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> Gender, Health, and Sustainable Development

> > Proceedings of a Workshop held in Nairobi, Kenya, 5–8 October 1993

Edited by
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# Gender Issues in the Prevention and Control of Visceral Leishmaniasis - (Kala-azar) and Malaria

## J. Munguti Kaendi<sup>1</sup>

#### Introduction

#### Malaria

Malaria is a vector-borne disease caused by protozoal parasites of the genus <u>Plasmodium</u>. The symptoms for most types of malaria include, among others, headache, malaise, nausea, vomiting and generalized body pains. Sequential chills, fever and sweating may also be present. <u>Plasmodium falciparum</u> malaria is the most dangerous form of the disease. Attacks could lead to complications which are usually fatal if untreated. Chronic and repeated malaria infections cause impaired growth in children and loss of productive activity in adults. Pregnant women show increased susceptibility and increased prevalence of anemia. As such, prevention and control of malaria, especially in light of the complications to pregnant women, is imperative. It has been noted that <u>P.falciparum</u> is a significant cause of spontaneous abortions in non-immune pregnant women, and that infants, especially the first-born of malarious mothers, generally have lower birth weights than those of healthy women, and therefore a poorer chance of survival in early childhood (WHO 1987).

#### Leishmaniasis

There are three different forms of human leishmaniasis: (1) mucocutaneous leishmaniasis which affects the mucous membranes; (2) a cutaneous form which affects the skin; and (3) visceral leishmaniasis (kala-azar) which affects the liver and spleen. This paper focuses on the visceral form of leishmaniasis. Leishmaniases infections are caused by intracellular protozoan parasites transmitted by more than 50 species of female sandflies of the genus Phlebotomus (for old forms of the disease and Lutzomyia - for new world forms). It is estimated that there may be as many as 1.5 to 2 million cases of the disease worldwide (Walton 1988).

After contact with an infected sandfly, the onset of kala-azar is gradual. Its incubation period varies from 10 days to more than one year. The breeding and resting sites for sandflies (the disease vector) are diverse and widespread. They include termite hills, tree trucks and rodent burrows. This diversity of vector habitats leads to complications in designing effective prevention and control measures. The symptoms of kala-azar are

<sup>&</sup>lt;sup>1</sup>Institute for Development Studies, University of Nairobi, Nairobi, Kenya.

recurrent fever, malaise, weight lose, wasting, enlargement of the liver and spleen, anemia and, in some cases, diarrhea. Despite the large numbers of people suffering from the disease and those at risk, the research has shown little interest in this fatal disease.

Unlike many diseases, for which there are no distinct gender differences, it has been observed that kala-azar tends to affect males more often than females (Wijers 1974). This has been attributed, at least in part, to occupation (especially herding) and type of clothing (Fuller 1979; Thakur 1981). In an epidemic study in India, Thakur observed that 85 percent of those afflicted with leishmaniasis were male. He argues that clothing patterns may expose the male more than the female, as women tend to be better clothed than their male counterparts. Additionally, the disease seems to primarily affect the productive age groups of the population (Bodero 1988). However, recent studies showing that sandfly vectors inhabit the walls of houses raise new issues in relation to disease and gender (Mutinga 1980).

Both malaria and kala-azar exist in similar geographical areas. They also present similar symptoms; in fact, kala-azar may be confused with malaria at a certain stage of illness. Southgate (1981) has observed that kala-azar infection gives rise to a progressive disease which resembles a long drawn-out episode of malaria. There have been suggestions that the two diseases may actually interact and complicate each other. According to Cox (1979), leishmaniasis-induced anemia may have the effect of depriving malaria parasites of preferred host cells. On the other hand, leishmaniasis-induced immuno-depression could benefit the malaria parasites. There is also the possibility that the treatment of one infection may, while achieving its intended aim, complicate a super-imposed infection or cause the recrudescence of a latent one (Cox 1979). Thus, prevention measures may be better informed in addressing both disease problems simultaneously.

### Socio-Economic Determinants of Malaria and Kala-azar

In order to effect sustainable control measures for infectious diseases, it is necessary to understand the social, economic and political context within which these diseases abound. Tropical diseases are found in underdeveloped regions of the world, namely Africa, Asia and Latin America. At the national level, countries in these regions are characterized by political instability, poor nutrition, low levels of education and inadequate health services. Contrary to the popular notion that the existence of these diseases is related to climactic conditions (tropical climates), socio-economic factors appear to be more important in their existence and perpetuation. The spread, persistence and selectivity of these diseases has been attributed to the existing socio-political structures of underdeveloped countries which are diametrically opposed to the interests of the poor (Doyal 1977).

It has been shown that kala-azar and malaria, like other 'tropical diseases', are closely associated with poverty (Rosenfield 1990; Gramiccia 1981). Most people living in endemic areas for kala-azar have low levels of education, income and poor quality housing (Kaendi 1986). Wijers (1973) argues that starvation may be a factor of importance in relation to kala-azar, and that people who are well fed have higher resistance to the disease. This view

is also shared by Mutinga (1984), who notes that children with signs of malnutrition are more likely to get the disease (Mutinga 1984), thus identifying a synergism between nutrition and kala-azar infections.

Similarly, malaria has persisted as a disease partly because of etiological and behavioural factors and resistance of parasites to drugs, but largely because of the socio-economic conditions of the populations at risk. The populations suffering from endemic malaria live in economically marginal rural areas. They are also excluded from the benefits of the larger social political system. Medical facilities serving them are scarce (Gramiccia 1981). Since infectious diseases are intricately related to people's social conditions, control efforts should aim to solve these socio-economic problems. The eradication of malaria in Europe shows that the disease can only be eliminated when social cohesion, basic health services and economic conditions of the community have reached high levels (Bruce-Chwatt 1985). Similar sentiments have been expressed by Stevenson (1987:2), who aptly points out that:

Although inexpensive techniques are available for the control and treatment of common tropical infections, there has been a tendency to use them without simultaneous social and economic progress. While medical techniques may reduce the burden of disease, they are in most cases palliatives, and must be continued indefinitely since they do not strike the root of the evil. Poverty and the diseases which are associated with it can only be abolished by long term policies of improved education and economic advancement.

## Gender Dynamics in Prevention and Control

Prevention and control (P and C) of malaria and kala-azar must be seen in terms of socialized gender. The concept of socialized gender enables us to examine those non-medical constraints whose removal would contribute to disease prevention. This approach involves looking at health and development simultaneously. For example, the improvement of road networks in many rural areas may increase the utilization of health services for the entire population. Also, the provision of clean piped water to households would reduce women's workload burden, thus giving them time to concentrate on health issues.

Distance to health facilities and the quality of care is also important in the prevention and control of disease. In a study on malaria and kala-azar that took place in Baringo (Kenya) during 1992-1993, I found that distance was the major determining factor in health care utilization. There were, however, inter-gender differences with more women (62 percent of the female respondents as opposed to 48 percent of the male) indicating distance as a factor in their health-seeking behaviour (Kaendi unpublished). The distance travelled to health facilities has implications for women, particularly in rural areas, where walking is the common mode of transportation. Thus, women themselves have to walk to these facilities when ill, and as health care givers, they have to walk long distances with sick children strapped on their backs. Hence, there is a need to make health facilities accessible if we are

to encourage their use in the prevention and control of disease. Mobile clinics or the provision of transport, such as ambulances to take sick persons to distant clinics, would greatly improve accessibility.

There exists a need to involve women and other members of the community in health care planning and delivery. As the major users of these services, they are more likely to be aware of the existing health needs and priorities. While keeping gender-specific aspects of prevention and control in perspective, we believe that vector control measures for malaria and kala-azar must involve the whole community. Vector control involves the use of insecticides against the mosquito and sandfly, larvicides, removal or modification of breeding sites and, at the household level, reduction of contact between people and vectors by appropriate screening of houses, use of bednets, protective clothing and repellents. Various logistical issues must be considered in implementing these measures such as cost, cultural appropriateness and acceptability to the community. Rajagopalan et al. (1986) have demonstrated the effectiveness of integrating vector control with income generating activities for poor rural populations, as this improves their economy while strengthening control measures. The involvement of the community (especially women) points to the need for participatory democracy in order to enable communities to participate effectively in the implementation of control programs.

Certain factors, with significant gender inequalities, such as levels of education, and the distribution of domestic power, need to be taken into account in the control of infectious diseases. In Kenya for example, the level of literacy is reported to be lower among females than males. Even in areas of the country where general literacy is low, the corresponding rate of female literacy is even lower, and the enrolment of girls tend to be low in the whole school spectrum (UNICEF 1989).

In a study conducted in Baringo (Kaendi 1992-1993), of 608 households, 63% of the female respondents had no schooling, compared to 48% of the males. 10% of the males had over eight years of schooling, while only 4% of the females had comparable educational levels. As a consequence of the low levels of education among women, only a small proportion of them (12%) knew the correct etiology of kala-azar as opposed to 26% of the men (P<0.05). Knowledge and awareness of disease etiology is important in prevention; those who know the correct causative vector are more likely to take action in protecting themselves and their families. There is therefore a need to improve literacy and educate women on these two diseases.

The importance of female literacy in disease control cannot be overemphasized. Education strengthens women's ability to perform vital roles in creating healthy households. It also increases their ability to benefit from health information and to make good use of health services. With literacy, health messages can be correctly interpreted and assimilated into disease prevention and control programs. Education further increases women's access to income and enables them to live healthier lives (World Development Report 1993). In Nigeria for example, Gesler reports that maternal education was associated with the use of

Western-based health care and more effort by mothers to reach practitioners (Gesler 1979). Thus, advances in female education are likely to positively impact the prevention and control of disease.

Socially, infectious diseases such as malaria and kala-azar affect men and women differently. Gender stratification influences women's health status and shapes their experiences as health care consumers and health care providers in the home (Browner 1989). In many societies, women tend, in addition to their regular roles, to take up the activities of sick household members, thus the "shadow effect" of disease on women. There is a need to identify the "shadow" and "multiplier" effects of infectious diseases on women with a view to finding ways to reduce the illness/disease burden on them. Women are major agents in the socialization of family members on health beliefs, illness behaviour and utilization of health services, and can therefore play an important role in prevention and control of these two diseases. Additionally, as the crucial providers of health care to their families, women have to be healthy in order to play a key role in maintaining healthy families.

Although women play an important role in the health of their families in many societies, the distribution of domestic power is such that the decision on where and when to seek care lies with their husbands or male members of the households. Since observations show that women tend to use out-patient services more than men (Cleary 1982; my observations in Baringo 1992-1993), women can play an important role in the prevention of disease. Thus, there is a need to empower women so that they can participate fully in household and community decisions on health care and prevention. It is encouraging to note that in a study I just completed in Baringo, women seem to have a "free" hand in making decisions on where to seek care for malaria and kala-azar.

#### Conclusions

Malaria and kala-azar are infectious diseases which tend to affect men and women differently, both in terms of physical manifestations and societal implications. Gender stratification influences the health status of women and shapes their experiences as both health care consumers and health care providers in the home. As such, any prevention and control measures designed to manage these diseases must involve not only the community in general, but women specifically. As the major agents in the socialization of family members on health beliefs, illness behaviour and utilization of health services, women can and should play an important role in the prevention and control of these two diseases.

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