

Validating the applicability of GLI 2012 equations on the Iraqi adults

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Al-Zaytoonah University of Jordan, 2019

Abstract

Spirometry reference value is essential in diagnosis, treatment monitoring, and pulmonary function evaluation. The GLI 2012 equations were founded to provide spirometry reference for different ethnic populations. The present study performed to evaluate the applicability of GLI 2012 equations and other regional equations on Iraqi population. About 1028 (402 males and 626 females) Iraqi participants were enrolled in this study. All enrolled peoples were healthy and nonsmokers. Pulmonary function tests were performed by using minospir spirometer. z -score, predicted value and multi linear regression were calculated for each enrolled individual using GLI 2012 equations and other regional equations performed in Arabic area. All statistics analysis performed by SPSS 20. All spirometry parameters were higher in male than female, except FEV1/FVC which was higher in female. The FEV1 and FVC values increase with height. Although some studied equations were better fit for our data than other, no one equation was perfect fit to our data. In order to reduce pulmonary function evaluation mistake, the requirement to formulate a definite equation for the Iraqi population is urgent and essential.

Key words: spirometry, GLI 2012 equations, Iraqi population, spirometers, lung