

# The role of research and statistics in the field of psychology

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



## **Abstract**

Research and statistics are essential elements within the field of Psychology. Through the evolution of technology, the task of conducting adequate research and statistics methods have become abundant in methodology. Because of such, research collection and experimentation approaches of researchers and Psychologists, greatly vary in specificity. However, one method reigns true and consistent, and that is the Scientific Method; of which will be further explored.

This paper will discuss and make sense of the roles in which both research and statistics play in the field of Psychology, and the procedures in which such methods are conducted will be defined. This will include explanations of the validity, importance, and relevance of the above stated procedures, as such are referenced for study. The Role of Research and Statistics in the Field of Psychology Research and statistics play a crucial role in the field of psychology, both of which are used to ascertain and examine informational data. Such methods are used to greatly increase the effectiveness and success of an organization or field of study.

Scientific or logical informational data is typically established through the use of the scientific method. Over the course of research history and study, the scientific method has become known to be the most reliable and consistent method of obtaining dependable knowledge. Such knowledge is then kept and utilized by researchers, either for their own study (primary data), or by a secondary party referencing said data (secondary data).

Essentially, the field of Psychology is geared towards ascertaining the truth about people, the mental process, and behaviors that follow.

The truth can only truly be found through the above methods. The Scientific Method For as long as the human mind has had thought, human beings have, in one way or another, questioned, observed, and analyzed the world we live in and the way we proceed to live within it. These human beings, the thinkers, the observers, the analyzers have always been and still remain the scholars of their time period. The phrase “ method of scholars” is an alternative title for the scientific method, for it is the absolute best set of methods in finding the truth, and of course the scholars would know. It has often been said that the greatest discovery in science was the discovery of the scientific method of discovery”: (Feibleman, 1972). This method is an investigation in which a problem is initially identified. With this, observations, experiments, and other relevant data (provided by research) are then used to create or test hypotheses that lead to conclusions about the original problem. The steps involved in this process include:

1. Forming a testable hypothesis.
2. Devising a research plan and method of application.
3. Collecting data and researching.
4. Analyzing the data and reaching possible conclusions about the study.

Report findings. This research can be characterized as an activity of creative work that is carried out in a systematic way in an effort to increase knowledge and truth. In the field of psychology, this refers to the knowledge of the human mind, human behavior, cultures, and societies. In order to fully

understand how researchers, scientists, psychologists, scholars, and students alike reach such conclusions, one needs to recognize the importance of the research process and measures that are applied when conducting the various types of psychological research.

With this knowledge, one will not only understand what is involved in reaching conclusions about psychology, but also how to do so oneself. (McLeod, 2008) Primary and Secondary Data. Primary and secondary data are both key components in any piece of information. These two types of data are used within many avenues of life, not just research and science. They can be published or unpublished and in any media presentation, from print to electronic. Therefore, since Primary and secondary data are quite abundant, yet perhaps undistinguishable from the uneducated eye... What exactly are the differences and characteristics of such?

The distinct difference between primary and secondary data is the method of research in which the data was found. While primary data is both researched and utilized by the same source, secondary data comes from the research of a combination of external or secondary sources. An accurate example of primary data is that of personal vital statistics records, for such are accounts that have been personally witnessed and recorded by the source, and then kept by public institutions, as well as the source. Specific examples of personal records would include but are not limited to: birth certificates, death certificates, and marriage licenses.

Such examples are vital to the functioning of an individual and the organization (country) of which that individual resides. Additionally, such

documents can be used in genealogical research, and other research projects related to society, culture, and psychology. One stepped removed from the original source of data, would be data that is secondary. A prime example of such would be information found in textbooks and historical documents, which are comprised of information that was borrowed from multiple primary sources.

Case in point, when a history book includes computed data regarding a regions birth and death rates for a specific time period, the birth and death certificates would have originally been considered primary data, but when utilized and calculated by an outside source for the purpose of a study shown in the book, that data then becomes secondary. (McLeod, 2008) Statistics in Research. Statistics are a crucial part of research. Without, statistics, it is nearly impossible to attain a definitive conclusion and/or compute data in any research study.

Being that the study of statistics is the science of collecting, analyzing, and making inferences from data, it quite literally communicates research findings in an effort to give credibility to the research itself. Obviously, it is imperative that researchers understand statistics, however, it is also important that the general population has at least a basic understanding of such. For not only researchers, but the entire population is bombarded by statistics every day, and in one way or another, everyone performs research.

Whether the research is nominal, such as comparing prices, or significant, such as proving a ground breaking psychological theory, the point remains that it is all research and all research is comprised of statistics (Aron &

Coups, 2009). Conclusion. Arthur Schopenhauer once said, “ Just as the largest library, badly arranged, is not so useful as a very moderate one that is well arranged, so the greatest amount of knowledge, if not elaborated by our own thoughts, is worth much less than a far smaller volume that has been abundantly and repeatedly thought over. Schopenhauer’s quote is an excellent representation of the importance of research, the scientific method, primary data, secondary data, and the role of statistics in research. Essentially, an abundance of information is only influential and valuable when it has been analyzed and brought to purposeful point. Through the understanding and proper use of the above explored topics, one can surely make a positive impact upon the field of Psychology and research alike.

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