

APPENDIX - D

Computation of χ^2 and Contingency Coefficient
for Emotional Exhaustion Frequency

Emotional Exhaustion Frequency

	Low	Moderate	High	
	1	23	54	78
	30	17	76	123
	66	3	0	69
	97	43	130	270

$$X = \frac{(f_o - f_e)^2}{f_e}$$

$$X = \frac{(1-28.02)}{28.02} + \frac{(30-44.19)}{44.19} + \frac{(66-24.79)}{24.79}$$

$$+ \frac{(23 - 12.42)}{37.56} + \frac{(17 - 19.59)}{59.22} + \frac{(3 - 10.99)}{33.22}$$

$$+ \frac{(54 - 37.56)}{37.56} + \frac{(76 - 59.22)}{59.22} + \frac{(0 - 33.22)}{33.22}$$

$$= 26.06 + 4.56 + 68.51 + 9.01 + .34 + 5.81 + 7.20 + 4.75 + 33.22$$

$$= 159.46$$

$$df = (k-1) (r-1) = (3-1) (3-1)$$

$$= 2 \times 2$$

$$= 4$$

With $df = 4$, χ^2 is significant far beyond .001 level.

$$\begin{aligned}
 C &= \frac{X^2}{N + X^2} \\
 &= \frac{159.46}{270 + 159.46} \\
 &= .371295 \\
 &= .6093
 \end{aligned}$$

$$\begin{aligned}
 \text{Maximum value for } C \text{ is} &= \frac{K-1}{K} \\
 &= \frac{3-1}{3} \\
 &= \frac{2}{3} = .816
 \end{aligned}$$

$$\begin{aligned}
 \text{Correction for grouping} &= \frac{\text{Computed 'C'}}{\text{Maximum 'C' for that classification}} \\
 &= \frac{.6093}{.816} \\
 &= .74 \text{ 'C' corrected for fineness} \\
 &\quad \text{of grouping.}
 \end{aligned}$$