

The emerging threat of Plasmodium knowlesi Malaria infection: a concept paper on the vulnerable factors in human

ABSTRACT

In South-East Asia (SEA), there has been an increase in the trend of detected and reported cases of Plasmodium knowlesi malaria in the last few decades. This higher transmission rate within SEA countries is attributed to the distribution of the Macaque, banded leaf monkeys, and Anopheles mosquito in this region. This study aims to propose a concept that highlights the integration of vulnerability factors to P. knowlesi malaria infection. The relevant literature on the vulnerability factors of P. knowlesi was reviewed. Any theories and models that could be integrated to support the factors were also explored throughout this study. Exposure to P. knowlesi malaria was found to be influenced by sociodemographic, socioeconomic, environmental, social context, belief, and human behaviour factors. However, these factors were commonly discussed separately in existing studies. For better disease prevention and control, all these factors should be explored collectively, to facilitate research aimed at generating a deeper understanding of the vulnerability factors to P. knowlesi malaria from various perspectives, including the genetic, sociodemographic, socioeconomic, environmental, sociocultural beliefs, and human behaviour of the population.