Data Output [1]

Data output is the process and method by which data can be studied under different circumstances and manipulated as required by the researcher. Any statistical analysis produces an output data that needs to be studied.

This data needs to be modified in a presentable form so that further conclusions [3] and inferences can be drawn from this data. Therefore the researcher needs to study different data output [4] methods for this purpose.

With the increased use of computers in statistics, there are today many softwares and programs that help in data output. These tools can be used by the researcher to present the findings in different formats and also helps her to do the required calculations on the data.

Spreadsheets are very handy tools in data output that can help the researcher quickly do simple computations and checks on the data. Simple statistical analysis and statistical parameters like mean [5], median [6], mode [7], range, etc. can easily be found using spreadsheets.

> For example in a physical experiment, if the time interval between two events in noted, it is always best to average out the readings to eliminate random errors [8]. When these data points are entered into a spreadsheet, their average [9], standard deviation [10], etc. can be easily found out. This facilitates easy recording of results, and also helps to identify any deviant points and anomalies.

Data output also involves representation of the data. For example, if a researcher is studying the effect of a particular disease in people of different age groups, she may make use of a pie chart to indicate the percentage of people affected in different age slabs.

This would immediately give a graphic representation of which age group is most prone to that disease. If the researcher needs to include absolute numbers, then she may choose to take the help of a bar chart.

The choice of the format of data output and presentation should be driven by the inference that is being drawn from the research. In the above case, if the research aims to show that children are most prone to the disease, then a pie chart may be the best option. However, if the aim of the research is to show that the disease is spreading most rapidly among the older people, then a bar graph may be the best option.

Data output is central to statistical analysis and is an integral part of the experiment. When done right, data output can bring about the strengths of the research in an easy to understand

fashion.

Links
[1] https://explorable.com/data-output
[2] https://explorable.com/users/siddharth
[3] https://explorable.com/drawing-conclusions
[4] http://www.statcan.gc.ca/edu/power-pouvoir/ch3/5214787-eng.htm
[5] https://explorable.com/statistical-mean
[6] https://explorable.com/calculate-median
[7] https://explorable.com/statistical-mode
[8] https://explorable.com/random-error
[9] https://explorable.com/arithmetic-mean
[10] https://explorable.com/measurement-of-uncertainty-standard-deviation