Preliminary Results on Lung Function Parameters of Sri Lankan Tamil Adults in Northern Province

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Background: South Indian norms are commonly used to interpret the lung function parameters of Sri Lankans due to lack of ethnic specific Sri Lankan norms.

Objective: To establish reference values for lung function parameters of Sri Lankan Tamil adults.

Methods: This was a population based descriptive study. Participants (256 males and 239 females) were recruited from Jaffna and Vavuniya districts by cluster sampling. Age, standing height, Sitting Height (SH), weight, arm span, Peak Expiratory flow Rate (PEFR) and spirometric parameters were measured.

Results: The mean and standard deviation of Vital capacity (VC), Forced Vital Capacity (FVC), *Forced Expiratory Volume in the first second (FEV1), FEV1 % and PEFR in males* were 3.4±0.6 L, 3.5 ±0.6 L, 3.0 ±0.5 L/s , 85.1 ±4.8 % and 469 ±71 L/min respectively. In females, the Mean ± SD of VC, FVC, FEV1, FEV1 % and PEFR were 2.4±0.4L, 2.5±0.4 L, 2.1±0.4 L 87.8±4.6 % and 322±50L/min respectively. Prediction equations derived by multiple regression analysis using the SH, arm span and age are given below:

VC

VC (Males)= 0.035 SH (cm) + 0.3 arm span (cm) - 0.016 age (years) - 4.11

VC (Females) = 0.021 SH (cm) + 0.023 arm span (cm) - 0.014 age (years) - 2.41

FVC

FVC (Males)= 0.041 SH (cm) + 0.028 arm span (cm) - 0.019 age (years) –4.08

FVC (Females)= 0.019 SH (cm) + 0.023 arm span (cm) - 0.017 age (years) - 2.05

Conclusion: This study provides useful information on lung function parameters of Sri Lankan Tamils which has not been established before.