recognized fever as hot body or hot body with others symptoms or signs	68 (70.8)
Mothers defined malaria as fever or fever with other symptoms or signs	84 (87.5)
Mothers blamed malaria for the child current fever	38 (40.0)
Mothers believed that the common cause of fever in the area is malaria	76 (79.2)
Mothers seeking advice from any source before coming to health facilities	58 (60.4)
Mothers give the child any sort of care before coming to health facilities	49 (51.0)
The care given to the child was drugs (n= 49)	44 (89.8)
Village is the source of the care given (n = 49)	43 (87.8)
Duration (h) of response form the initiation of fever (Mean ±SD)	67.8±41.3
Decision to attend health facility	
Mother	17 (17.7)
Father	41 (42.7)
Mother/father	33 (34.4)
Others	05 (05.2)

Table 2: Preferred and actual practice related to treatment of febrile children

Variables	Frequency (%)
Mothers prefer to seek advise	
Medicine store owners	78 (81.3)
Grandmothers, grandfathers, neighbours	7 (07.3)
Village volunteers	4 (04.2)
Others	3 (03.1)
Mothers actually seek advise for this event	
Medicine store owners	81 (84.4)
Grandmothers, grandfathers, neighbours	7 (07.3)
Village volunteers	0 (00.0)
Others	4 (04.3)

Factors involved in selection between different treatment options: Two major factors mentioned during FGDs affecting health-seeking behaviour included, "when the child condition deteriorated, with high fever, inability to stand or walk, refused to eat, loss of consciousness, yellowish eyes, severe diarrhea and repeated vomiting, there is an urgent need for health worker on the other hand, if illness starts at any time at night no matter its severity the child has to wait till the morning. Other factors included: low coverage and/or performance of health facilities the expected cost and frequent use of traditional options. Seeking help from health personal and not from other options has no relation to the parent's of child's age or gender. However, there was significant association between father's education and consulting health workers within 24 h of the onset of fever ($p<0.05$).

DISCUSSION

Effective management of malaria requires the consumers and the care givers, seek, obtain and use drugs appropriately (McCombie, 2005). This is linked to timely decision, accessibility, correct use of the drugs and follow-up after prescription.

Malaria in children under 5 years requires cargivers early recognition and classification of fever. In the present study, fever and malaria were defined correctly by the majority of caregivers and malaria was identified as a main cause of fever. These findings have been shown to be key to intervention in rural Ghana (Hill *et al*., 2003). The study results reflected mothers good knowledge about malaria, its transmission and prevention as in other parts of Africa. (Comoro *et al*., 2003). Furthermore, they identified that high fever, inability to stand or walk, refusal to eat, loss of consciousness, yellowish eyes, severe diarrhea and repeated vomiting were the features if malaria episode evolved into a more serious situation (severe malaria) and that requires urgent treatment at health facilities. These findings were consistent with similar studies carried out in Sri Lanka (Konradsent *et al*., 2000) and other parts of Africa (Nyamongo, 2002; Nsugwa-sabiiti, 2004).

Four treatment options were available for a febrile child in the area. Two included the use of drugs (consulting a medicine store owners and self treatment). The other two (traditional medicines and herbs) were deeply rooted. Accessing care from a variety of sources is a common practice in malaria endemic areas. A study in Philippines (Espino and Manderson, 2000) showed availability of 6 treatment choices for families ranging from ignoring the illness, to treatment with drugs based on formal prescription. Sources of health care identified in Uganda, included public health institutions, private practitioners, traditional healers and self treatment (Nunowalia, 2002).

Treatment-seeking behaviour was comparable between villages in the study area. Commonly people start care for a febrile child at home with what is available (remaining drugs, drugs from shops, herbs, cold compiness or sponging). When there is no response or if the condition deteriorates then they seek advice from health personnel. Medication at home before moving to health facilities was also reported in Tanzania (Tarimo *et al*. 2000). A study in Kenya (Nyamungo, 2002) showed that moving from different options was determined by duration of sickness, its intensity and the expected cost. As observed by other studies, the delay in seeking care at health facilities. Level was related to existence accessibility, satisfaction (Nuwaha, 2002) and cost of service (Hill *et al*., 2003), as well as satisfaction with traditional medicine and herbs. However, two factors affecting early consultation were actually leading to contradicting outcomes: firstly, a severely ill child need urgent consultation and hence short duration and secondly, appearance of illness at night deter the child from health facilities care waiting for the sun to rise and hence prolong the duration. These barriers have been recognized among other factors such as long waiting time in health facilities, health workers abusing patients and being given injections instead of tablets (Nwoaha, 2002). Hill *et al*. (2003) also considered financial access as a major barrier to care seeking.

Self treatment and traditional medicine are habitual among the population of the study area. Similar findings have been reported in other parts of Sub-Saharan Africa (Abdel, 2000; Comoro, 2003). In the present study, seeking health care at health facilities is predominantly by fathers. This is in contrast to findings in Uganda (Nsingwu, 2004) where mothers decide.

CONCLUSION

In Nigeria, there is new emphasis for the delivery of antimalarials including ACTs to health facilities. However, in situations where coverage with health facilities is low or dilapidated such as in the study area, promoting

adequate case management practices at the community level appears necessary. This can be achieved through training of mothers and availing adequately packaged drugs at designated dispensations in every community. Mothers could then be able to recognize malaria and as well give appropriate treatment at home and by so doing, reduce the incidence of severe disease and mortality.

REFERENCES

Abdel-Hameed, A.A., 2000. Malaria case management at the community level in Gazira, Sudan. Afr. J. Med. Sci., 30: 43-46.

Armstrong, S.J.R., R. Nathan, S. Abdulla, O. Mukasa, T.J. Marchant, M. Tanner and C. Lengeler, 2002. Risk factors for child mortality in rural Tanzania. Trop. Med. Int. Health, 7: 506-511.

Comoro, C., S.E.D. Nsimba, M. Warsame and G. Tomson, 2003. Local understanding, perception and reported practices of mothers/guardians ad health workers on childhood malaria in Tanzania district-implications for malaria control. Act. Trop., 87: 305-313.

Espino, F. and L. Manderson, 2000. Treatment seeking for malaria in Morong, Bataan, the Philippines. Soc. Sci. Med., 50: 1309 -1316.

Hill, Z., C. Kendali, P. Arthur, B. Kirikwood and E. Adjei, 2003. Recognizing childhood illness and their traditional explanations: Exploring options for care-seeking interventions in the context of the IMCI strategy in rural Ghana. Trop. Med. Int. Health., 8: 668-676.

Konradsen, F., P.H. Amerasinghe, D. Perera, W. Van der Hoek and F.P. Amerasinghe, 2000. A village treatment center for malaria: Community response in Sri Lanka. Soc. Sci. Med., 50: 879 -889.

McCombie, S.C., 2005. Treatment seeking for malaria: A review and suggestions for future research. Social and Economic Research in Tropical Diseases; Resource Paper No. 2. TDR/SER/RP/94.1

Miguel, C.A., L. Manderson and M.A. Lansang, 1998. Patterns of treatment for malaria in Tayabas, the Philippines: Implications for control. Trop. Med. Int. Health, 3: 413 -421.

Muller, O., C. Traore, H. Becher and B. Kouyatem, 2003. Malaria morbidity, treatment-seeking behaviour and mortality in a cohort of young children in rural Burkina Faso. Trop. Med. Int. Health, 8: 290-296

NPC, 2005. National population and health survey of Nigeria. National Population Commission, Abuja, Nigeria.

Nsingwu, S.K., 2004. Treatment seekink behavior for malaria among people of Southern Uganda.Ug Med J., 13: 11-15.

Nsugwa-Sabiiti, J., K. Kallander, X. Nsabagasani, K. Namusisi, G. Pariyo, A. Johansson, G. Tomson, S. Peterson, 2004. Local fever illness classifications: Implications for home management of malaria strategies. Trop. Med. Int. Health., 9: 1191-1199.

Nunowalia, R.P., 2002. Critical appraisal of healthcare delivery systems in Ug. Nat. Health Bull., 5: 9-14.

Nuwaha, F., 2002. People's perception of malaria in Mbarara, Uganda. Trop. Med. Int. Health., 7: 462-470.

Nyamongo, I.K., 2002. Health care switching behaviour of malaria patients in a Kenyan rural community. Soc. Sci. Me, 54: 377-386.

Oberlander, L. and B. Elverdan, 2000. Malaria in the United Republic of Tanzania: Cultural considerations and health-seeking behaviour. Bull. WHO, 78: 1352-1357.

Ruebush, T.K., M.K. Kern, C.C. Campbell and A.J. Oloo 1995. Self treatment of malaria in a rural area of Western Kenya. Bull. WHO, 73: 229-236.

Salako, L.A., W.R. Brieger, B.M. Afolabi, R.E. Umeh, P.U. Agomo, S. Asa, A.K. Adeneye, B.O. Nwankwo and C.O. Akinlade, 2001. Treatment of childhood fevers and other illnesses in three rural Nigerian communities. J. Trop. Pead., 47: 230-238. Oxford University press.

Tarimo, D.S., G.K. Lwihula, J.N. Minjas, I.C. Bygbjerg, 2000. Mother's perceptions and knowledge on childhood malaria in the holoendemic Kibaha district, Tanzania: Implications for malaria control and the IMCI strategy. Trop. Med. Int. Health, 5: 179-184.

Thera, M.A., U. D'Alessandro, M. Thiero, A. Ouedraogo, J. Packou, O.A. Souleymane, M. Fane, G. Ade, F. Alvez, O. Doumbo, 2000. Child malaria treatment practices among mothers in the districts of Yanfolila, Sikasso region, Mali. Trop. Med. Int. Health, 5: 876-888.