

# Measures of central tendency essay



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1. What Do You Mean by Mean? a) The mean of the salaries is calculated by adding up each individual salary and dividing it by the seven employees. The mean of the seven salaries is \$43, 814. 29. The mean compares to the individual salaries because it shows the average of all the salaries together. The employees would use the average to negotiate with Dick for a higher salary, because by looking at the average you can see that Dick's salary is an outlier compared to the mean. b)The median of these seven salaries is \$23, 500. I got the median by first putting the numbers in order. Since it is an odd amount of numbers, I just find the center of the data after they were in order. This value does not really compare to all of the individual salaries; it has no relation other than it is just in the center. Dick's salary does not compare to the median because it is the outlier, but mostly everyone else's does because it is around the same amount. c)The mean gives a fairer sense of the " average" salary because since Dick's salary is an outlier so the median is automatically not appropriate to describe all the salaries. The mean sort of equally describes all the salaries because it is in the middle of each. The median describes the majority of the salaries, but not Dick's because it is an outlier.

2. Better than Average Each measure of central tendency has strengths and weaknesses. Not every measure of central tendency can equally describe a problem; usually one of the measures gives a better description of the list of data. All in all, it is best to know the three measures strengths and weaknesses so you can properly use each one for a problem given.

The mean equally describes all the numbers. It is " the most widely used and most generally understood way of describing the central tendency or central

location of a set of data” (Hamburg 47). The mean is used with dealing with a set amount over a period. In statistics, the population mean is used to describe the average of all the information in a population. The population mean is typically not used to calculate the mean of the number because the population of the numbers is too great. For example if comparing the population of Blackwood, New Jersey to the population of New York City, New York the mean would not properly describe the data because of the big gap between the numbers.

The median is the center of a given list of data. When the list of data is odd, it is just the center number, but when it is even the median is the mean of the two center numbers. The median is best used when dealing with, “ the center (or middle) of a distribution” (Wine 37). The median will always be greater than half of the data and less than half of the data. On the other hand, the median does have a down side. When there is an outlier or any extreme values it is not shown in the median’s answer. For example, the median of {1, 2, 3, 5, 6, 7, 235} is 5. When using the median of that list of data, no one will know the outlier of that data because the number given is 5 and that is no one close to 235. So the median is used when you need to find the center of a distribution, but not used when dealing with extreme values or outliers.

“ The mode as a statistical average is the observation that occurs with the greatest frequency and thus is the most “ fashionable” value” (Hamburg 55).

“ The mode is typically not used to determine ungrouped data” (Hamburg 55). To determine the mode you look at the numbers that appear the most within the set of data, but when you are looking at ungrouped data, the

upper and lower numbers make it hard to represent the data. A positive of using the mode is when looking at a set of data that deals with the population of the vote. For example, if a professor wanted to see the average age of the students in his class he could collect the data to determine which age appears the most.