Knowledge and Acceptability of Malaria Vaccine Among Mothers of Under-Five Children in Auta Balefi, Karu LGA, Nasarawa State

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ABSTRACT

Introduction: Malaria remains a major public health problem, with almost half of the world's population at risk of infection, contributing substantially to global morbidity and mortality. Despite preventive strategies such as insecticide-treated nets, environmental management, and chemoprophylaxis, malaria continues to cause high mortality among children under five years in sub-Saharan Africa. With the World Health Organization (WHO) prequalifying two vaccines, RTSS (2022) and R21 (2023), new opportunities have emerged for malaria prevention. This study assesses the knowledge and acceptability of malaria vaccines among mothers of under-five children in Auta Balefi, Karu LGA, Nasarawa State.

Objective: The general objective of this study is to assess the knowledge and acceptability of malaria vaccines among mothers of under-five children in Karu LGA, Nasarawa State. The specific objectives are to: (1) determine the level of knowledge of malaria vaccines among mothers of under-five children; (2) assess the acceptability of malaria vaccines among these mothers; and (3) identify factors influencing the acceptability of malaria vaccines in the study area.

Methodology: A cross-sectional study design was adopted among mothers aged 18–40 years with children under five in Auta Balefi. A multistage sampling technique and simple random sampling were used to select participants. Data were collected using a structured, self-administered questionnaire and analyzed using the Statistical Package for the Social Sciences (SPSS). Chi-square tests were employed to assess associations between socio-demographic characteristics and vaccine knowledge, with significance set at $p < 0.05$.

Results: Findings revealed that 55.2% of respondents had heard of the malaria vaccine, but only 5.0% knew its name, and 19.9% knew the correct age for administration. Overall knowledge was low, with 95.5% having poor knowledge. Despite this, vaccine acceptability was high, 95.9% expressed willingness to vaccinate their children, 69.2% believed the vaccine is safe, and 71.5% believed it is effective. The main factors influencing vaccine acceptability were cost (31.2%) and safety concerns (26.7%). Educational level, religion, and trust in health workers were significantly associated with acceptability ($p = 0.001$).

Conclusion and Recommendations: The study concludes that although knowledge of malaria vaccines among mothers in Auta Balefi is poor, their willingness to accept vaccination is encouragingly high. Education, religion, and trust in healthcare providers play pivotal roles in shaping vaccine decisions. It is therefore recommended that: (1) public health authorities and policymakers (e.g., the Federal and State Ministries of Health and the Primary Health Care Development Agency) should strengthen community education and awareness programs; (2) healthcare providers should be trained and supported as vaccine advocates; (3) community and religious leaders should be actively engaged to promote trust and vaccine acceptance; (4) vaccines should be made free or subsidized to improve accessibility; and (5) researchers and academic institutions should conduct further community-based studies to monitor uptake and address barriers to malaria vaccine implementation.

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