

$N=16$ subjects learned a visual discrimination task on one day and then were tested the following day. Half were allowed to have at least 6 hours sleep, and the other half were kept up all night.

6 hours sleep	No sleep
$N_1 = 8$	$N_2 = 8$
$\bar{X}_1 = 72$	$\bar{X}_2 = 61$
$SS_1 = 440$	$SS_2 = 456$

Is there a significant difference in performance between the two conditions?

One sample of rats receives a drug that lowers serotonin, whereas another receives placebo. The number of aggressive acts is recorded:

Control	Low serotonin
$N_1 = 10$	$N_2 = 15$
$\bar{X}_1 = 12$	$\bar{X}_2 = 16$
$SS_1 = 160.2$	$SS_2 = 135.1$

Does the drug result in increased aggression in rats?