

1. Suppose there are 8000 people in a town. Out of the 8000 people 800 are females. In that town 1600 people are employed. Out of those 1600 employed people, only 120 are female.

Then Calculate the following:

- a. Confidence interval for odds ratio, θ .
- b. Confidence interval for difference of proportion, $\pi_1 - \pi_2$.
- c. Confidence interval for relative risk, r .
- d. Comment on the association between gender and employability based on the confidence intervals.
- e. Compute Chi square statistic, X^2 .
- f. Compute Wilk's statistic, G^2 .
- g. Compare these two statistics with appropriate Chi square cut-off value and comment on the decision on testing $H_0: \pi_{ij} = \pi_{i+} \pi_{+j}$