

Police administration discuss complete 5

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POLICE ADMINISTRATION discuss/complete 5

Social Science Statistics Question Looking back at the concepts learnt, I think skewness has had a great impact on me at a personal level. This concept challenges the notion I have previously as regards analysis of data in social research. In essence what I learnt here was that while analyzing data, we should be ready to look out for other issues that may be affecting the data we are studying, even though those issues may not be part of the study. Ensuring therefore that the data presents the expected distribution, in this case, normal distribution plays a key role in analyzing the same data. If not, then the methods of analysis chosen also come into sharp focus. Taking anything for granted will lead to wrong results with devastating consequences given that these results are relied upon for decision making. Thus, skewness as a concept is a very important part of analysis which both guides and complements other methods of social science research. In my view, this concept guides us on how we interpret results as it shows us that there is need exercise caution with our proclamations.

Question 2

For this data, the modes are House, Trailer and Apartment. This is because these three have the highest frequencies in the data set. The frequencies are 280, 34 and 21 respectively. As a result, when plotted on a graph, the data may produce a multi-modal shape. From these results, it can be said that the data is NOT normally distributed because of a skewness of 2.000. The mean (1.41) is greater than median (1) showing that the data is positively skewed.

Question 3

For the variable ARREST, the modes are 0, 1 and 2 with frequencies of 243, 23 and 10 respectively. Given that the total frequency is 343, it is clear from this observation that the data is not normally distributed. Hence, when plotted on a graph, a positive skewness will be evident. It is interesting to note that a huge chunk of data (frequency of 61) is missing and this also contributes to the level of skewness. Looking at the difference between Mean and Median (0.31), one gets the sense that the data is almost normally distributed. This does not augur well with the skewness of 12.692. Hence, the missing data can be said to be hiding quite a lot of information.

Question 4

We are concerned about distribution of data because there are certain statistical procedures that do not work well with skewed data. Hence, for such procedures, the data needs to be transformed first so as to bring certain aspect of the data within acceptable tolerance levels. If transformations on the data do not achieve acceptable skewness and kurtosis, then the researcher may be forced to settle of procedures that are not susceptible to existing levels of non-normal curves.

Question 5

If the data is not normally distributed then there are issues that may come up. Of course the first one comes from the interpretation of the results. As noted earlier, any statistical procedures applied with an aim of interpreting the results will have to be thought through carefully, otherwise, we may end up with misleading results. It should not be lost on us that the purpose of such results is decision making. Besides, such data also calls on the researcher to further investigate the data and find out underlying factors

that led to this problem. Ordinarily, it is expected that data out of a research process will present a normal distribution.