PSYC 60 – Statistics
Spring 2012
Notes #7

Test Selection

Example A	Example B	Example C	Example D
IQ:	**UCSD GPAs:**	**Weight loss:**	**BP Clinical Trial:**
$\mu = 100$	$\mu = 3.01$		
$\sigma = 15.$	Transfer student		
Sample: 103	sample: 3.1		
105	2.9		
99	3.3		

	Before	After	Drug	Placebo
A:	180	172	80	90
B:	135	132	85	93
C:	145	147	86	87
				89

2-samples, Dependent

Book: Chapter 15 - t Test for Two Related Samples (Repeated Measures)
Excluding 15.9

Example: A dietician follows a sample of individuals and calculates the number of pounds that each person changes over a diet program. For example, DIFFERENCE for person A = -8 (lost 8 lb.) and DIFFERENCE for person C = 1 (gained 1 lb.). He loses the actual before & after weights but still has the difference values. What is the hypothesis test that he should perform to determine if the program helped people lose weight?

If we have _____ values for 2 dependent samples,

we can perform a _____

Based on the raw data below, did participants in the program have a statically significant amount of weight loss? (This example is a 1-tailed test, but 2-sample dependent tests can be either 1 or 2 tailed)

ID	Before	After
A	180	172
B	135	132
C	145	147

Characteristics of a 2-sample dependent (repeated measures) test:

Procedure:

1. Match the two measures for each entity

2. For each entity, calculate a _____ value.

3. _____ the data for the 2 conditions.

4. Treat the difference values just as you would sample values and perform a

_____

Formulas:

All formulas are familiar, they just use _____ instead of _____

SE of the sample mean

how much sample means deviate from the mean of the population

SE of the sample difference

how much sample differences deviates from the mean of population differences

Examples:

Before/After measurements
Drug/Placebo (must return to baseline)
With/Without glasses

Counterbalancing

Participation in one condition may affect performance in another
Have half the participants participate in condition A first, the other half does B first

With before / after measurements, the effect could always be due to _____

Counterbalancing -