

Converting  $\hat{d}$  to  $\hat{f}$  for the 2-group case

$$\hat{d} = t \sqrt{\frac{1}{n_1} + \frac{1}{n_2}} \quad (1)$$

$$\hat{f} = \sqrt{(k-1) \frac{F}{N}} \quad (2)$$

When  $k$  (# groups) = 2, Equation (2) becomes

$$\hat{f} = \sqrt{\frac{F}{N}} \quad (3)$$

From Equation (1)

$$t^2 = \frac{\hat{d}^2}{\frac{1}{n_1} + \frac{1}{n_2}} \quad (4)$$

Since  $t^2 = F$ , Equation (3) now becomes

$$\hat{f} = \sqrt{\frac{\hat{d}^2}{\frac{1}{n_1} + \frac{1}{n_2}} \cdot \frac{1}{N}} \quad (5)$$

Equation (5) converts  $\hat{d}$  to  $\hat{f}$  given sample sizes ( $n_1$  - sample size for Group 1,  $n_2$  - sample size for Group 2, and  $N$  - total sample size).

Chris Oshima

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