**Group 1:** I am testing whether noise during your exam (low, medium, high) is independent of exam grades (pass, fail). The following table shows the observed frequencies for this test:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Noise level |  |
|  |  | Low | Medium | High | Total |
| EXAM | Pass | 20 | 18 | 8 | 46 |
| Fail | 8 | 6 | 10 | 24 |
|  | Total | 28 | 24 | 18 | N=70 |

Conduct a chi-square test for independent at the .05 level of significant. Let me know how much noise I should ensure you hear during your second exam by whether or not you retain or reject the null hypotheses. What are your recommendations to me? Compute effect size (and interpret) the Phi Coefficient.

**Group 2:** A researcher is testing whether the political affiliation of individuals I related to or independent or whether they have a positive view of the economy. The researcher records the political affiliations and economic viewpoints of 105 respondents. The following table lists the observed frequencies for the study. Conduct a chi-square test for independent at the .05 level of significance and decide whether to retain or reject the null hypothesis.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | View of Economy |  |
|  |  | Positive | Negative | Total |
| Political Affiliation | Democrat | 20 | 18 | 46 |
| Republican | 8 | 6 | 24 |
|  | Total | 28 | 24 | N=70 |

What do you conclude? Do you have policy recommendations? Be sure to compute effect size (and interpret) the Phi Coefficient.

**Group 3**. Keskinoglu and colleagues (2007) studied sex discrimination among the elderly. As part of their study, they recorded whether participants were involved in or made decisions concerning personal income and earnings (personal income) and whether they were exposed to negative sex discrimination. The following table lists the observed frequencies from this study. Compute a chi-square test for independence at the .05 level of significance. Do you retrain or reject the null? What do you make of this?

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Negative sex discrimination |  |
|  |  | Yes | No | Total |
| Personal income | Yes | 32 | 71 | 103 |
| No | 26 | 19 | 45 |
|  | Total | 58 | 90 | N=148 |

What do you conclude from your analysis? Do you have policy recommendations? Be sure to compute effect size (and interpret) the Phi Coefficient.