

6 pm Discussion Section 7

AMS7
12 Nov
09

p. R-84

paired-comparison (repeated measures design); this diff. is small 1 yr at a time but would grow into something large over a longer period of time

This is like deer foreleg / hindleg example

see Disc. sec on 9 Nov for details

Disc. sec 8 #7

R-89

this is like the Daphnia case study

(a) This is about a 10% decline ⁽²⁾ in going from drug G (on ave.) to drug B (on ave.), so yes this diff is large in practical

terms

inferential summary

(2 = G, 1 = B)

unknown pop. sensitivity diff interval	$(\mu_2 - \mu_1) =$ pop. mean diff in clotting time
estimate	$\bar{y}_2 - \bar{y}_1 = 0.99$ min
best take	$SE(\bar{y}_2 - \bar{y}_1) =$ (Pythagoras) .39 min
95% interval	$0.99 \pm (2.2)(0.39 \text{ min})$

2 indep. samples so 2 model diagrams (like Daphnia) L-⁽¹⁹⁵⁾₍₁₉₆₎

pop
all people
with hemophilia (B)

sample

sample (3)

[]
mean $\mu_1 = ?$
SD $\sigma_1 = ?$

→ [] $n_1 = 6$
mean $\bar{y}_1 = 8.75$
SD $s_1 = 0.58$

[]

(C)

[]

[]

[]
mean $\mu_2 = ?$
SD $\sigma_2 = ?$

→ [] $n_2 = 7$
mean $\bar{y}_2 = 9.74$
SD $s_2 = 0.82$

[]

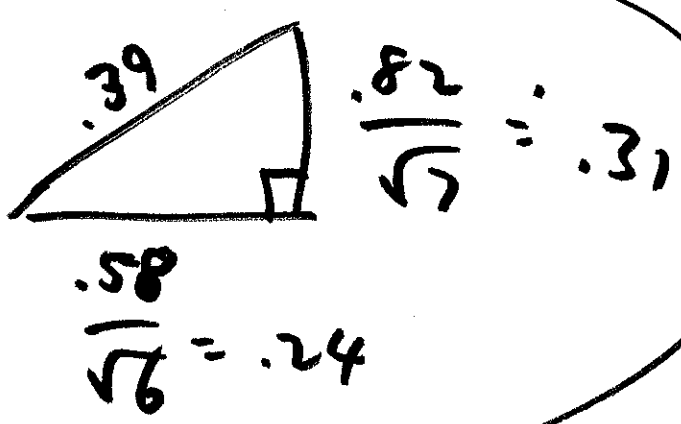
⊕

$$\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

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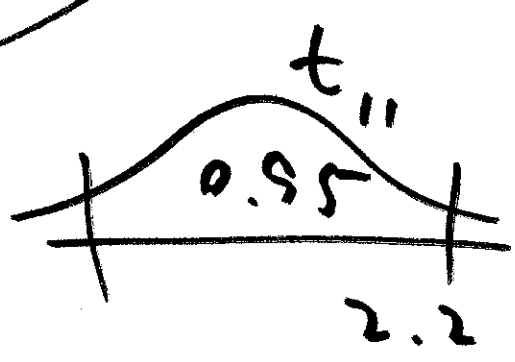
formula (11),
p. 12-25

$$\sqrt{\frac{(0.58)^2}{6} + \frac{(0.82)^2}{7}}$$

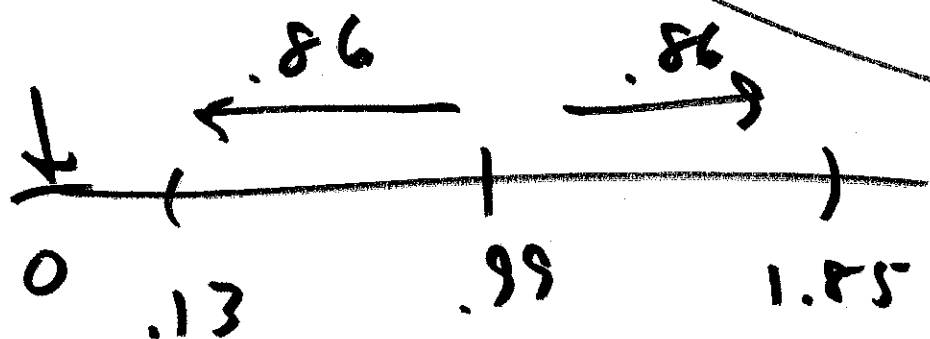


$$= \frac{.82^2}{7} + \frac{.58^2}{6}$$

$$= \cancel{.23} = .39 \text{ min}$$



long run
hist
of $(\bar{y}_2 - \bar{y}_1)$
accounting



95% int

↑ not in int so diff. (15) statistics

This is an obs. study ^(0.5%)
treatment: ^{moderate} exercise vs. ^{low} ex.

outcome: CH⁽¹⁾ or not⁽⁰⁾

2 indep samples with 15 & 20

this is like the redwood
trees / sudden oak death study
