

Inferential statistics essay sample



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Measures of central tendency are also called measures of central location because they are single values that tends to describe a given set of data by identifying their central locations. In his book introduction to statistical methods and data analysis, R. Ott Longnecker argues that measures of central tendency seek to describe the centre of distribution of measurements and also how the measurement vary about the centre of distribution. Central tendency measures include mean, mode and median. On the other hand measures of variability describes a given set of of data by analyzing how data varies from its centre of distribution. examples of variability measures include range, standard deviation and variance.

There are two main branches of statistics that include descriptive statistics and inferential statistics. Descriptive statistics gives numerical measures that describes the features of a given set of data. Inferential statistics on the other hand takes a sample of a given population, analyses the sample, and from it draw conclusions about the population . Malcolm. O. Asadoorian and Demetrius Kantarelis in their book: Essentials of inferential statistics argue that descriptive statistics organize , summarize and display data whereas inferential statistics utilize probabilistic techniques to analyze sample information from a certain population to improve our knowledge about the population. Measures of central tendancy and variability fall under descriptive statistics.

Inferential statistics is divided into two i. e confidence interval which give a range of values for unknown parameters of a population by measuring a statistical sample and the test of significance also called hypothesis testing whereby a claim about a population is tested by analyzing a statistical

sample. Descriptive statistics only gives numerical measures to describe a set of data but we cannot draw conclusions. Inferential statistics on the other hand allows us to draw conclusions from a given set of data. From the above scenio the psychologist will require use of inferential statistics inorder to fully draw conclusions and make assertions. Therefore the psychologist will draw a sample from the population of students, determine the confidence interval, make assumptions or claims about the sample, conduct significance tests and finally come up with conclusions about the whole population.

References

Asadoorian, M. O., & Kantarelis, D. (2005). *Essentials of inferential statistics* (4th ed.). Lanham: University Press of America. Ott, L., & Longnecker, M. (2010). *An introduction to statistical methods and data analysis* (6th ed.). Australia: Brooks/Cole Cengage Learning.