

Observed

	High School	Bach	Master	Ph.D	Total
female	60	54	46	41	201
male	40	44	53	57	194
Total	100	98	99	98	395

Expected

Female	201 x 100	395
Male	194 x 100	395
Total	395	395

Expected	female	male	Hypothesis	H ₀ : Education level not dependent on gender	H ₁ : Education level dependent on gender
50.86	49.86	50.37	98	99	98
49.86	48.13	48.62	98	99	98
201	49.86	194	395	395	395

Degree of freedom (V) = (2-1)(2-1) = 3.

Critical Value: ~~7.378~~ 7.815

Chi-square formula: $\chi^2 = \sum \left[\frac{e}{(O-e)^2} \right] = 5.86$ 8.006

8.006 > ~~7.378~~ 7.815

So we reject the null hypothesis and conclude that the education level depends on the gender at .05 level of significance.