

Discussion  
Section 3

R-29 #4 (a)

AMS 7  
23 April 8

outcome (Y): (dichotomy) 0  
1 if "c. 2 y. relief"

0 else

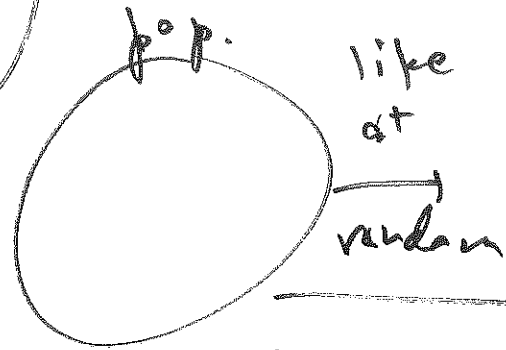
treatment (X):

1 if (T) = acupuncture  
1.5 treatment  
0 (C) didn't

here, no (C) group

another way  
to get paired  
data

ex. new drug to help insomnia



expt. subjects

# sleep if  
person CBT new  
drug

1	4.1	6.8
2	2.8	4.3
:	:	:
n	7.0	6.6

CBT =  
current best  
treatment  
this design  
defeats all  
possible person-  
level PCFs, by holding  
the entire person constant

this is a  
repeated-  
measures

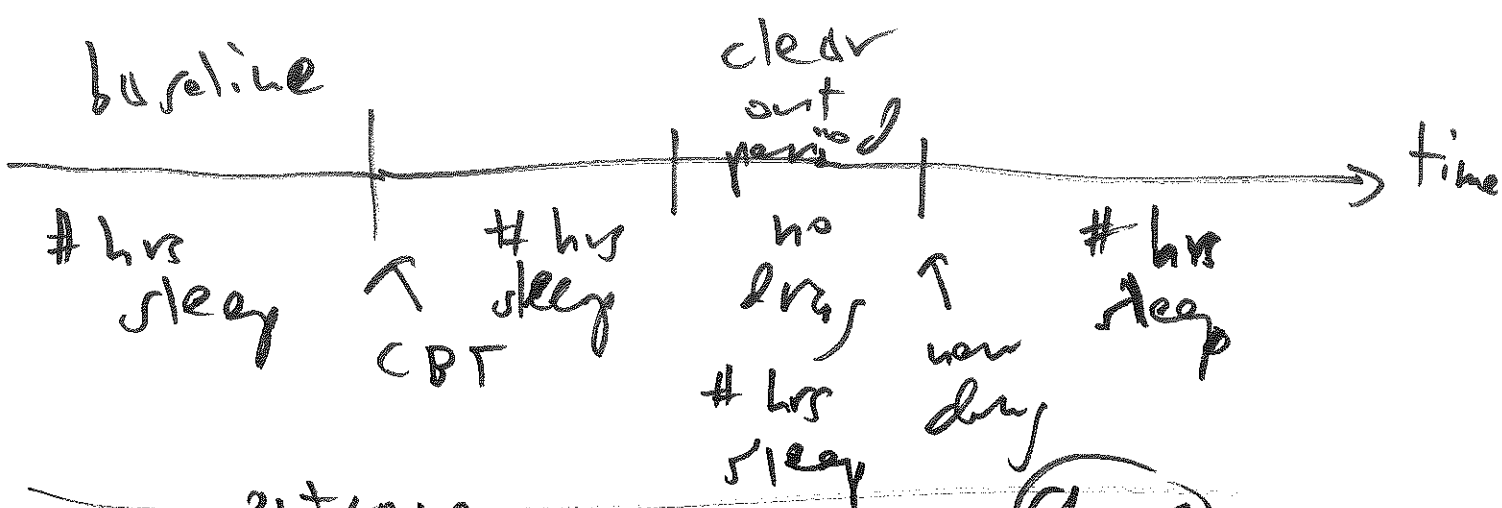
this is an example of  
longitudinal data-gathering: design

study the same individuals at multiple (2 or more) points in time (movie) (2)

opposite of

cross-sectional data gathering:

study many different people at one moment in time (snapshot)



Plan

person #	Acup.	Con v.
1	1	0
2	0	0
3	1	1
⋮	⋮	⋮
31	1	0

① lack of generalizability:

(as she didn't try to choose her patients in

a representative manner from

$P = \{ \text{all people with spinal punctures} \}$

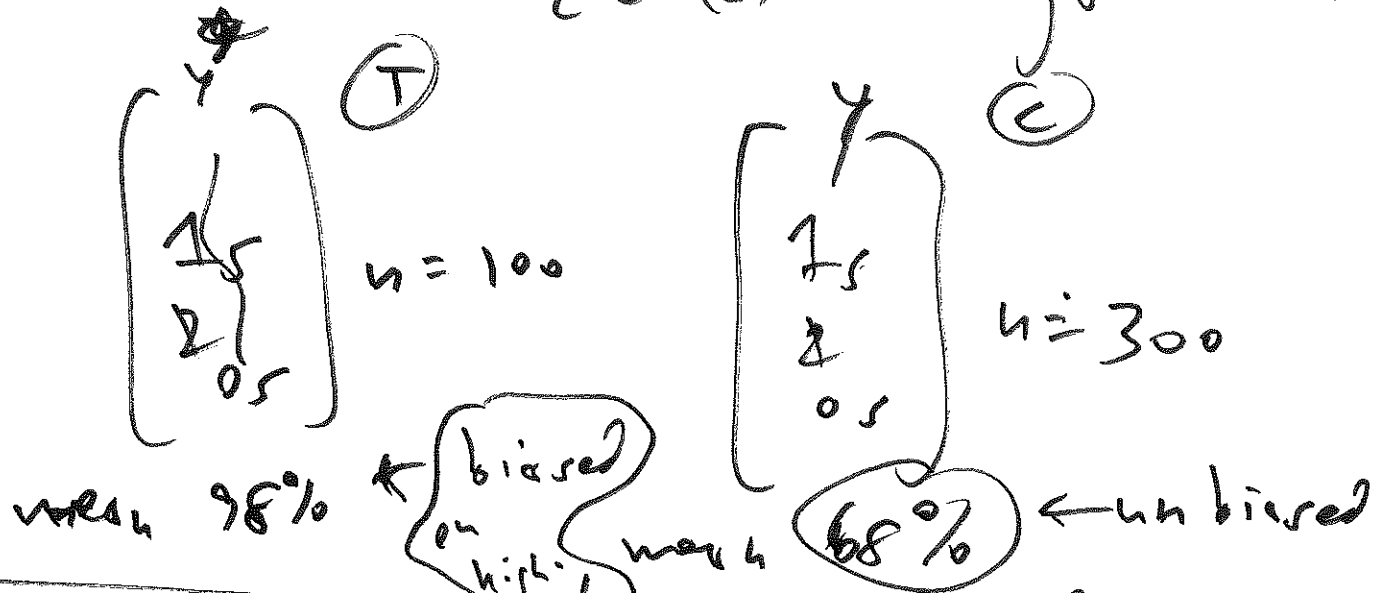
(b) key pts. are different from other pts. in P is that conventional treatments didn't help

↳ possibility of placebo effect

$\frac{30}{31}$  as an estimate of success rate in all of P is biased on high side

(b) outcome (Y):  $\begin{cases} 1 \text{ if alive 3yr later} \\ 0 \text{ else} \end{cases}$

treatment (X):  $\begin{cases} 1 (T) = CABG \\ 0 (C) = drugs + diet \end{cases}$



$98\% - 68\% = +30\%$  estimate of improvement in P

$P = \{ \text{all adults with coron. art. d.s.} \}$  <sup>(4)</sup>  
 + 30% is likely to be biased on  
 the high side, because Dr. Lillyot  
 almost certainly oversampled relatively  
 healthy patients from  $P$

(5) outcome: being fat or not  
 (Y)  
 treatment: eating cottage  
 cheese or not  
 (X)

claim: ~~X~~ causes Y  $\leftarrow$   
 (X causes Y)

