

## Letter to Editor

# Metabolic syndrome and associated risk factors

Sir,

I have read a recent publication entitled “an epidemiological study of metabolic syndrome (MS) in a rural area of Ambala District, Haryana”, and would like to comment on certain issues.<sup>[1]</sup> The prevalence of MS as found in the study was 9.2%. MS is a cluster of cardiovascular risk factors. Although there are various definitions of MS, its common pathophysiology is insulin resistance, and a prominent clinical feature of the syndrome is abdominal or central obesity.<sup>[2]</sup>

In a study conducted by Pathania *et al.*, the definition used was the clinical definition given by the International Diabetes Federation (IDF).<sup>[3]</sup> It includes central obesity (waist circumference 90 cm in men and 80 cm in women) plus any two of the following four factors (i.e. raised triglycerides level:  $\geq 150$  mg/dl or a specific treatment for this lipid abnormality, reduced high-density lipoprotein cholesterol:  $< 40$  mg/dl in males and  $< 50$  mg/dl or a specific treatment for this lipid abnormality, raised blood pressure [BP]: Systolic BP  $\geq 130$  or diastolic BP  $\geq 85$  mm Hg or treatment for previously diagnosed hypertension, raised fasting plasma glucose  $\geq 100$  mg/dl [5.6 mmol/L] or previously diagnosed type 2 diabetes).

The authors indicated a significantly higher prevalence of MS with higher education. This is a valid finding as it indicates more premorbid status in individuals of higher social status. However, documenting an association of MS with hypertension, waist circumference and fasting glucose level is unprofitable, as the definition used for MS is inclusive of these parameters. The information regarding the association of MS with risk factors such as sociodemographic parameters, dietary habits, physical activity, personal habits, and other parameters of obesity could have been of immense help in improving the knowledge of readers.

The authors indicated that the WHO STEPS approach was used to collect the data. STEPS methodology mentions a specific technique for calculating sample size by taking

into consideration 10-year-age groups, gender, design effect, etc.<sup>[4]</sup> Therefore, the sample size calculated and surveyed in the study would not have been adequate to reach a valid scientific conclusion. I suggest that this should be mentioned as a limitation of the study and readers cautioned to interpret these findings with this in mind.

**Ajeet Singh Bhadoria**

*Department of Epidemiology, Institute of Liver and Biliary Sciences, New Delhi, India*

**Address for correspondence:**

Dr. Ajeet Singh Bhadoria,  
Department of Epidemiology, Institute of Liver and Biliary Sciences,  
D-1, Vasant Kunj, Room No. 1043, New Delhi - 110 070, India.  
E-mail: [ajeetsinghbhadoria@gmail.com](mailto:ajeetsinghbhadoria@gmail.com)

## REFERENCES

1. Pathania D, Bungler R, Bungler E, Mishra P, Arora A. An epidemiological study of metabolic syndrome in a rural area of Ambala district, Haryana. *J Family Community Med* 2014;21:130-3.
2. Conthe P, Lobos JM. Definition and current situation of cardiometabolic risk. *Rev Clin Esp* 2008;208:63-5.
3. International Diabetes Federation. The IDF Consensus Worldwide Definition of the Metabolic Syndrome. Available from: [http://www.idf.org/webdata/docs/MetS\\_def\\_update2006.pdf](http://www.idf.org/webdata/docs/MetS_def_update2006.pdf). [Last accessed on 2014 Jul 19].
4. World Health Organization. STEP Wise Approach to Surveillance (STEPS). Available from: <http://www.who.int/chp/steps/manual/en/index.html>. [Last accessed on 2014 Jul 19].

This Letter to Editor was sent to the corresponding author of the commented article and he agrees to the suggestions of Dr. Ajeet Singh Bhadoria

Access this article online	
Quick Response Code:	Website: <a href="http://www.jfcmonline.com">www.jfcmonline.com</a>
	DOI: 10.4103/2230-8229.149593