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Establishing association

Sir,

The study on grass pea consumption and present scenario of neurolathyrism in Maharashtra State of India published in a recent issue¹ is a valuable addition to the existing literature on neurolathyrism. The authors deserve appreciation for their effort. However, I have a few concerns with this study. The authors concluded “The cases of neurolathyrism declined in all the studied villages due to reduced β -ODAP exposure through *Lathyrus sativus* consumption, however, the grass pea was cultivated and consumed in Gondia district of Maharashtra State”. But the methodology used for the purpose of this study is inappropriate to justify this conclusion. The authors conducted a cross-sectional survey in 105 households in five villages and grass pea samples were collected for β -ODAP estimation. Neurolathyrism cases were identified by snowball sampling method. Here again these 105 households were selected by using a non-probability sampling technique, which was unable to justify the conclusions. But, importantly the methodology used (snowball) to identify neurolathyrism and its link with the use of green pea needs further justification.

Snowball sampling (or chain sampling, chain-referral sampling, referral sampling) is a non probability sampling technique where existing study subjects recruit future subjects from among their acquaintances. Therefore, the sample group appears to grow like a rolling snowball. As the sample builds up, enough data are gathered to be useful for research. The methodology finds its utility in locating hidden populations or locating people of a specific population, for example, drug users or sex workers. The methodology is liable to a few biases including the community bias. In the

community bias, the first participants will have strong impact on the sample. Further, snowball sampling being non random, contradicts many of the assumptions supporting conventional notions of random selection and representativeness. In this sampling technique there is no way to know the total size of the overall population. Lastly, another disadvantage of snowball sampling is the lack of definite knowledge as to whether or not the sample is an accurate reading of the target population². By targeting only a few select people, it is not always indicative of the actual trends within the result group. Given these limitations, it seems inappropriate to come up with the conclusions that the authors of this study have made.

The study could have been conducted in a cross-sectional manner with households identified by probability sampling. The second part of the survey could have identified neurolathyrism in these households. Alternatively, the study could have been conducted in a case-control mode. This would have helped us establish a link between grass peas and neurolathyrism.

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References

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