

Repeated measures

[Science](#), [Statistics](#)



Repeated Measures Design Here s Here Repeated Measures Design This experiment would be undertaken to examine the relationship between moustaches and others' perceptions of the wearer (or non wearer). In other words, we would be asking if people perceive men with moustaches as being meaner or nice than those without moustaches. This study could use a between-groups design where one group of subjects would view pictures of men with moustaches while the other group viewed pictures of men without them, but the repeated-measures design is a more powerful (better chance of correctly rejecting the null hypothesis) option that can be utilized in this experimental situation. The reason for the increased power of the repeated-measures design is the elimination of between-subjects variability and thus the reduction of our error term.

In our repeated-measures design, we would employ one group of subjects (randomly selected from the male population) who would each rate pictures of men with moustaches and men without moustaches on a scale ranging from very mean to very nice. A seven-point Likert scale may be appropriate for this task, but there are several scaling options. Stimuli would be presented in blocks and randomized to eliminate ordering effects.

The data would be analyzed using a repeated-measures (dependent samples) t-test. This statistic will provide a number that can be compared to standardized critical values in order to determine if there is a significant difference between the ratings of mustachioed men and the ratings of men without moustaches. This analysis will be performed with an alpha of .05, giving the test 95% power (probability of correctly rejecting the null hypothesis). No post-hoc comparisons will be required for this experiment.

Reference

Grimm, L. G. (1993). *Statistical application for the behavioral sciences*. New York: Wiley