Malaria Control : Behavioural and Social Aspects

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ABSTRACT

Malaria is unique among diseases because its roots lie very deep within human communities. In the modern resurgence of malaria the focus of public health and malariology in particular, has been narrowly fixed on the parasite and the mosquito vector. Whereas, the role of social and behaviour factors is simply ignored. The present article focuses on the crucial role of behavioural and social aspects in malaria control programmes and acknowledges that the socio-cultural environment is significant in terms of epidemiology of malaria.

Keywords: Malaria, Plasmodium falciparum, malaria control

1. INTRODUCTION

Malaria is a threat to more than 40 per cent of the world’s population, and out of this, more than 300 million acute cases each year and between 1.1 and 2.7 million people die each year (RBM 2002; WHO 2000). The vast majority of malaria cases (90 per cent) are in sub-Saharan Africa, where malaria constitutes 10 per cent of the total disease burden. Children under five and pregnant women are most at risk, with Plasmodium falciparum being “the main cause of severe clinical malaria and death” (TDR/WHO 2002; RBM/WHO 2000). Malaria constitutes nearly 25 per cent of all childhood mortality in Africa (WHO 2000). According to the United Nations Children’s Fund (UNICEF), “Malaria’s cost to human and social well-being is enormous. It is a major cause of poverty and poverty exacerbates the malaria situation”. So too is the economic loss, which in Africa alone is estimated at more than $2 billion annually (WHO 2000). According to the Roll Back Malaria Programme (RBM 2002), “It has slowed economic growth in African countries by 1.3 per cent per year, the compounded effects of which are a gross domestic product level now up to 32 % lower than it would have been had malaria been eradicated from Africa in 1960.” Because of the seriousness of the problem, the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), the United Nations Development Programme (UNDP), and the World Bank (WB) have joined forces in worldwide malaria control efforts, Roll Back Malaria (RBM), with the aim of reducing malaria mortality by 50 per cent by the year 2010 (World Bank 2001). The failure of previous initiatives can frequently be blamed on the lack of adequate consideration given to the social and behavioural aspects of malaria control, which, it is now understood, must be taken into account and incorporated into any programme. While there is agreement that malaria is linked with poverty, there is some debate as to the primary direction of this relationship. It is clear that the health of a burgeoning group of people will not improve unless poverty and expanding inequality are reduced and this includes the effort to control malaria on a large scale. The larger issues of poverty and inequality must be addressed if we are to be taken seriously in our quest to tackle malaria. But nothing can be accomplished without positioning the problem in social, economic, and political contexts as well as in a cultural one. But with few exceptions, relatively little attention has been given to these factors in malaria control efforts until recently.

2. BEHAVIOUR AS A FACTOR IN HEALTH

Human behaviour is influenced by social, cultural, economic, and political factors which in turn related to health, including the risk for infectious diseases like malaria. Whether it is intentional or not, human behaviour affects health-promoting and disease-preventing activities, in some instances increasing risk and in others reducing it. Human groups have often unwittingly facilitated the spread of infectious diseases through culturally coded patterns of behaviour or through changes in the crucial relationship among infectious disease agents, their human and animal hosts, and the environments in which the host-agent interaction takes place” (Inhorn and Brown 1990). Beyond human behaviour as such, prevalent socio-cultural factors – including political and economic parameters – also contribute to shaping how humans act, and therefore must be seen, in and of themselves, as epidemiological predictors of health and disease patterns.

There has been little written about social factors in the modern resurgence of malaria. This is because the focus of public health and malariology in particular, has been narrowly fixed on the parasite and the mosquito vector.
The bigger picture has been neglected – namely that increased rates of malaria morbidity, although directly influenced by changes in the parasite and vector, are more directly caused by human behaviours. Those behaviours are both related to individual culturally coded patterns and larger scale sociological phenomena including the political-economic level.

3. CONSEQUENCES OF SOCIO-CULTURAL FACTORS AS AN AFTERTHOUGHT

The research involving social science in malaria control carried out to date has not been of uniformly high quality, but it is widely agreed that inattention to the socio-cultural factors was a major reason for the failure of earlier malaria control efforts. Communities were not invested enough to hold on to preventive programmes, and governments felt they lacked resources to go on providing the means to attack mosquito-breeding sites.

Inhorn and Brown (1990) have asserted that, “Societies actively change their ecology so as to increase or decrease the risk of particular diseases. And despite Alland’s “minimax” theory – that cultural systems tend to favour practices which minimise the risk of disease and maximise the health and welfare of groups – this may not always lead to the reduction of infectious disease”. It may seem strange that people actively change their ecology in a way that will increase risk for disease. Yet, we sometimes modify our environment to gain nutritional or convenience benefit to the detriment of our disease status (and we then adapt to the new disease risk) (MacCormack 1984). Especially in hierarchically structured societies, those who benefit most from these ecological changes often are not those most at risk of the increased disease consequences. Rather, the worst consequences fall on the peasants displaced by dam construction, or the populations (a “servant” class) marginalised into urban slums or into a perpetual cyclical rural-urban migratory process.

4. SOCIO-ECONOMIC FACTORS AND RISKS

Socio-economic factors are clearly related to health risks, including the risk for malaria. It is now well established throughout the world that morbidity and mortality rates are directly associated with socio-economic status. The lower the status, the higher is the rate. In malarious regions, the poor are disproportionately at risk of the disease, and while there is general agreement about this association, there is less agreement about the directionality of the association, like the question in the old saying, “Am I sick because I am poor, or am I poor because I am sick?”

The World Bank, WHO, and other international agencies, while maintaining that good health is a human right, are also arguing that “investing in health” makes good economic sense, since improved health is seen as a prerequisite for development, especially “sustainable development”. In malarious regions it can be argued that the reduction and control of the disease is a prerequisite for economic development. But it is now recognised that the reduction of malaria is a social good in itself and thus one element of an overall process of social development. It must be pursued vigorously.

5. AETIOLOGY AND TRANSMISSION OF MALARIA

Understanding people’s perceptions of malaria, and the factors which influence these perceptions, must be a central part of mounting successful interventions by WHO to control malaria throughout the world (Ahorlu et al. 1997; Bradley et al. 1991; Lipowsky et al. 1992). People in different societies hold a variety of beliefs about the cause and transmission of malaria that vary according to cultural, educational, and economic factors, and have direct consequences for both preventive and treatment-seeking behaviour as well as for activities to control malaria. Attention to these perceptions is critical to public health efforts for at least three primary reasons. First, beliefs that differ from the scientific explanation about the cause and transmission of malaria may lead to inaction, a delay in seeking appropriate treatment, or ineffective action, all with serious consequences. These attitudes may also inhibit effective preventive measures (e.g., community participation). Second, people often hold various, seemingly contradictory views about malaria at the same time (Espino, et al. 1997). Although they may concur with the scientific explanation of how transmission occurs, their preoccupation with why it occurs, for a particular person at a particular time, may be unique and at odds with orthodox public health knowledge.

6. TRADITIONAL TREATMENTS FOR MALARIA

Traditional treatment methods and healers may often be the first line of treatment for malaria, it is important to understand how, why, and what kinds of traditional methods are used. This is particularly crucial since many control programmes in the past have ignored the ways that traditional medical systems and local people deal with the disease (Lipowsky, et al. 1992).

The use of herbal remedies in the treatment of malaria is widespread. They are often an inexpensive alternative to Western antibiotics (Ruebusch, et al. 1995; Silva, 1991; Tona, et al. 1999). In Somalia, the aetiological connection between malaria and the mosquito has probably been recognised for a long time, and as a consequence of the long historical interaction between local culture and malaria, Somalis have developed many of their own treatment practices, including consumption of “Khat” leaves (a mild drug-like substance), fresh camel milk, purgative herbs such as “Carmo” leaves, black river fish, reciting verses of the Quaran, and massaging ill people with a mixture of sesame oil and lemon juice (Abyan and Osman 1993). However, sometimes various religio-cultural misinterpretations of the disease symptoms make its diagnosis very difficult e.g. in the case when the malaria is thought to be of supernatural origin, the treatment methods chiefly rely on the culture based diagnosis.
7. MALARIA AND THE MILITARY

Human population movements have also played a significant role in malaria transmission. The undefined movement of human, especially in to the areas of malaria risk, creates an highly malaria-conducive environment in their own habitat after return.

The military is yet another highly mobile group exposed to malaria all over the globe. Indeed, malaria has played an important, sometimes decisive role throughout military history. Since ancient times, malaria has contributed to the success and defeat of military campaigns. Alexander the Great, the icon of military strength, after conquering most of the “known world,” succumbed to the disease in 323 BC at the age of 33. Even though malaria resulted in few deaths, soldiers experienced significant morbidity and this resulted in great manpower drains in terms of both combat troops as well as medical personnel.

The effects of malaria on troops are exacerbated by the fact that most soldiers rapidly deployed to malarious regions have no acquired immunity to the parasites. In addition, combat conditions are less than ideal for providing protection against the disease. A highly mobile group, i.e., soldiers often go on leave after their tour has ended, bringing the parasites back to base and even to their countries of origin (Newton, et al. 1994). This is of particular concern if the soldiers originate from a country where malaria was once common. carried from other countries If public health surveillance is not effective, malaria carried from, other countries by soldiers often go on leave after their tour has ended, bringing the parasites back to base and even to their countries of origin (Newton, et al. 1994). This is of particular concern if the soldiers originate from a country where malaria was once common. Carried from other countries, if public health surveillance is not effective, malaria carried from other countries by soldiers could theoretically contribute to re-establishing the disease in places where it had been virtually eradicated. These problems related to malaria among troops have been among the main factors spurring malaria research.

8. LIMITATIONS OF HEALTH EDUCATION IN MALARIA CONTROL

There are following four main reasons for the failure of health education in malaria control.

1. Type of populations that suffer from endemic malaria in poor countries or in depressed areas have been found with low educational standard and poor housing, hygiene and general environmental conditions. Accessibility to these populations is often difficult, and the medical facilities available to them are, to say the least, the scarce.
2. Malaria is part of a socioeconomic depression complex from which people have difficulty singling out malaria for particular concern. The people cannot understand why malaria should be selected for elimination rather than poverty, hunger, or other diseases or conditions. The multiplicity of afflictions from which the people suffer takes away a good part of the motivation they might have for self-help in controlling malaria.
3. Nature of the disease itself, specifically the complexity of its epidemiology.
4. Control methods currently employed. Generally speaking, there may be failure in the application or control measures may not have not been well adapted to local situations. (Gramiccia 1981).

9. CONCLUSION

In the present study it was endeavoured to make clear how crucial it is to consider the behavioural and social aspects of malaria control and to acknowledge that the socio-cultural environment is significant in the epidemiology of malaria. Indeed, the success of the worldwide malaria control initiative depends on serious attention to these factors. While the value of doing this is generally accepted within public health circles, it has received only superficial attention. The interrelationship between infectious disease and behavioural and socio-cultural factors needs to be re-emphasised and made a central part of malaria control strategies.

The article also has tried to bring out that human behaviour is related to risk for malaria, and that such behaviour is influenced by a range of cultural and social factors, including different explanatory models about aetiology and appropriate preventive and treatment actions, which are not precipitously pushed aside by the provision of “correct” knowledge – in this case, biomedically derived information about the causes, symptoms, and appropriate preventive and therapeutic actions regarding malaria. A considerable gap remains between “correct scientific knowledge” and the accepted practices and beliefs about malaria held by various groups of people.

It is our intention that the message of this article not only highlights the importance of socio-cultural factors in malaria control, but also makes it clear that the fight against malaria and other infectious diseases is inseparable from the striving for social and economic as well as political equity.

REFERENCES


