

This study used Stat-Cal that is embedded in Epi Info version 7.2.1.0 (CDC, USA). We assumed that living within a 3 kilometre radius of a river or swamp was a significant risk factor for contracting malaria with an odds ratio of 2.7 and 43% of controls having been exposed using findings from Kureya et al, (2017) and a power of 80% and a 95% confidence interval gave the minimum required sample size of 66 cases and 66 controls (Fleiss).

With expected 20% attrition rate:  $66/0.8 = 82.5$  which is approximately 83.

Therefore the maximum calculated sample size was equal to 83 cases and 83 controls.