

Class 37: Topic 23: Analyzing Paired Data

Held: Wednesday, 30 April 2008

Summary: We explore a similar and different kind of two-quantitative-variable test, one in which each observational unit from the first population has a natural pair in the second population.

Notes:

- Due Friday: 26-1, 26-2, 26-3, 26-4 (not to be turned in).
- I'd like you to do the first half of topic 26 on your own. (We won't do the second half.)
- Don't forget the poster session tomorrow!
- I have optional permission forms for you to sign.
- EC for attending the student art show.
- Two more exam-lettes to finish off the semester: Friday and Wednesday.
- I will be leaving class today at 1:55 to pick up my son from school. Katherine and Cassie can handle the last ten minutes.
- There is an error in activity 23-4 a. Similar data were not provided in Activity 22-3. Nonetheless, you should be able to reflect on the meaning of the problem.

- Handouts: R Notes for Topic 23.
- Due: 22-5, 22-6, 22-9, 22-14, 22-27.

Overview:

- What are paired data?
- How should we analyze paired data?

The Poster Session

- The poster session runs from 11:00 a.m. to 12:30 p.m.
 - Do your best to be there by 11:00 a.m.
 - If you have to (want to) leave by noon, and have completed your work, that's fine.
- Lunch will be available for all participants.
 - Remember that you provided your P-card number, so this is your lunch for the day.
- We will hang your posters in the morning. (At least I hope we will.)
- You will be responsible for reviewing two other posters from our class, and one poster from outside of our class.
 - In class: Assigned
 - Outside of class: Your choice
 - All of your forms go to me.
- If possible, try to have one person from your group at the poster at all times.
 - Groups with one person can't meet this requirement.

- You can keep your posters.
 - If you don't want your poster, let me know.
 - If you can't agree on who gets to keep your poster, talk to me or Katherine.

Paired Data

- Sometimes we have a two sets of values in which we can naturally pair one value from the first set with a corresponding value in the second set.
 - Ages of married men and women
 - Before and after scores
 - Responses of subjects to two different stimuli
 -
 - When analyzing such data, we should *not* use the two-sample t -test.
 - Instead, we do a standard t -test, using the differences between paired samples as our variable.
-

Copyright © 2008 Samuel A. Rebelsky. This work is licensed under a Creative Commons Attribution-NonCommercial 2.5 License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/2.5/> or send a letter to Creative Commons, 543 Howard Street, 5th Floor, San Francisco, California, 94105, USA.