

Background

Malaria transmission in most agricultural ecosystems is complex and hence the need for developing a holistic malaria control strategy with adequate consideration of socio-economic factors driving transmission at community level. A cross-sectional household survey was conducted in an irrigated ecosystem with the aim of investigating vector control practices applied and factors affecting their application both at household and community level.

Methods

Four villages representing the socio-economic, demographic and geographical diversity within the study area were purposefully selected. A total of 400 households were randomly sampled from the four study villages. Both semi-structured questionnaires and focus group discussions were used to gather both qualitative and quantitative data.

Results

The results showed that malaria was perceived to be a major public health problem in the area and the role of the vector *Anopheles* mosquitoes in malaria transmission was generally recognized. More than 80% of respondents were aware of the major breeding sites of the vector. Reported personal protection methods applied to prevent mosquito bites included; use of treated bed nets (57%), untreated bed nets (35%), insecticide coils (21%), traditional methods such as burning of cow dung (8%), insecticide sprays (6%), and use of skin repellents (2%). However, 39% of respondents could not apply some of the known vector control methods due to unaffordability (50.5%), side effects (19.9%), perceived lack of effectiveness (16%), and lack of time to apply (2.6%). Lack of time was the main reason (56.3%) reported for non-application of environmental management practices, such as draining of stagnant water (77%) and clearing of vegetations along water canals (67%).

Conclusion

The study provides relevant information necessary for the management, prevention and control of malaria in irrigated agro-ecosystems, where vectors of malaria are abundant and disease transmission is stable.