

$$\begin{array}{c} \text{A} \\ Y_A = 21 \\ T_A = 1 \end{array}$$

$$\begin{array}{c} \text{B} \\ Y_B = 11 \\ T_B = 0 \end{array}$$



$$\begin{array}{c} \text{C} \\ Y_C = 9 \\ T_C = 0 \end{array}$$

$$\begin{array}{c} \text{D} \\ Y_D = 5 \\ T_D = 1 \end{array}$$

I don't know about the individual causal effects. BUT I can help you ESTIMATE the AVERAGE causal effect!

i	T	Y	$Y(T=1)$	$Y(T=0)$	Effect(τ)
A	1	21	21	?	$21 - ? = \tau_A$
B	0	11	?	11	$? - 11 = \tau_B$
C	0	9	?	9	$? - 9 = \tau_C$
D	1	5	5	?	$5 - ? = \tau_D$

Define

an
Unobserved
Estimand $\bar{\tau} = (\tau_A + \tau_B + \tau_C + \tau_D) / 4$
 $\bar{\tau} = \bar{Y}(1) - \bar{Y}(0)$

Choose

$$\hat{\tau} = \hat{\bar{Y}}(1) - \hat{\bar{Y}}(0) = \frac{(21+5)}{2} - \frac{(11+9)}{2} = 13 - 10 = 3$$

an
Estimator

(Show (Later) that $\hat{\tau}$ is a good estimator of $\bar{\tau}$)