

	Test Statistic	Effect Size
Chi-square goodness of fit $df = (\text{Categories} - 1)$	$\chi^2 = \sum \frac{(\text{OF} - \text{EF})^2}{\text{EF}}$	
Chi-square test of independence $df = (\text{Columns} - 1) * (\text{Rows} - 1)$	$\chi^2 = \sum \frac{(\text{OF} - \text{EF})^2}{\text{EF}}$ $E = \frac{(\text{RT})(\text{CT})}{N}$	<p>For 2×2: $\phi = \sqrt{\frac{\chi^2}{N}}$</p> <p>All others: $\phi' = \sqrt{\frac{\chi^2}{N(df^*)}}$</p> <p>$df^* = (\text{Columns} - 1) \text{ OR } (\text{Rows} - 1)$, whichever is smaller</p> <p>See Chapter 14 for size guidelines</p>