Levels of Data

The Level of Data can also be referred to as the Level of Measure.

The Level of Data is something you need to identify to enable you to choose the right test for your investigation.

There are 4 Levels of Data:

1. **Categorical / Nominal** This data is discrete data, where each data point belongs to one group or another. A typical example of this is Gender. There may be more than two groups e.g. year of undergraduate study.

2. **Ordinal** This is where you know the order in which the data belongs, but you do not know that the differences between each data point are equal. For example, in a race you may find that Jane came 1\textsuperscript{st}, Ron 2\textsuperscript{nd} and Dave 3\textsuperscript{rd}. The difference between 1\textsuperscript{st} and 2\textsuperscript{nd} cannot be presumed to be the same as between 2\textsuperscript{nd} and 3\textsuperscript{rd}. This data can be put in order only.

3. **Interval** This is data where you know the differences between the measures to be equal. However, it does not have an absolute zero. E.g. Temperature measured in Celsius is Interval data, the difference between 1 and 2, 2 and 3, 3 and 4 etc. are equal. However, Zero Celsius is not an absolute zero, as it's possible to go lower.

4. **Ratio**. This is data that has a true zero as well as the differences between the measures being equal. E.g. Centimetres is a form of Ratio data. The difference between 1 and 2, 2 and 3, 3 and 4 etc. are equal and zero cm is an absolute zero, where you cannot go lower.

Note: Ratio and Interval combined, can sometimes be referred to as **Scale Data** this is seen in SPSS

Ratio data is seen as the highest level of data, Categorical is the lowest. This is based on the strictness of the measurement.