

The hypothesis test essay sample

[Law](#), [Evidence](#)



The hypothesis test includes five distinct steps that may be followed in a specific order. In the first step, the researcher identifies a hypothesis that he would like to prove or disprove. The researcher will also formulate the alternative hypothesis which would be tested in case the original hypothesis does not stand true. In the second step, the researcher collects a random sample from the population which he would measure for the purpose of his study. Consequently, as a result of the second step, the relevant sample test statistic would be computed. Moving on to the third step, the researcher's task is to work under the assumption that the null hypothesis hold true. Henceforth, the researcher would determine in the third step the sampling distribution of the selected test statistic. In the fourth step, the researcher identifies the probability that the value of the selected sample statistic is similar to the one drawn from the sampling distribution. In the preceding step, this is also the fifth step, the researcher draws a conclusion. If the probability is significantly higher the null hypothesis is not rejected; whereas, a low probability would point towards rejection of the null hypothesis.

In simple words, testing for normality as a result of step 2 ensures that the researcher has been able to derive a relevant sample size and test statistic. In case, the test statistic selected does not coincide with the selected sample size then the results may be distorted, and the research may eventually be flawed. The tests selected to compare the results of a particular sample statistic are selected on the basis of having a normally distributed set of scores and have a similar mean and standard deviation. However, a significant test includes a non-normal distribution. Moving on, for sample sizes that are less than 30 or in other words small sample sizes; thus,

normality tests have a negligent power to reject the null hypothesis. Thus, it can be concluded that small samples are often able to pass the test of normality. On the other hand, large sample sizes have a tremendous impact upon the results because even a small deviation from normality would be projected in the final result.

Step 3 is a critical step of the entire research process. It is here that the researcher has to make critical decisions that would impact the success or failure of the result. If there is little research done on the topic under study then, the researcher's job is made even more difficult. However, from assistance from past researches the researcher can get an idea about the appropriate sample size. If the sample size is not truly reflective of the population then, the research results may not be of much value. Step 3 poses to be difficult because of the level of uncertainty involved at this stage and the importance of this stage to the entire research. Adding on, the selection of the correct statistical test is just as important as the selection the appropriate sample size. The statistical test selection is based upon the analysis of the independent and dependent variables. The dependent or independent variables are classified into two categories; categorical and continuous. Categorical variables are those that cannot be put into a sequence under a mathematical method; whereas, continuous variables can be sequentially numbered in a specific order. Keeping into consideration the aforementioned nature of variables and analysis of variables the researcher would determine the appropriate statistical test.

A researcher creates a hypothesis based on his beliefs about the positive relationship between two or more variables. The researcher does not work

towards proving his own idea to be correct; rather they concentrate upon proving that the null hypothesis is not correct. Consequently, the researcher has to work under the assumption that the alternate hypothesis is wrong. However, if there is any evidence to suggest that the researcher's idea is wrong or falsified, he may under such circumstances reject this hypothesis and accept the null hypothesis to be correct.

Works Cited

" Statistical Misconceptions - S. W. Huck." Statistical Misconceptions - S. W. Huck. Web. 31 Oct. 2014.