A researcher conducts a chi-square test to determine whether there is a statistically significant difference in the rate of current anxiety disorder between an intervention and control group at baseline (pre-treatment visit). Explain why the researcher would like to retain the null hypothesis stating no significant differences in the proportion of cases with anxiety disorder in the two groups.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **gender \* anxiety Crosstabulation** | | | | | |
|  | | | Anxiety | | Total |
| 0 | 1 |
| gender | 0 | Count | 87 | 16 | 103 |
| % within gender | 84.5% | 15.5% | 100.0% |
| % within anxiety | 52.4% | 29.6% | 46.8% |
| % of Total | 39.5% | 7.3% | 46.8% |
| 1 | Count | 79 | 38 | 117 |
| % within gender | 67.5% | 32.5% | 100.0% |
| % within anxiety | 47.6% | 70.4% | 53.2% |
| % of Total | 35.9% | 17.3% | 53.2% |
| Total | | Count | 166 | 54 | 220 |
| % within gender | 75.5% | 24.5% | 100.0% |
| % within anxiety | 100.0% | 100.0% | 100.0% |
| % of Total | 75.5% | 24.5% | 100.0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Chi-Square Tests** | | | | | |
|  | Value | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
| Pearson Chi-Square | 8.492a | 1 | .004 |  |  |
| Continuity Correctionb | 7.602 | 1 | .006 |  |  |
| Likelihood Ratio | 8.723 | 1 | .003 |  |  |
| Fisher's Exact Test |  |  |  | .005 | .003 |
| Linear-by-Linear Association | 8.453 | 1 | .004 |  |  |
| N of Valid Cases | 220 |  |  |  |  |
| a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 25.28. | | | | | |
| b. Computed only for a 2x2 table | | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk Estimate** | | | |
|  | Value | 95% Confidence Interval | |
| Lower | Upper |
| Odds Ratio for gender (0 / 1) | 2.616 | 1.354 | 5.054 |
| For cohort anxiety = 0 | 1.251 | 1.076 | 1.454 |
| For cohort anxiety = 1 | .478 | .284 | .805 |
| N of Valid Cases | 220 |  |  |