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## HYPOTHESIS AND RESEARCH

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### ABSTRACT :

*The hypothesis plays very important role, while pursuing the research, without which a researcher can't do anything in the field of research it only shows the way for the scholar to move on to the field of search of the source to solve the problem of their research issue. "Hypo" means less than or under, and "thesis" mean s idea or general opinion to be defended by a person and thus hypothesis means an idea form beforehand which has less value than the generally formed view. If we have to proceed towards some destination for which we don't know the way, we try to form an idea about the direction to proceed and by trial and error, we reach that goal. The primary idea is called a hypothesis. "Hypotheses are single tentative guesses, good hunches – assumed for use in devising theory or planning experiments intended to be given a direct experimental test when possible". (Eric Rogers, 1966) "A hypothesis is a conjectural statement of the relation between two or more variables". (Kerlinger, 1956) "Hypothesis is a formal statement that presents the expected relationship between an independent and dependent variable."(Creswell, 1994) "A research question is essentially a hypothesis asked in the form of a question." It is the imagination of a person over the issue or research problem.*

**KEYWORDS :** *hypothesis plays , good hunches , planning experiments.*

### INTRODUCTION

"It is a tentative prediction about the nature of the relationship between two or more variables." "A hypothesis can be defined as a tentative explanation of the research problem, a possible outcome of the research, or an educated guess about the research outcome." (Sarantakos, 1993: 1991) "Hypotheses are always in declarative sentence form, an they relate, either generally or specifically , variables to variables." "An hypothesis is a statement or explanation that is suggested by knowledge or observation but has not, yet, been proved or disproved." (Macleod Clark J and Hockey L 1981)

### SCOPE OF THE HYPOTHESIS

The hypothesis is a clear statement of what is intended to be investigated. It should be specified before research is conducted and openly stated in reporting the results. This allows to: Identify the research objectives Identify the key abstract concepts involved in the research Identify its relationship to both the problem statement and the literature review A problem cannot be scientifically solved unless it is reduced to hypothesis form It is a powerful tool of advancement of knowledge, consistent with existing knowledge and conducive to further

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enquiry. It is based on the problem selected by the scholar. It can be tested – verifiable or falsifiable. Hypotheses are not moral or ethical questions. It is neither too specific nor too general. It is a prediction of consequences. It is considered valuable even if proven false.

The null hypothesis represents a theory that has been put forward, either because it is believed to be true or because it is to be used as a basis for argument, but has not been proved. Has serious outcome if incorrect decision is made! The alternative hypothesis is a statement of what a hypothesis test is set up to establish. Opposite of Null Hypothesis. Only reached if H<sub>0</sub> is rejected. Frequently “alternative” is actual desired conclusion of research.

In a clinical trial of a new drug, the null hypothesis might be that the new drug is no better, on average, than the current drug. We would write H<sub>0</sub>: there is no difference between the two drugs on average. The alternative hypothesis might be that: the new drug has a different effect, on average, compared to that of the current drug. We would write H<sub>1</sub>: the two drugs have different effects, on average. the new drug is better, on average, than the current drug. We would write H<sub>1</sub>: the new drug is better than the current drug, on average.

This is due to the fact that the null hypothesis relates to the statement being tested, whereas the alternative hypothesis relates to the statement to be accepted if / when the null is rejected. The final conclusion, once the test has been carried out, is always given in terms of the null hypothesis. We either 'reject H<sub>0</sub> in favor of H<sub>1</sub>' or 'do not reject H<sub>0</sub>'; we never conclude 'reject H<sub>1</sub>', or even 'accept H<sub>1</sub>'. If we conclude 'do not reject H<sub>0</sub>', this does not necessarily mean that the null hypothesis is true, it only suggests that there is not sufficient evidence against H<sub>0</sub> in favor of H<sub>1</sub>; rejecting the null hypothesis then, suggests that the alternative hypothesis may be true.

### **SOURCE FOR THE HYPOTHESIS**

There is no theories or the particular principles are existed for framing the hypothesis, it is left to the person will and wish he can think and proceed to formulate the guess over the statement of the problem. It is like FIR registered by the police office to reach over the culprit such way that it is also in the same way scholar has to imagine himself to reach over the aim and objectives of the research. The main source for the formulation of the hypothesis is of the Literatures and the basic knowledge of the scholar are the main source to formulate the Hypothesis.

### **IMPORTANCE OF HYPOTHESIS IN RESEARCH**

Hypothesis is the main way to proceed in the field of research, it only direct the scholar to search of the evidence or else search of the data to solve the problem which he/she selected for the research. Hypothesis is developed to talk about the research problem or to address any phenomenon. It aims to encourage critical approach. It enables the researcher to develop a specific direction as well as better understanding about the subject matter of the study. It further assists in the careful and focused analysis of data collected. There are different types of hypotheses. The two that are more basic involve those used in scientific researches and the other one in sociological studies. In scientific researches, hypotheses are developed keeping in view the experimentation and observation drawn from the past. Such hypotheses are tested according to the current theories. Science fair projects involve these forms of hypotheses. For example, if

water temperature rises then sugar/ salt will be dissolved at higher rate. On the other hand, working hypotheses are based on the widely accepted suppositions in order to carry out further research. For example, if I start the consumption of more vegetables and fruits then I will be prone to faster weight loss or if I start adding pesticides to the growth of my plants then these will grow safer.

## CONCLUSION

Research questions and hypotheses become “signposts” for explaining the purpose of the study & guiding the research...”, Creswell A hypothesis is an explanation, tentative and unsure of itself, for specific phenomena about which you have questions. A well-crafted hypothesis very often suggests the best way to perform the research and gives you clues as to your research design. There are different types of hypotheses. Deductive inductive Research Hypothesis can either be non-directional or directional. There exists a hypothesis that is opposite of the positively stated one, i.e. the null hypothesis.

On this account researcher conclude that, hypothesis is very important in research work. It is key to help to the researcher to open his innovative idea. In framing a hypothesis, the investigator must not currently know the outcome of a test or that it remains reasonably under continuing investigation. Only in such cases does the experiment, test or study potentially increase the probability of showing the truth of a hypothesis. If the researcher already knows the outcome, it counts as a “consequence” and the researcher should have already considered this while formulating the hypothesis. In 21<sup>st</sup> century it is very essential that, a hypothesis should be an evolutionary one and there is some specific outcome. For proper evaluation, the framer of a hypothesis needs to define specifics in operational terms. A hypothesis requires more work by the researcher in order to either confirm or disprove it. In due course, a confirmed hypothesis may become part of a theory or occasionally may grow to become a theory itself. So it plays very important role in the carrier of the scholar so.

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