

## *SOC 4930/5050: Week 10 Equations*

*Christopher Prener, Ph.D.*

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*Pearson's  $r$*

*Calculating  $r$*

$$r = \frac{\sum_{i=1}^n (x - \bar{x})(y - \bar{y})}{(n-1)s_x s_y} \quad (1a)$$

*Percent of Variance Explained*

$$r^2 \quad (1b)$$

*Calculating Degrees of Freedom ( $v$ )*

$$v = n - 2 \quad (1c)$$

*Calculating  $t$*

$$t = \frac{r}{\sqrt{\frac{1-r^2}{v}}} \quad (1d)$$