4. Check against critical values

5\%: 3.8
1\%: 6.7

Result is significant: 54.5 > 6.7

Reject null, accept alternative

H₀: There is no association between gender and pizza brand preference

Hₐ: There is an association between gender and pizza brand preference

Report the Finding

A chi-square test for independence was performed to determine whether preference for Dominos or Pizza Express was associated with gender in a sample of 280 students. The test demonstrated that there was an association between gender and pizza preference, \( \chi^2(1, n=280) = 30.69, \ p < 0.001 \). Males showed a preference for Dominos whereas females showed a preference for Pizza Express.

5. Used to determine if the frequencies of cases in different groups differ significantly from each other

6. Compares the observed frequencies in each group/cell with expected frequencies

7. The bigger the overall distance between observed and expected frequencies, the bigger Chi-square will be, and the more likely it is to be significant

The statistical significance of Chi-square is based on the degrees of freedom, which is based on the number of cells