

# SEX DISCRIMINATION PROBLEM

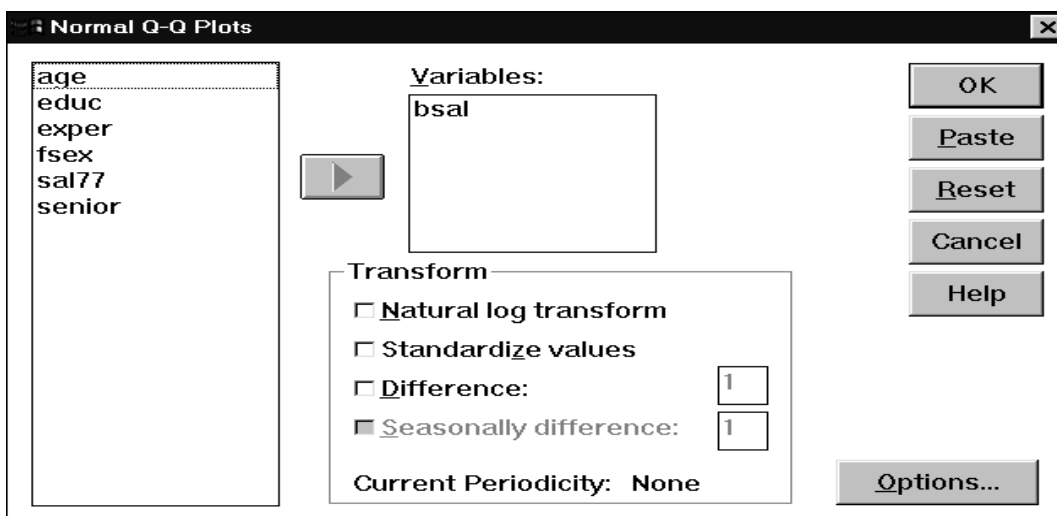
## 14. Checking the Normality Assumption

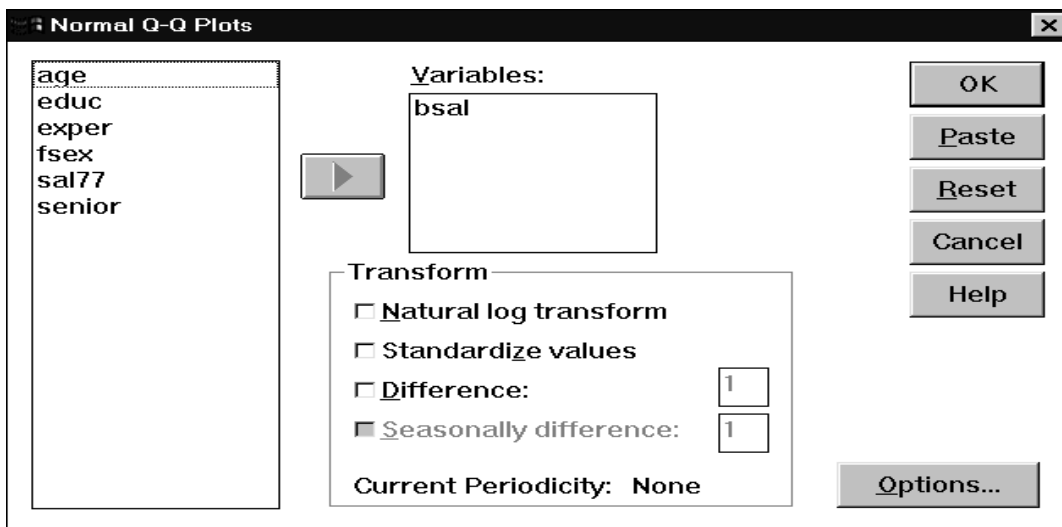
The average starting salaries for males and females will be compared using the two-sample t-test. The assumptions of the test are that both samples are random samples from their respective populations, the two samples are independent of one another, and both populations are normal.

In order to determine whether or not a variable is normally distributed, You can use one of the two available procedures: *Normal Q-Q* plot or *Normal P-P* plot from the *Graphs* submenu. The *Normal Q-Q* plot plots the quantiles of a variable's distribution against the quantiles of the normal distribution. If the data come from a normal distribution, the plot should resemble a straight line. The *Normal P-P* plot plots the cumulative proportions of a variable's distribution against the cumulative proportions of the normal distribution. Similarly, if the sample is from a normal distribution, points will cluster around a straight line.



The P-P Plots and Q-Q Plots dialog boxes are identical.





The normal probability plots for our data for each gender are displayed in **Section 7.2**.