

## G240250 : MAJOR EDUCATIONAL STATISTIC

KEY WORD: THE CRAMER'S V COEFFICIENTS / SMALL EXPECTED FREQUENCIES

KANNIGAR INSAI : A COMPARISON OF THE CRAMER'S V COEFFICIENTS WITH COMBINING AND WITHOUT COMBINING CELLS IN THE CONTINGENCY TABLES UNDER SMALL EXPECTED FREQUENCIES. THESIS ADVISOR : ASSIST. PROF. DEREK SRISUKHO, Ph.D., 131 pp. ISBN 974-584-168-4

The purpose of this research was to compare the mean square error, the distribution, and the median of The Cramer's V coefficients between those obtained from combining and without combining cells in the contingency tables. The comparisons were made under small expected frequencies when the correlation coefficients of population were 0.0 , 0.1 ... , 0.9.

The Monte Carlo Simulation technique was employed for the study. The contingency tables for the simulation were 2X3, 2X4, 2X5, 3X3, 3X4, 3X5, 4X4, 4X5 and 5X5 with small expected frequencies from 1 to 3 columns. The sample size was 200.

The findings could be summarized as follow .

1. The mean square error of Cramer's V coefficients calculated without combining cells were lower than the coefficient obtained from combining cells method, especially when the correlation coefficients of population were low.
2. The sampling distributions of Cramer's V coefficients obtained from combining cells and those without combining cells were significantly different at .05 level.
3. The medians of Cramer's V coefficients obtained from the combining cells method were significantly lower than those without combining cells at .05 level.