

Exploring barriers to and facilitators of malaria prevention practices: a photovoice study with rural communities at risk to Plasmodium knowlesi malaria in Sabah, Malaysia

ABSTRACT

Background The control of Plasmodium knowlesi malaria remains challenging due to the presence of macaque monkeys and predominantly outdoor-biting Anopheles mosquitoes around human settlements. This study aims to explore the barriers and facilitators related to prevention of mosquito bites among rural communities living in Sabah, Malaysia using the participatory visual method, photovoice. **Methods** From January through June 2022, 26 participants were recruited from four villages in Kudat, Sabah, using purposive sampling. Participants were male and female villagers, aged >18 years old. After photovoice training in the villages, participants documented facilitators of and barriers related to avoiding mosquito bites using their own smartphone cameras, and provided narratives for their photos. Twelve Focus Group Discussions (FGDs) sessions in three rounds were held to share and discuss the photos, and to address challenges to the avoidance of mosquito bites. All discussions were conducted in the Sabah Malay dialect, and were video and audio recorded, transcribed, and analyzed using reflexive thematic analysis. The Ideation Model, a meta-theoretical model of behaviour change, underpinned this study. **Results** The most common types of barriers identified by participants included (I) intrapersonal factors such as low perceived threat of malaria, (II) livelihood and lifestyle activities consisting of the local economy and socio-cultural activities, and (III) physical and social environment. The facilitators were categorized into (I) intrapersonal reasons, including having the opportunity to stay indoors, especially women who are housewives, (II) social support by the households, neighbours and healthcare workers, and (III) support from healthcare services and malaria awareness program. Participants emphasized the importance of stakeholder's support in implementing feasible and affordable approaches to P. knowlesi malaria control. **Conclusion** Results provided insights regarding the challenges to preventing P. knowlesi malaria in rural Kudat, Sabah. The participation of communities in research was valuable in expanding knowledge of local challenges and highlighting possible ways to overcome barriers. These findings may be used to improve strategies for zoonotic malaria control, which is critical for advancing social change and minimizing health disparities in malaria prevention