



Figure5: Comparison of prediction equations of FVC in females.

Discussion

This is a study of reference values of lung function test in a random sample of healthy non smoker Iraqi subjects from Baghdad. All relevant data were obtained by trained technicians using standardized equipment & techniques that produce reproducible data. The predicted spirometric values derived from this study showed varying degrees of difference when compared with those derived from studies on Caucasians.

In the literature, the mean average difference between the Asian and Caucasian population is stated to be 16% for females and 12% for males ⁽⁶⁾. In this study, we found that the mean difference for FEV-1 in females was 5.58% and for FVC was 6.14% ($p < 0.01$) while the mean difference for FEV-1 in males was 4.78% and for FVC was 12.65% ($p < 0.01$), respectively when samples were compared with that to the Caucasians. Similarly, a significant difference was found for FEV-1 7.19% and FVC 16.14% with ($P < 0.01$) for females. The mean difference for FEV-1

was 6.61% and FVC 16.15% ($P < 0.01$) for males when Iraqi subjects was compared with that to Mediterranean population ⁽¹³⁾.

The scatter of (R^2) was between 49% and 79% in tables 2 and 3 which mean that the strength of formulae varies in all the studies conducted. Taking that into consideration, it can be stated that non of the authors have managed to create a strong, universal formula and this again emphasizes the importance of ethnic, age, height and other variables that effect the pulmonary functions.

According to the presently accepted method of establishing predicted values for lung function indices, it is assumed that the value of FEV-1 depends on height and age. This assumption is true as it has been confirmed in several examinations in the up growth period and in subjects who outgrew this period.

Differences in the predicted values obtained in various studies may be attributed to the technical factors involved in lung function testing. For