

Comments on Khan SU et al (J Pak Med Assoc 2018; 68: 175-186)**Characterisation of breeding sites of anopheline mosquitoes in District Bannu, KPK, Pakistan**

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Madam, the debilitating impact of malaria on public health cannot be overstated,¹ hence we commend the stupendous efforts of Khan SU and Khan RA in determining possible factors affecting Anopheline mosquito breeding sites.² However, we believe that some crucial analysis has been omitted. Furthermore, the authors failed to mention any limitations faced in the study.

Firstly, it mentions "man-made activities are impacting more on malaria incidence", "average rainfall during these months was low and resultantly the low larval density has been found" and "humidity has linear effect but due to low temperature the anopheline mosquitoes could not develop". The authors attempt to establish cause and effect relationships based on frequencies, however, to confidently establish these relationships, statistical tests should have been used to find statistical significance in comparisons.³ We would recommend using tests like the chi-squared test or multivariate analysis to find which factor effects the mosquito population density the most.

Secondly, there is no mention of how the selected breeding sites were standardized. We understand that

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they were randomly chosen, but how did the authors make sure that the comparison would be fair, for instance, it was extremely important to mention the size of the individual breeding sites in km² or another unit.

Finally, limitations have not been addressed and biases have not been reported. Researchers should always assume the existence of bias and it is their responsibility to report it.⁴ Also, limitations are important for shaping future studies on the subject.⁵

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References

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The author of the article with above comments did not provide any rejoinder.