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Malaria Vector Composition, Abundance, and Plasmodium Infection Rates in Rural Southwestern Nigeria: Implications for Targeted Control Strategies.

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INTRODUCTION & AIM

Malaria remains a major public health concern in Nigeria. Rural communities are particularly affected due to environmental and socio-demographic factors that sustain transmission. Understanding mosquito species composition, abundance, and infection rates is crucial for effective vector control.

This study investigated malaria vector diversity and transmission dynamics in two rural communities, Igbo-Ora and Idere in southwestern Nigeria.

METHOD

Mosquito Collection

Morphological Identification

Molecular Identification using PCR

Sporozoite infection using sandwich ELISA

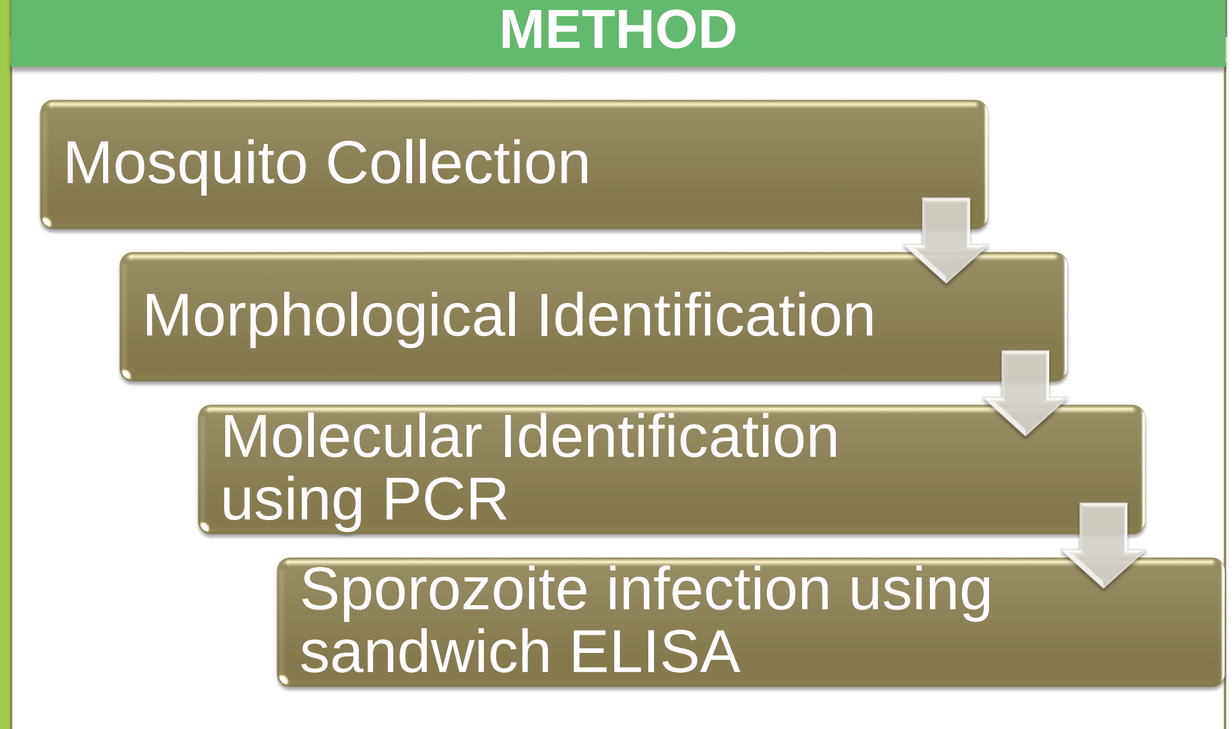

Figure 1: DNA ladder; lanes 5–7 positive control *An. coluzzii*; lane 9 positive control *An. gambiae*; lanes 10–12 *An. coluzzii*; lane 13 *An. gambiae;* lane 15 *An. arabiensis*

RESULTS & DISCUSSION

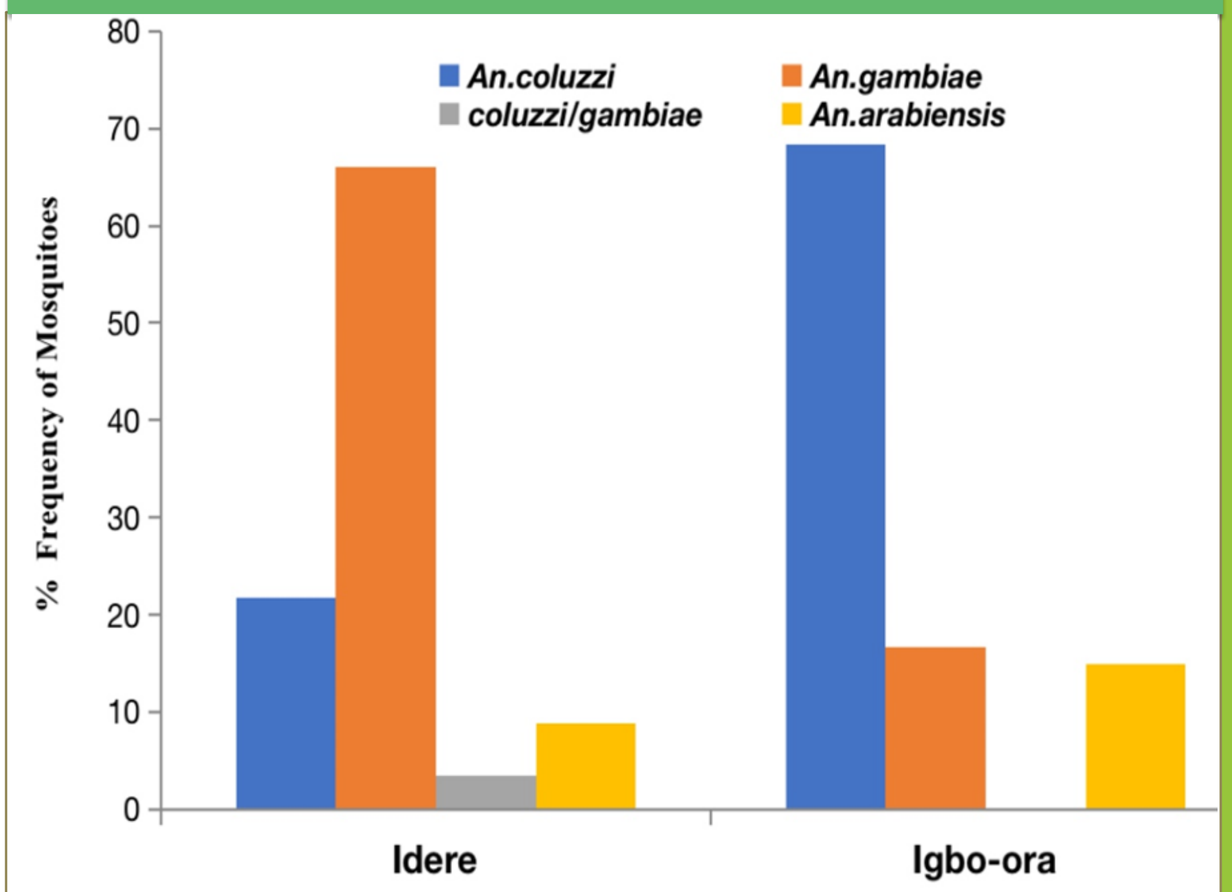

Figure2: Distribution of *An.gambiae* complex sibling species in the study sites

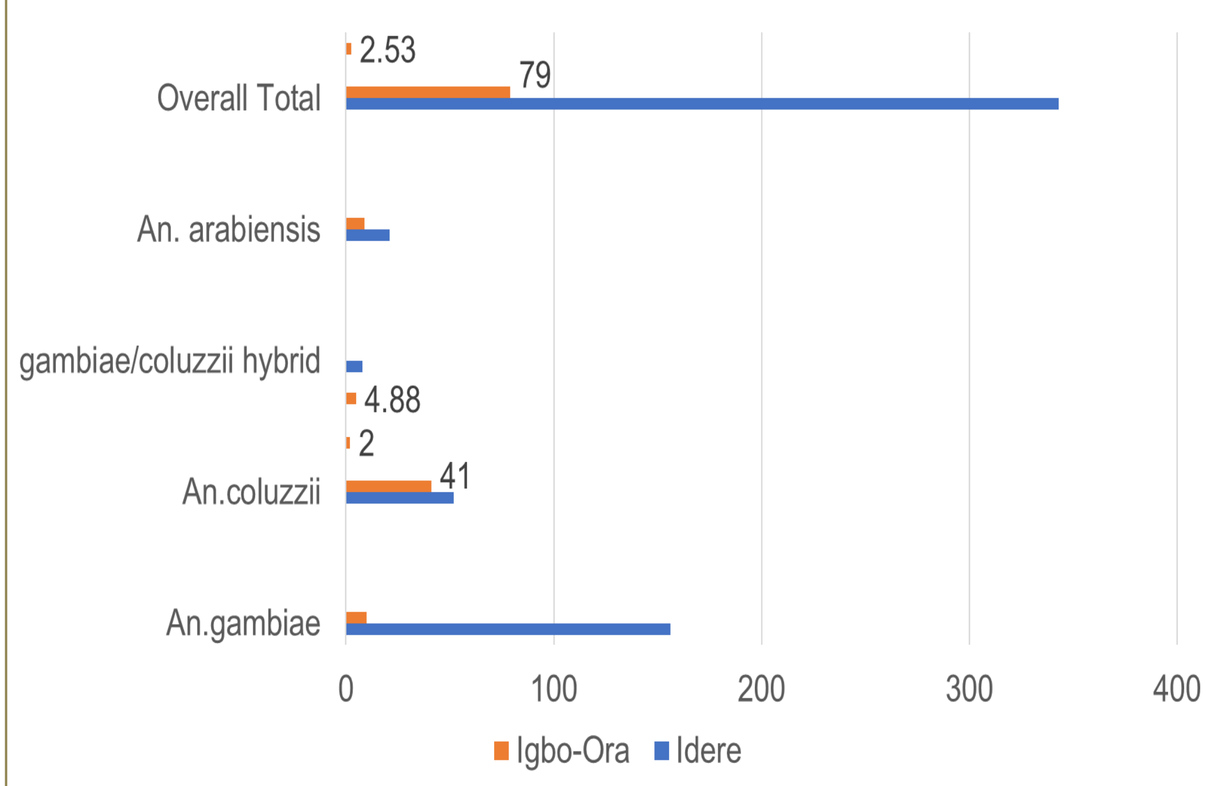

Figure 3: Detection of CSP antigen in *Anopheles* in the study sites

CONCLUSION

Malaria vector patterns in rural Nigeria, dominated by *An. gambiae s.l.*, call for localized control and ongoing monitoring to address resistance and behavioral changes.

FUTURE WORK / REFERENCES

Ibrahim, A. O., Bello, I. S., Shabi, O. M., Omonijo, A. O., Ayodapo, A., & Afolabi, B. A. (2022). Malaria infection and its association with socio-demographics, preventive measures, and co-morbid ailments among adult febrile patients in rural Southwestern Nigeria: A cross-sectional study. *SAGE open medicine*, *10*, 20503121221117853.

World Health Organization (WHO). World malaria report 2018: global malaria programme. Geneva: WHO, 2018.