Selection bias

Selection bias is a kind of error that occurs when the researcher decides who is going to be studied. It is usually associated with research where the selection of participants isn't random.

It is sometimes referred to as the selection effect. It is the distortion of statistical analysis, resulting from the method of collecting samples.

If the selection bias is not taken into account, then some conclusions of the study may not be accurate.

The types of selection bias include:

1. Sampling bias

It is a systematic error due to a non-random sample of a population causing some members of the population to be less likely to be included than others resulting in a biased sample.

2. Time interval

A trial may be terminated early at an extreme value (often for ethical reasons), but the extreme value is likely to be reached by the variable with the largest variance, even if all variables have a similar mean.

3. Arbitrary Data Selection

When specific subsets of data are chosen to support a conclusion or rejection of bad data on arbitrary grounds, instead of according to previously stated or generally agreed criteria.

4. Attrition

Attrition bias is a kind of selection bias caused by attrition (loss of participants) discounting trial subjects/tests that did not run to completion.