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**Global malaria vaccine research and community perception in Africa: a systematic review**

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**Background:** Malaria vaccine is one of the critical areas in tropical health research, considering the success recorded in other vaccine-preventable diseases. This review provides an overview of global malaria vaccine research and systematically reviews community perception of the vaccine in Africa.

**Methods:** A validated search was conducted to identify scientific literature on malaria vaccines in the Scopus database from 2005. Bibliometric indicators explored include publication/citation indices over time and the overall research themes using VOSviewer. A further in-depth search was undertaken in five databases to identify studies on community perception of malaria vaccine in Africa. Studies were screened, quality appraised, and narratively synthesized.

**Results:** 6457 malaria-vaccine-related documents were found in 160 journals/sources from 189 countries/territories. There were 214,323 total citations, with 33.2 average citations per document and 167 documents' h-index. The United States, United Kingdom and Australia combined produced more than 60% of the publication output. Six themes emerged from the global malaria vaccine research: Merozoite surface protein, characterization, trials, infant/children, traveler, and research/review. Twenty studies (n = 20)

met the inclusion criteria for the systematic review. Overall perceptions of malaria vaccines varied in African communities (26.2-88.2%), in addition to higher willingness to accept the vaccines (32.3%-96.0%), poor knowledge/awareness (11%-60%) and misconceptions (19.2%-20.9%). Other issues identified include vaccine availability and logistics.

**Conclusions:** Malaria vaccine research and citations have increased considerably, mainly targeting vaccine development and safety/efficacy in Africa. African communities' perceptions of the vaccine varied, with most of the population willing to accept the vaccine.

**Key messages:**

- An increase in number of malaria vaccine research targeting vaccine development, and safety and efficacy in Africa.
- Varried malaria vaccine perception in Africa, including willingness to accept the vaccine, awareness, misconceptions, availability and logistics.