

Attitude Towards Malaria in Under-Five Years Children: A Study From Blue Nile State, Sudan

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Abstract

This is a descriptive cross-sectional community based study. The **aim** is to assess the awareness of family members to participate in malaria control and management for under- five years among villagers, Blue Nile State, Sudan.

Methods: The study was conducted in three districts selected by cluster sampling from one village called Abuhashim in an area which is endemic with malaria. These districts represent the diversity of the community who are living there. The respondents were selected by simple random technique for mother or care giver of under-five year children. The tool used in this study was a focus group discussion (FGD) and observation. Three round focus group discussions held for a total of 29 participants. FGD done for two groups of household who are similar and matched from two districts and the third group is done for secondary school teachers in the third district. The period of the study was one month in the last two heavy rainy season months. The information were collected, organized and analyzed manually by the researchers, reports were processed and ready for distribution to the partners for utilization in the state strategic plan for malaria management for under –five years.

The Results All groups revealed similarity in recognition of malaria and 65% of them link malaria to fever, headache and malaise. The attitude towards early response malaria is differing between the first two groups and the third. In the first two groups 83% of the mothers wait till symptoms became serious. There after the results revealed that 70% start home treatment, 50% avoid use of analgesics, and only 20% were taking their children to the health facility. In the third group which include secondary school teachers 90 % took their children immediately to the health facility. We **concluded** that there were some ignorance and negative attitude towards malaria in children among family members regarding rapid responds and first aids; this is not seen among educated. We **recommended** that introducing home management in the strategy of managing of malaria among children is very important.

Keywords: Malaria, Under-five, awareness of malaria, attitude towards malaria

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Introduction

Malaria is a major public health problem and a common cause of death in Sudan(1), as in other tropical countries. Malaria remains one of the most important causes of child morbidity and mortality in sub-Saharan Africa it is the most prevalent parasitic endemic disease in Africa with more than 80% of the population south of the Sahara at risk of the disease. Ninety percent (90%) of the estimated 1-2 million deaths globally from malaria annually are estimated to occur in Africa(2). Children mortality is high due to inappropriate treatment or poor mother's knowledge about the disease itself. According to WHO estimation 700,000 deaths in children caused every year in the tropics with the highest mortality in the age group 1-4 years(3).

Effective control and management of malaria depends on clear understanding of the local epidemiological factors in the different endemic regions. Prevention and appropriate treatment of malaria in children is important to help in the ultimate goal of controlling malaria in the community and the prevention of anti-malarial resistance. As it is recommended by a previous research about the same issue that: Mothers usually go through different treatment option before consulting health facilities ending with obvious delay in seeking care. As early effective treatment is the main theme of the control programme, implementation of malaria home management strategy is urgently needed to improve the ongoing practice and Malaria in children under five years requires caregiver's early recognition and classification of fever. In recent study done in Sudan, fever and

malaria were defined correctly by the majority of caregivers and malaria was identified as a main cause of fever(4).

Despite of the existence of a control programme, there has been no evaluation or known baseline information on which to assess the effectiveness of programmatic activities. With the worldwide effort to control malaria, it is necessary that all fight against this killer disease. However it is necessary that adequate information become available with which to measure achievements of various national and local efforts. In Sudan such information will be most useful for the National Malaria Control Programme since it will serve as the base with which progress can be assessed in this state which help in controlling child malaria country wide. The situation in Blue Nile state where we conducted this study is not differ from the region and country situation, but it is more worse according to the survey done by National Malaria control programme in 2009. The prevalence of Malaria in Blue Nile state was 12, 5% which reports the highest rate in Sudan. The nearest state in malaria prevalence was Darfur states with (7, 1%), while the remaining states report less than 3% (5). This study intends to collect situational information on the experience and response towards the management of malaria among under five year children across the village of Abuhashim which belongs to Damazin locality, Blue Nile State, and to evaluate the mother's awareness about malaria and its treatment. We set our objectives in this study as to assess the local knowledge, attitude and practices towards malaria and describe malaria illness experience, as well as management among mothers or care givers of under-five year in Abuhashim village, Damazin Locality, Blue Nile State, Sudan.

II. METHODOLOGY

i. Study Design

This is a descriptive cross sectional community based study aiming at assessing the awareness of mothers and other family members to participate in malaria control and recognized factors that affect malaria management for children under five years in, Abuhashim area, Damazin locality, Blue Nile state.

Discussions were done with deliberately selected mothers or care givers from each of the districts selected from this area.

One focus group discussion carried out with the mothers of children under-five years in every district to ascertain the perception, beliefs and illness experiences about malaria in children. Observation also used to validate their behavior.

The research involves three districts and the data collected from the three districts .The study used qualitative tools for collecting information.

ii. Description of Study Area

Sudan is the one of the large countries in Africa The country is as diverse in culture as it is in its vegetation and terrain. Blue Nile state was one of 18 states in Sudan, Damazin locality was the major locality out of 7 localities in the state and Abuhashim area was one of the biggest area in this locality and its lies about 18 kilometers northern to Damazin city the capital of the state.

Study Area:

Blue Nile state is a border state located in the eastern south of Sudan; it is bordered by Sinnar state, in the north, Upper Nile state (South Sudan) in the west and south and Ethiopia in the east. The total surface area is about 37000 square kilometers and the total population is 800000, it is composed of seven localities .It has long rainy season most of the parts of the state are inaccessible in this season .The climate is rich savannah. Rainy season is about 5 months from June to October with rain fall about 900-1000ml per year(6).

Damazin locality is the biggest locality in the state which is the capital of the state; it is located in the northern part of the Blue Nile state at the western coast of Blue Nile river with two sectors Damazin sector, and seraw sector. Our study village Abuhashim was the biggest village in this locality situated in the last northern zone of Damazin sector with a variety of community it was representing the locality with its diversity of cultures and population. This area was selected to apply this study because it is represent the whole ethnic groups beside it had different cultures due to different groups living in it and as well it includes displaced people from the southern parts of the state which is an area of war and conflicts.

Study population

The study population selected from mothers or a care giver with children of under-five years. There were no differences in the communities regarding cultures and traditions. Tribes living in the area were different tribes; the main tribe in the northern part was Fulani tribe, while in other parts there were Fong tribes, western tribes, eastern, northern and middle Sudan tribes from Arab descends beside the nomadic groups of different descends.

Focus group discussion used to collect information (qualitative data) from mothers and other care givers of under five years children on their' perception, beliefs, and practices about malaria in children.

Inclusion and exclusion criteria: In this study we include mothers or care givers who had children less than five years of age and should be residing in the area for the last six months. Mothers who did not have children less than five years and those who came to reside recently in the area are excluded.

Sample size and sampling technique

The sample size was determined using cluster technique from Abubashim village, administrative unit (strata which were 3 in number) then care givers who were 29 in number, selected through simple random technique. They were discussed through 3 round focus group discussions with the researcher and field assistants who are guiding the target clients by a key sentence using a formulated designed technique in applying FGD.

III. Methods Of Data Collection

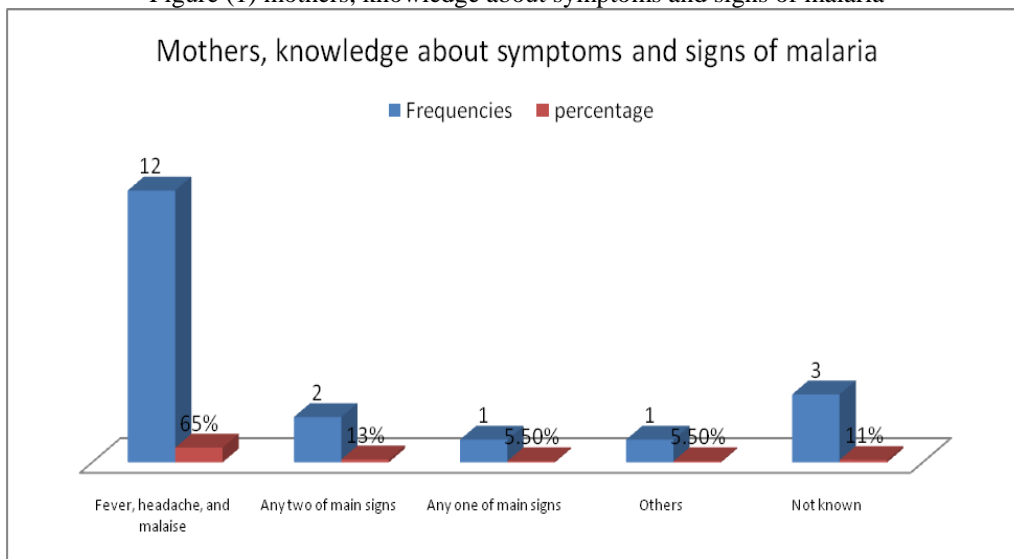
Data collected directly by researcher, field assistant and the trained reporter. We collected data from targeted districts selecting 29 care givers 19 of them were mothers of under-five children from two districts (Tabook and Elneel) with similar culture, and their educational level not exceeding primary level or local religious schools or even illiterate and they were receiving the same services. The other 10 care givers were professional secondary school teachers from both genders. The school was located in Elhigra district in Abubashim village. The tools used for data collection is focus group discussion and observation. First we held a meeting with area officials and community leaders to explain the study procedures and seek consent and commitment. Then we trained our team about the study methods including data collection and reporting procedures. After each session of a field work, a meeting takes place to organized data and observations making them ready for analysis and reporting. The analysis done manually and the results issued at the end.

IV. Results

Recognition of Malaria Symptoms and Signs:

The majority of the participants from the first two groups were non-educated or primary school leavers. Figure (1) showed that 65% of the mothers from these two groups recognize the collection of three symptoms (fever, headache, malaise) as indicators of malaria. Where minimal numbers of them do not much care of the same symptoms if they are two or one symptoms, and only 13% and 5.5 % of them respectively related the symptoms to malaria. Only 5.5% (n=1) relate other symptoms to malaria. From these two groups 11% (n=3) do not know if these symptoms related to malaria or not.

Figure (1) mothers, knowledge about symptoms and signs of malaria



Attitude of respondents toward quick response to management:

The response to symptoms and signs of malaria differs in the two groups of household mothers from that of the educated teachers. Seventy nine percent (n=15) from the mothers wait till symptoms became serious, but this attitude observed only in one teacher (10%). From the two groups of the mothers 84% (n=16) starting home treatment without doctor consultation, where 40% (n=4) from the teachers do this. Regarding the attitude of not giving analgesic for fever and headache as they thinks it is harmful to children, 53% (n=10) of the

mothers believe and practiced it, where none of the teachers group do that. Only 21% (n=4) of the mothers groups take the child immediately to the health facility, where 90% (n=9) of the educated teachers took their children immediately to the health facility after appearing of the symptoms and signs. All of these are shown in table (1).

Table (1) showing attitude of respondents toward quick response to management

The attitude towards treatment	Mothers	Teachers	Total
wait until the symptom was serious	15	1	16
starting with home compound first	16	4	20
not giving the child analgesic	10	0	10
take the child immediately to health care facility	4	9	13

Points and others results from FGD:

The researchers used the FGD sessions to educate the mothers about the symptoms and signs of malaria which will help in early management and avoiding its complications. The mothers gained knowledge about how malaria is transmitted and what are the most effective preventive measures. The discussion focused in the environmental hygiene, use of impregnated mosquito nets and other insecticides. Both mothers and teachers were having good points added to the results of this study. Mothers ask for more education about this serious disease and the whole local community is in need to educate. Teachers spoke and asked about the composition of ant-malaria medicines and their side effects. FGD elaborate more in points raised by the participants and explain the differences between the oral and parental medicines and how parents behave in case of vomiting after oral treatment. Danger signs of malaria in children like severe gastroenteritis, seizures and severe anemia were discussed as well.

V. Discussion

In This descriptive study results revealed comparison between literate and illiterate regarding rapid response to Malaria illness which reveals education level was very important in control of Malaria among under-five children.

Important Demographic Information:

The studied groups were living in a remote village and some of them were nomads. The majorities are farmers and the nomads are cattle herders. We recorded difficulties that face the health service delivery and implementation of the malaria control program in remote areas and especially for nomads. Many studies in Sub-Saharan Africa and other places conclude that the prevalence of malaria is still high, especially in rural areas where mostly pregnant women and children are affected and due to the inability of the control program to reach them(7),(8).

Awareness and attitude towards malaria:

Regarding knowledge of participants about Malaria episode recognition the majority were defined Malaria as fever, malaise, and headache, which agrees with the study done in Sudan by Malik et al in 2006 who stated; " malaria were defined correctly by the majority of caregivers and malaria was identified as a main cause of fever(4). Our results agree with the study done in Nigeria in 2005 which showed that: "Children mortality is high due to inappropriate treatment or poor mother's knowledge about the disease itself. The same study in Nigeria concluded that 70% of the mothers who started home treatment first before seeking medical advice results in worsening child health status(3). One of the essential strategies of the World Health Organization for malaria in children in endemic areas is recognition of fever and its presumptive treatment with antimalarial drugs(9). The results of our study showed that a lot of efforts from the local program are needed to fulfill this strategy. A study done in Guinea showed similar results to ours as it stated "That mothers often failed to identify fever in their children and to consult or to provide antimalarial treatment"(10). The study and focus group discussion results showed that mothers usually go through different treatment options before consulting health facilities ending with obvious delay in seeking care. As early effective treatment is the main theme of the control programme, implementation of malaria home management strategy is urgently needed to improve the ongoing practice. The same findings are stated by other studies done in Sudan and in other tropical countries (4, 11, 12).

Malaria and traditional remedies:

The percentage of the study group who preferred drug treatment over traditional treatment was very few among household mothers (only 20%). We found that most of the participants from the non-educated mothers are highly believe on traditional remedies more than medical treatment. This belief is influenced by many factors which may include financial problems and difficulty to get to the health facility especially in the rainy season. The same findings are concluded in studies done in Tanzania, Uganda and Ethiopia (13-15). In addition we found that many villagers belief that analgesic are affecting and delayed responds to Malaria episode, so that they keep their children with high fevers and severe illness which ultimately affect the prognosis

of the disease. The results showed that education has positive effect in the knowledge, attitude and practice towards malaria among villagers. This is not a strange finding as it is stated by many researchers before (16, 17).

VI. Conclusion

We can conclude that there were some lag of education and negative attitude among family members regarding rapid responds and first aids for fever among children under-five years old. The majority of mothers slowly responded to Malaria episode also they go through many options before seeking medical care. There are negative attitudes regarding first aids of Malaria illness which lead to serious complications towards the children, but a high educational level had a positive effect regarding malaria management among children. The findings encourage effective community involvement which is essential for planning, controlling and management of Malaria. As a transforming practice it could contribute to early diagnosis and positive behavior changes, the mater that most of studies agree with.

Recommendations

We recommend the following:

- 1- Introducing home management in the strategy of managing of malaria among under –five children with a clear awareness program for the mothers or a care giver.
- 2- Formulation of suitable curriculum to increase community awareness to facilitate their participation in Malaria control and management targeting under –five children.
- 3- Encouraging researches that enhancing community participation in Malaria control and management.

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