|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | |
|  | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| HAVE GUN IN HOME \* RESPONDENTS SEX | 1711 | 67.4% | 827 | 32.6% | 2538 | 100.0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **HAVE GUN IN HOME \* RESPONDENTS SEX Crosstabulation** | | | | | |
|  | | | RESPONDENTS SEX | | Total |
| MALE | FEMALE |
| HAVE GUN IN HOME | YES | Count | 282 | 247 | 529 |
| % within RESPONDENTS SEX | 36.6% | 26.3% | 30.9% |
| NO | Count | 457 | 671 | 1128 |
| % within RESPONDENTS SEX | 59.3% | 71.4% | 65.9% |
| REFUSED | Count | 32 | 22 | 54 |
| % within RESPONDENTS SEX | 4.2% | 2.3% | 3.2% |
| Total | | Count | 771 | 940 | 1711 |
| % within RESPONDENTS SEX | 100.0% | 100.0% | 100.0% |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Chi-Square Tests** | | | | | | | |
|  | | Value | | df | | Asymptotic Significance (2-sided) | |
| Pearson Chi-Square | | 28.351a | | 2 | | .000 | |
| Likelihood Ratio | | 28.307 | | 2 | | .000 | |
| Linear-by-Linear Association | | 11.571 | | 1 | | .001 | |
| N of Valid Cases | | 1711 | |  | |  | |
| a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 24.33. | | | | | | | |
| **Symmetric Measures** | | | | | | |  |
|  | | | Value | | Approximate Significance | |  |
| Nominal by Nominal | Phi | | .129 | | .000 | |  |
| Cramer's V | | .129 | | .000 | |  |
| N of Valid Cases | | | 1711 | |  | |  |

My research question aligns with a correlational research design and can be answered through categorical data analysis, in this case by performing a Chi-Square statistical test.  Is there an association between respondents’ sex and owning a gun in the home?  The null hypothesis is respondents’ sex is not associated with owning a gun in the home.  The dependent variable is owning a gun in the home and the independent variable is respondents’ sex.  Both variables are qualitative, categorical variables.

The case processing summary shows that out of the 2,538 cases 1,711 (67.4%) are valid and 827 (32.6%) are missing.  When examining the cross tabulation table, 282 (36.6%) of male respondents and 247 (26.3%) of women respondents reported yes to having a gun in the home while 457 (59.3%) men and 671 (71.4%) of women reported no and 32 (4.2%) of men and 22 (2.3%) of women refused to answer.  The Chi-Square Test table reveals a critical value of 28.351 with an associated p-value of 0.000.  This test is significant at the 0.01 level and well below the 0.05 threshold.  Therefore, the null hypothesis can be rejected.  To evaluate the strength of this relationship, the Cramer’s V must be observed (Laureate Education, 2016a).  A value of 0 would indicate no relationship and a value of 1 would indicate a perfect relationship (Laureate Education, 2016a).  From the symmetric measures table, results show that the Cramer’s V is 0.129 suggesting that although there is a statistical significant relationship of the two variables, respondents’ sex and owning a gun in the home, the strength of the relationship is fairly weak.

For a lay audience, results indicate a statistical relationship between respondents’ sex and owning a gun in the home, therefore, rejecting the null hypothesis that there is no association between these two variables. Furthermore, this relationship is fairly weak suggesting that the meaningfulness of results, or the applicability of these result in real world contexts is low.  However, this allows for deeper research into this topic and further analysis into other variables that can affect one’s decision to own a gun in the home.

Reference

Laureate Education (Producer). (2016a). *Bivariate categorical tests* [Video file]. Baltimore, MD: Author.