

Occupational activities and a reported history of Malaria among women working in small-scale agriculture in South Africa

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Background and Aims: Malaria remains a persistent and major public health challenge in the developing world despite improvements in malaria control methods. Agricultural communities in malaria endemic regions may be at high risk for disease transmission with crop production and agricultural activities being associated with increased disease transmission. A better understanding of this association and particular risk activities and crop types can assist malaria control interventions.

Methods: A cross-sectional study using a questionnaire survey, compared a self-reported history of malaria among women (n=911) working in small-scale agriculture on the Irrigation Scheme and Drylands of the Makhathini Flats of northern KwaZulu-Natal South Africa. Associations between demographics, crop production and agricultural activities and a history of having malaria while working in agriculture were explored.

Results: Approximately 15% (n= 98) of 644 women reported malaria while working in agriculture with more Dryland as compared to Irrigation Scheme women reporting disease (18.4 % vs. 10.9%; p<0.05). Working on a self-owned or family owned farm (PR: 2.6; 95% CI: 1.3-5.2), spraying pesticides (PR: 2.3; 95% CI: 1.4-3.8), cultivating sugar cane (PR: 1.6; 95% CI: 1.1-2.3), cotton and mangoes (PR: 1.7; 95% CI: 1.1-2.6) were significantly associated with a history of having malaria when working in agriculture.

Conclusion: Agricultural work in general, and specific work tasks and crops appear to increase the risk of malaria infection in endemic areas. Future interventions by the SA Malaria Control Programme should

include educating rural populations on how to protect themselves during certain agricultural activities which could result in increased malaria transmission.