

## Research methodology and publications: Are we following the correct science?

Sir,

This is regarding an article entitled “Increased prevalence of subclinical hypothyroidism (SCH) in females in the mountainous valley of Kashmir” published in your journal.<sup>[1]</sup> We went through the contents of this article in hope to find a pure epidemiological study reflecting on the increase in prevalence of SCH in females in Kashmir valley. However, we were disappointed to note that the study based on pure laboratory investigations on patients probably referred from clinical departments for evaluation of hypothyroidism could yield prevalence, leave alone increased prevalence. Even if, we accept that prevalence estimates could be arrived at by this methodology, there is no way we can arrive at increased prevalence unless we have comparative statistics to prove this. We hardly find that. Further, the authors mention this as a retrospective study, but go on to write that the patients were re-evaluated with repeat thyroid profile after 3 months again. In fact, this forms the basis of their diagnosis for SCH. In materials and methods section the authors mention that patients with thyroid hormone evaluation picture of elevated serum thyroid stimulating hormone (TSH) levels ( $>4.3$  to  $\geq 10$  mIU/ml) with normal levels of serum thyroxine ( $T_4$ ) and tri-iodothyronine ( $T_3$ ) were categorized as SCH if similar levels were observed in repeated thyroid profile after a lapse of three months. However, in the results section the authors mention that the TSH value above 4.3-10 mU/l and free  $T_4$  within

normal range was taken as criteria for SCH. This essentially confuses a reader looking for quality research work in your journal. In the same issue of the journal, a better methodology has been adopted by the authors of the article “High prevalence of SCH during the first trimester of pregnancy in North India.”<sup>[2]</sup> Further, we would like to draw your attention to an article on SCH published in Journal of American Medical Association JAMA.<sup>[3]</sup> It defines SCH as a serum TSH above the defined upper limit of the reference range, with a  $T_4$  within the reference range. Other causes of a raised TSH, a past history of thyroid disease and patients on  $T_4$  hormone treatment need to be excluded.

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