

# Techniques in experimental research

[Science](#)



There are several techniques used in Experimental Research and are broken down into several methods of research used in psychology. These research methods are Naturalistic Observation, Correlational Method, Experimental Method, Clinical Method and Survey Method. The Experimental Method is used to give the researcher more control over the experiment. This is the most scientific method of research because the researcher is able to deliberately manipulate the IV (independent variable) while controlling the CV (confounding variables), making the outcome of the experiment, the DV (dependent variable), more accurate. The manipulation of the IV indicates a cause and effect relationship between the IV and the DV. The controlled conditions of the laboratory environment make it easy for the experiment to be replicated if further research is required. Also, technical equipment can be used to make the experiment more accurate. Another advantage of this method is that it can be easily structured to provide quantitative data. However, laboratory experiments do not provide total control over all variables. Another disadvantage is that the conditions of the laboratory are artificial, basically they do not generalise to the characteristics of a real-life situation. The experiment: Will a high protein diet have an effect on the endurance on bicycle riding in the age group of 30 to 40 years men and women? There will be 10 randomly chosen men and 10 women in the specified age group. Out of the 20 subjects, 2 sets of 5 men and 5 women will be randomly chosen. One group of 10 will receive a high protein diet and the 2nd group will receive a low protein diet. At the beginning each subject will have an initial ride observed. Over the course of the experiment, each group will be required to ride a stationary bike, only one day a week. They will be required to ride as long as they can, until they can peddle no further.

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This should take approximately 4 weeks. At the end of the experiment each subjects progress will be charted to show the tendency. The control group will be the group that has the high protein diet. The experimental group will have the low protein diet. In order to avoid an extraneous each group will think they are testing a new type of train for future sports teams and to avoid experimenter bias I would use at least 3 different researchers who keep independent results apart from each other.