

Reliability & Objectivity of Scores

Part 1: Analysis - Reliability (Stability)

Create the data file below (handstand balance skill). To get two scores per person you record the number of seconds each person holds their handstand on each of two attempts.

Time 1	Time 2
6	8
12	11
28	20
3	5
7	7
15	14

Obtain a measure of stability

Interpret

Obtain SEM (remember to use the SD of the average balance time)

Interpret

Part 2: Analysis - Reliability (Internal Consistency)

Consider now a written multiple choice format test administered once. To get 2 scores per person you could record how many of the even numbered and odd numbered items each person answered correctly.

x-even	x-odd	Total
42	44	86
50	42	92
40	51	91
34	40	74
35	35	70
40	42	82

Obtain a measure of internal consistency

Get alpha

Do spearman brown (by hand)

Interpret

Obtain SEM (remember to use the SD of the total score)

Part 3: Analysis - Reliability (Stability)

Use the Cereals file

Obtain an estimate of the reliability of the rating data

Get alpha

Interpret

Obtain SEM

Interpret

Part 4: Analysis - Objectivity

Assume you had 3 judges scoring students in a diving class. From these three scores per person assess objectivity by examining the consistency across the 3 sets of scores using coefficient alpha.

Judge1	Judge2	Judge 3
18	19	17
12	15	13
7	10	8
10	9	9
12	10	10
15	14	13

Obtain alpha

Interpret

Obtain SEM

Interpret