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Home Management of Febrile Children Under-Five Years in Kahama District, North-Western Tanzania

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An assessment of the prevalence and the factors associated with home treatment of children less than five years with febrile illnesses was carried out at Mmuhungura Ward in Kahama District, Shinyanga, Tanzania. Out of the 400 under-fives who participated in the study, 79% had fallen sick during the previous six months. Majority of the children had diarrhoea (64%) and 34% had cough. Thirty nine percent of the parents provided home treatment to their under-five children. The self-administered drugs were antimalarials 45%, antipyretics 34%, antidiarrhoeals 26%, cough syrups 23% and analgesics 17%. The drugs used were obtained from drug stores (68%) while left-overs from previous supplies accounted for 15%. Univariate analysis revealed that diarrhoeal diseases, shortness of breath, being a single parent and frequency of illnesses in the children were significantly associated with home treatment. Multivariate analysis showed that walking time to the health facilities of more than one hour, frequency of morbidity, being a single parent and unemployment of the parent were significantly associated with home treatment. Illiteracy of the parents had low association with home treatment. Home treatment of children less than five years was prevalent in the studied area.

Key words: Home treatment, fever, under-five children, Kahama, Tanzania

INTRODUCTION

Home treatment is any use of drugs other than those prescribed by an authorized health care worker for a particular disease/or ailment at a particular time. It has a broad meaning in terms of health practices and can have beneficial or harmful health effects [1, 2]. Self-medication is a common practice worldwide in adults. Most studies have concentrated on self-medication with antibiotics [3, 4, 5, 6,]. In Dar es Salaam, about 15.3% of the respondents used malaria chemoprophylaxis, and nearly 71.7% of the respondents used home-kept antimalarials for febrile illnesses [7].

Epidemiological data on self-medication among children has been reported in some countries. A study in Germany revealed that about 25% of institutionalized children use self-medication and about 40% of the study participants, mainly children under 12 years, were given medicines with aspirin [8]. Authors concluded that self-medication was highly prevalent in Germany especially among children and adolescents from families with a higher socio-economic status [8]. Similar observations were reported in France where almost 96% of the parents practice self-treatment of their children. Children aged 6 to 24 months were frequently given paracetamol and ibuprofen [9]. About 55% of the interviewed parents made mistakes when self-medicating their children, with 21% reported to combine two brands of paracetamol or two anti-inflammatory drugs [9]. In Brazil, similar studies reported a 56.6% prevalence of self-medication where mothers (51%) and drug store employees (20.1%) contributed the most to self-medication in the community [10]. The frequencies of self-medication in children with respiratory diseases, febrile illnesses and headaches were observed to be 17.2%, 15% and 14%, respectively. In Nigeria, about 43% of the children presented to health facilities had been medicated by their parents before going to hospital [11]. Exit interviews with

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parents/guardians at Kibaha District, Eastern Tanzania, revealed that majority of the childhood conditions were treated with drugs from shops [12]. In addition, 31% of the parents/ guardians dispensed antibiotics, 38% of which were not prescribed by medical practitioners [12].

In sub-Saharan Africa, prompt home treatment outside health facilities especially of under-five children is a common practice. In the best case scenario, it may serve to reduce disease-specific mortality in children under-five years. However, it may occasionally lead to delayed diagnosis and administration of inappropriate drugs and/or dosages. Many reasons have been cited for this practice [13-16]. Parents/guardians administer different types of treatments to febrile under-five children before taking them to hospitals. The most commonly used medications are antipyretics and occasionally antimalarial drugs [14, 16, 17].

In Togo, 80% of under-five children are treated at home and are only sent to health facilities when they have persisting fever [16]. In Uganda, one study revealed that 70% of under-fives who died of suspected pneumonia had received some treatment at home [18]. Of these under five years children, 27% had been treated with antibiotics and 52% were treated with antimalarial drugs [18]. About 42% of the drugs used were obtained from shops and the remaining 58% were leftovers or obtained from neighbours [18].

Self-medication of under-fives is common among parents/guardians in Tanzania. In Mwanza, about 76.1% of the febrile under-fives were reported to receive different treatments prior to presentation to the health facilities [14]. The majority had been given antipyretics (72.1%) and a few had received antimalarial drugs (10.9%) [14]. Local drug stores (94.7%) were the major sources of drugs [14]. In Tanzania, the mortality rate of under-fives is still high, currently it is standing at 81 per 1,000 [19]. The leading causes of mortality in this group are malaria, pneumonia and malnutrition [20]. This study was carried out to determine the prevalence of home management of febrile illnesses in children under-five years in Kahama District, North-Western Tanzania.

METHODOLOGY

This was a cross-sectional study conducted between June and August 2012 and involved households having at least one under-five child in Mmuhungura Ward, Kahama District, Shinyanga Region, Tanzania. The study included children under five years and their parents/guardians living in the same household. A pre-tested questionnaire was used to collect information on home treatment of the under-fives. The questionnaires were administered to guardians or parents of the under-fives. Information collected included the parent/guardian demographic and socio-economic data, number of children under five years in the household, age and sex of the children. The frequency and history of episodes of illnesses, common disease conditions, distance and time taken to reach the local health centre, and type of treatment offered at home were also recorded in the questionnaires.

The data was double entered in Microsoft Excel data sheets, cross-checked and transferred to and analysed using Stata Version 11 computer software (Stata Corp, College Station, Texas, USA). Descriptive statistics were used to measure relative frequencies, percentages and means of the variables. Bivariate analysis was carried out on variables as possible predictors of home medication. All factors with *P*-value <0.2 were retained for multivariate logistic regression and adjusted for age and sex. During logistic regression analysis, dummy variables were used for independent variables with more than two categories. A *P*-value of 0.05 was set for statistical significance.

RESULTS

A total of 400 parents/guardians participated in this study. The majority were in the age group 15-30 years (71.2%). The other age groups were 31-45 years (23.3%) and over 46 years (5.5%). The overall mean age of the parents/guardians was 28.5 ± 8.0 years. Majority of the study participants were females (78.8%) while males

constituted only 21.3%. A total of 79% of the children from the families which participated in the study had fallen sick within the previous six months. Majority of the children had diarrhoea (64%) and cough (34%) as shown in Figure 1.

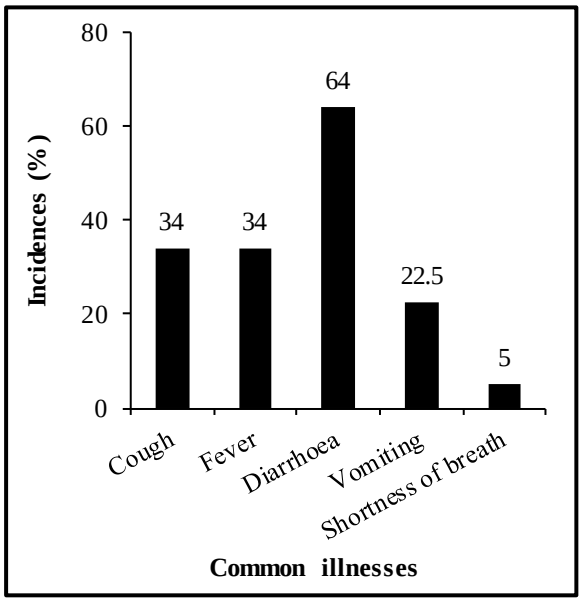

Figure 1. Common illnesses in the under-five children in Mmuhungura Ward, Kahama District.

The parents who were interviewed in this study, 43% reported seeking hospital treatment for their children illnesses. Of these, majority sought treatment in Government owned health facilities. Almost 39% of the parents opted for home treatment. The drugs self-administered at home to the under-fives included antimalarial drugs (45%), antipyretics (34%), antidiarrhoeals (26%), cough syrups (22%) and analgesics (17%) as shown in Figure 2.

The main sources of the drugs were drug stores (68%), Government hospitals (16%), home left-over medications (15%) and 2% of medicines were obtained from private clinics, as captured in Figure 3. On univariate analysis, diarrhoea diseases, shortness of breath being a single parent and frequency of disease in the previous six months were significantly associated with home treatment of the under-fives. Multivariate analysis revealed that, long walking time to the health facilities, frequency of morbidity, being a single parent and parents without employment were significantly associated with home treatment. Illiteracy was associated with lower risk of home treatment.

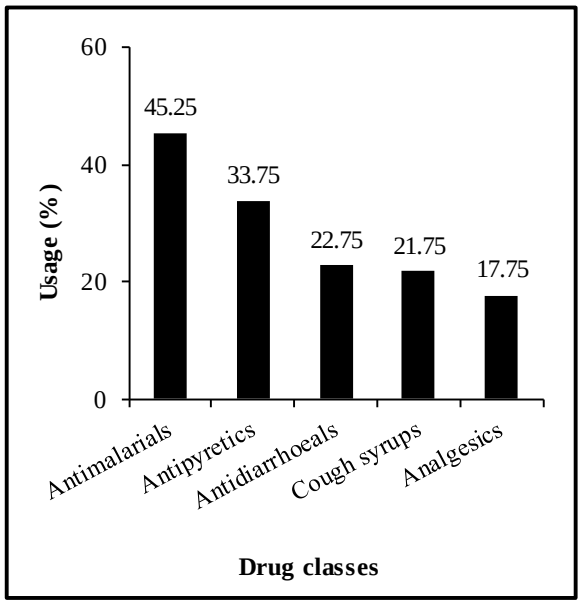

Figure 2. Common drugs administered to febrile under-five children at home.

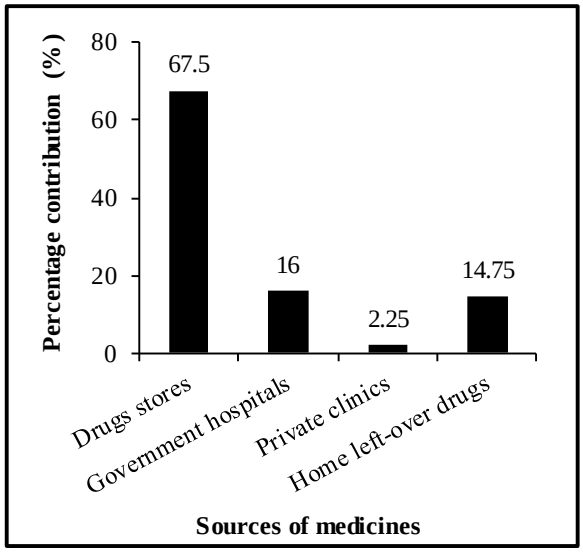

Figure 3. Sources of medicines administered at home to the under-five children.

DISCUSSION

The study has shown that home treatment of under-fives was a significant practice in the

study area. These findings are consistent with previous studies conducted in Tanzania and other parts of sub-Saharan Africa, which reported that the majority of under-fives received treatment outside health facilities [13, 21]. In this study, only 43% of the parents/guardians indicated having sought hospital treatment for illnesses in their under-five children. Similar observations have been reported in other studies elsewhere [21, 22]. Antimalarials and antipyretics were the most frequently used drugs for home treatment of the under-fives. The high frequency of antimalarial use could be explained by the fact that any febrile condition in malaria endemic countries is regarded to be malaria. Other studies have also reported the use of antimalarial drugs as a common home treatment practice in sub-Saharan Africa [13, 23, 24].

Several factors are associated with self-medication in under-five children in sub-Saharan Africa [25-27]. In this study the factors included long distances to health facilities, frequency of morbidity, being a single parent and unemployment of parent. Studies in some sub-Saharan African countries have also demonstrated that long distances and long walking time to the health facilities were among factors which were associated with home treatment in under-five children [12, 28-31].

CONCLUSION

Home treatment may be a hindrance to prompt access to effective treatment because of the delay in seeking proper care. The study confirms that travel time to the health facilities, frequency of illnesses in the under-fives, single parenthood and unemployment are strongly associated with home treatment of under-fives in the study area.

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