

Crapo and ECSC equations, are nonlinear with respect to age.

Statistical Analysis

The data was entered in computer package "Microsoft Excel" and analyzed using the statistical package for Social Science (SPSS) version-16 for window software. The data for age, height and pulmonary function parameters were expressed as mean \pm Standard deviation. A graph of pulmonary function variables against the age were examined for each gender. Means and standard deviation of quantitative variables (age, and height) were compared according to gender by Student-t-test. Multiple linear regression analysis was applied to observed lung function values as a function of standing height and age. The FEV-1 and FVC were dependent variables, while height

and age were independent variables. In all statistical analysis, only P-value <0.05 were considered significant.

Results

The age and gender distribution of the subjects are shown in figure 1. Table 1 presents the indices examined, FEV-1, FVC separately for females and males. The mean values for FVC was 3.66 ± 0.49 liter and 2.52 ± 0.40 liter in males and females, respectively, while the values for FEV-1 was 3.56 ± 0.49 liter and 2.44 ± 0.42 liter in males and females, respectively. The prediction formulas for both males and females were derived and the reference values were calculated and compared with those given by ECSE (1993), Knudson (1983), Roca (1981), and Crapo (1986) as shown in table 2 and table 3.

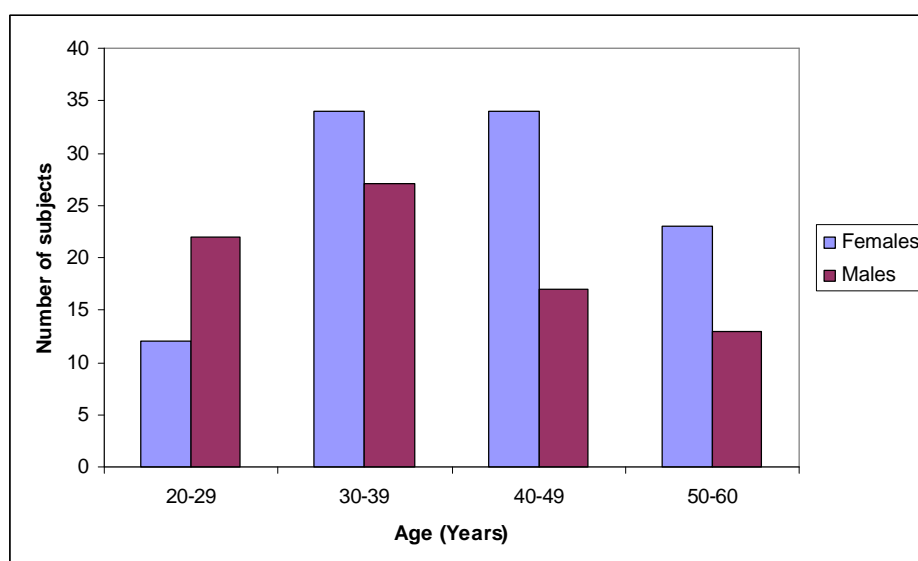


Figure 1: The age and gender distribution of the subjects.