

One-way experiment

Psychology



**ASSIGN
BUSTER**

One-Way Experimental Designs One-Way Experimental Designs Independent and Dependent Variables The independent variable is instruction given to participants about the pill that is required to be taken before going to sleep in night. The dependent variable is how long it took participants to fall asleep after taking the pill (insomnia).

Levels in Independent Variable

The number of levels in independent variables is two. The first level is the instruction that the pill will make participants feel "sleepy," and the second level is the instruction that the pill will make participants feel "awake and alert." Although, both randomly assigned groups received the same pill that actually contains milk powder (a placebo).

Research Design

The research used a between-participants research design. This is because for each level, different groups were used. Fifty insomnia sufferers who responded to a newspaper ad were randomly assigned to two groups and one half (group) were told that the pill will make them feel "sleepy," and the other group were told that the pill will make them feel "awake and alert."

Significant F in ANOVA

The Analysis of Variance (ANOVA) tests whether the mean scores on the dependent variable are different in the different levels of the independent variable (Stangor, 2011). According to Stangor (2011), in a one-way experiment with only two levels, a statistically significant F tells us that the means in two conditions (levels) are significantly different. Thus, if an ANOVA was conducted for this research, than a significant effect will mean that there is a difference in time taken to sleep after taking the pill between the two groups. In other words, the individuals who were told that the pill would

<https://assignbuster.com/one-way-experiment/>

make them feel sleepy will report that they fell asleep faster than the participants who were told the pill would make them feel alert.

Reference

Stangor, C. (2011). Research methods for the behavioral sciences (4th ed.). United States of America: Wadsworth, Cengage Learning.