**Assignment 5**

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PSYC 6380: Multivariate Statistics

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**Part 1**

**Questions**

***1***

Chi-square coefficient: 13.65

Squared Cramer’s *V*: 0.03

This finding supported the idea that participants’ enrollment (or absence thereof) in a presenter training program may have been related to their later employment or unemployment.

Squared Cramer’s V can be interpreted as an R2

***2***

**Table 1**

*Standardized Residuals*

|  |  |  |
| --- | --- | --- |
|  | Employed at Follow-Up | |
| Enrollment in Presenter Training | No | Yes |
| Not Coached | 2.40 | -1.30 |
| Coached | -2.32 | 1.26 |

Specifically, inspection of the standardized cell residuals in the associated contingency table suggested that participants who had undergone presenter training were approximately 2.40 standard deviations more likely to be later employed than would be expected by chance alone; and approximately 2.32 standard deviations less likely to be later unemployed than would be expected by chance alone for those who did not undergo presenter training.

***3***

Exponential-transformed slope coefficient for *PresentAbility* and 95% CIs: 2.38 [1.99, 2.89]

Specifically, inspection of the 95% confidence intervals around the odds ratio index suggested that, for every one unit increase in participants’ presentation ability, the population-level likelihood of those participants being later employed plausibly range between an increase in being employed by approximately 99 percent to an increase in being employed of 189 percent. Population-level effects outside of this range are possible but, are relatively less probable.

***4***

*Pseudo-R2*: 0.22

The pseudo-*R2* index further suggested that adding participants’ presentation ability as a predictor of later employment resulted in a decrease of approximately 22 percent in the absolute value of the log-likelihood of the model.

22 percent decrease in error