



Letter in Reply: Gender Differences and Obesity Influence on Pulmonary Function Parameters

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Dear Editor,

We appreciate the comments made by the author regarding our article published in the January 2019 issue of the *Oman Medical Journal*.¹

Our study was a retrospective study using data from patients referred for pulmonary function test (PFT) to the Physiology Laboratory, Universiti Sains Malaysia, between January and December 2015 by multiple medical specialties for various indications. Accordingly, the results should be taken and interpreted with caution and not be extrapolated to the Malaysian cohort at large.

We presented our data as forced vital capacity (FVC) predicted and forced expiratory volume in one second (FEV_1) predicted to express the absolute values of FVC and FEV_1 after comparing them with the predicted values. However, subjective assessment by examining the shape of the flow-volume curves was beyond the scope of our study. Moreover, Weiner et al,² conducted a study on the subjective and objective assessments of flow-volume curve configuration in children and young adults. They found that several PFT indices (β -angle, ratio forced expiratory flow at 50% of total lung volume to peak expiratory flow rate (FEF50/PEFR), FEV_1/FVC , ratio of maximum mid-expiratory flow to FVC (MMEF/FVC), FEF50, and FEF between 25 and 75% of total lung volume) correlated strongly with mean expert scores.

Our study used an automated spirometer (Cosmed Pony FX Desktop Spirometer, USA) equipped with the new software Omnia according to the American

Thoracic Society/European Respiratory Society and Global Lung Initiative (GLI) predicted values.³ The GLI-2012 equations have been endorsed by multiple national and international respiratory societies including Australian and New Zealand Society of Respiratory Science, Thoracic Society of Australia and New Zealand, and Asian Pacific Society of Respiriology.⁴ The GLI-2012 provided continuous age–sex–height prediction equations and reference values for multi-ethnic populations (i.e., Caucasian, African-American and North-East and South-East Asian) between the ages of 3 and 95 years.⁴

An earlier study conducted by Singh et al,⁵ on 1999 healthy volunteers (1385 males and 614 females), ranging in age from 13 to 69 years, attempted to provide the useful norms based on a large sample derived from the local population for clinicians. We believe that in the 20-plus years that have elapsed since this study, various changes have taken place in terms of demographic parameters of the population such as socioeconomics, nutritional status, and intermarriages between different ethnic groups. The latest consensus recommended the use of the GLI-2012.⁴

To conclude, our data on gender differences and obesity influence on pulmonary function parameters were obtained from patients of multi-disciplines referred for PFT, not from healthy volunteers, and the reference values used are valid and based on multi-ethnic populations including South-East Asian populations between the ages of 3 and 95 years.

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