

Discussion section 7 #1

AMS 7
9 Nov
09

0.20 ^(cm) mean growth μ_d by itself cm/yr

doesn't look big in practical terms, but ~~is~~ since growth accumulates over time, this trend of 0.2 cm/yr would become large in practical terms after just a few years.

inferential summary

unknown μ_d quantity of interest	$\mu_d = \text{pop mean growth in jaw width}$
estimate	$\bar{d} = 0.20 \text{ cm}$
give or take found as est. of μ_d	$SE(\bar{d}) = 0.01 \text{ cm}$
95% interval for μ_d	$\bar{d} \pm 2.145 SE(\bar{d}) = 0.20 \pm 0.02 \text{ cm}$

boy
old U.S. girls
age 5 & 6
1950s

sample
the observed
girls
saw width
age

imputed data
possible
 \bar{d}

diff.
N=?
(diff)

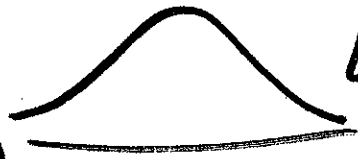
diff (age - age)

(actual) like
= I_{ij}
n=15

mean $\mu_d = ?$
SD $\sigma_d = ?$

mean $\bar{d} = 0.20$
SD $s_d = 0.039$

hyp. test
pop list



sample list

n=15
mean $\bar{d} = ?$ (ex. 0.22)

0.20
0.22
:
:
M=0

EV of $\bar{d} = \mu_d$

SE of $\bar{d} = 0.01 \text{ cm}$

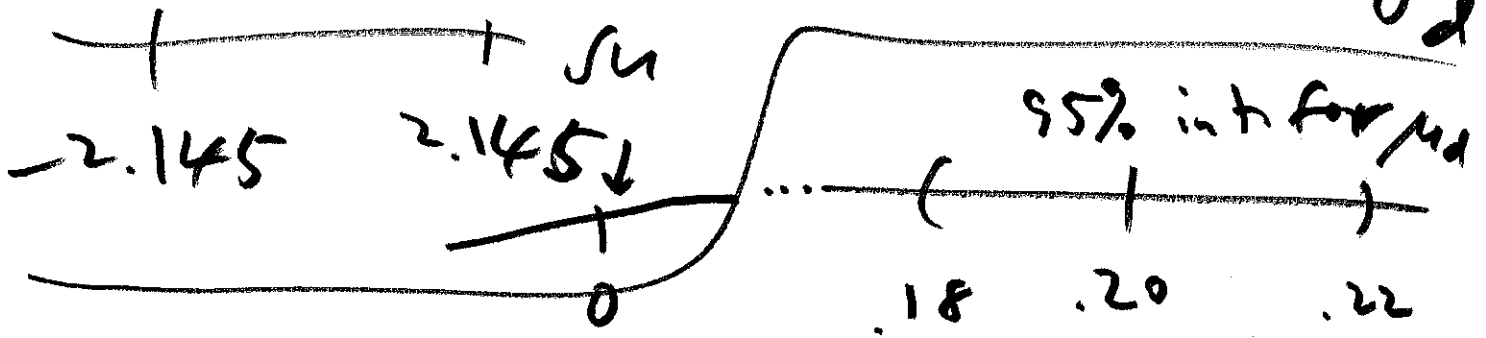
SE 0.01 cm

1 $E_{I_{ij}}(\bar{d}) = \mu_d$

2 $\hat{SE} \text{ of } \bar{d} = \hat{SE}_{I_{ij}}(\bar{d}) = \frac{s_d}{\sqrt{n}} = \frac{0.039 \text{ cm}}{\sqrt{15}} = 0.01 \text{ cm}$

formula (9) p. 1-24

$\hat{\sigma} = 0.01 \text{ cm}$ t_{14} lay μ_d list σ_d ③
 of \bar{d} , accounting
 for uncertainty in



0 is (way) hot in our 95%
 interval, this diff (is) striking
