# Descriptive statistics

Psychology

Descriptive Statistics Descriptive Statistics refers to the field of analysing data that helps in the or summary of data in a meaningful way. For example, descriptive data might help to show the patterns that emerge from the data analysed. Descriptive data does not allow statisticians or researchers to reach conclusions beyond the analysed data, or conclude on a given hypothesis made. It is simply a way of summarising data meaningfully.

One of the advantages of descriptive statistics is that it enhances good and easy visualisation of the meaning of data. 1 When there is a lot of data to be presented, descriptive statistics can be used to enhance simpler interpretation of the data as suggested by the study of Kim and Kang (2010) who use descriptive statistics to summarise data of 164 articles from the Journal of the Korean Pharmacopuncture institute. The study selected the descriptive statistics in order to summarise the large number of articles easily. The benefit of this approach was that it enhanced easy visualisation of the meaning of the large number of data

Secondly, descriptive statistics allows for the spread and distribution of psychological data so that they can be easily identified and interpreted. Measures of central tendency are some of the ways of describing data. It describes the central position of a frequency distribution for grouped data. 2 This enhances an easy way of determining the pattern and distribution of data. This strength of descriptive statistics is demonstrated by Kaliannan and Adjovu (2015) who use descriptive statistics to show that effective employment engagement leads to organisational success. The study used measures of central tendency (Mean and Pearson Correlation) in its case study to describe the impact of employee engagement strategies. The views of employees were collected and summarised using descriptive statistics

because it provides the spread and distribution of employees' views, leading to easy interpretation of such views.

The use of descriptive statistics also enhances easy comparison across a set of data, e. g. a set of conditions in a given sample of people. 3 Using descriptive statistics to summarise data also reduces the chances of distorting the original sets of data. It summarises data the way they are without adding or omitting information in order to enhance comparison of original data. This is demonstrated by King-Shier et al who suggested that descriptive statistics enhances comparison between decisions across cardiac patients concerning the use of chelation therapy. Descriptive statistics therefore answers psychological questions by enhancing easy comparison between sets of data.

Despite the above strengths, descriptive statistics also has some weaknesses. According to Kim and Kang (2015), the weakness of descriptive statistics is that it reduces the specificity of details of a set of data, making them inaccurate. External validation of data from a descriptive analysis is also difficult due to the large sample involved. Using small sets of data makes external validation of data easier because it involves low reduction of specific details of the data. This shows that descriptive statistics may cause unreliable results of the researcher fails to summarise the data accurately.

Descriptive statistics can be differentiated from inferential statistics in that descriptive statistics describe what the data shows, while inferential statistics attempt to reach conclusions by extending the research beyond the given data. 4 For example, inferential statistics can be used to try to infer from a sample of people with a given mental condition what the population of mentally ill people experience. Therefore, inferential statistics makes

inference from the data to more general conditions while descriptive statistics describes the data the way they are (Mann, 1995). The importance of descriptive statistics over inferential statistics is that it summarises the data the way it is in order to interpret it clearly as it is.

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