Morphometric study

A morphometric study is a scientific analysis that involves the quantitative measurement and statistical analysis of the shape, size, and structural features of organisms or anatomical structures. It is commonly used in fields such as biology, anthropology, paleontology, and medical imaging.

Key aspects of a morphometric study: Shape analysis: How structures differ in form, often using landmarks.

Size measurements: Linear distances, areas, or volumes.

Comparative approach: Often used to compare between species, populations, age groups, or pathological vs. normal conditions.

Techniques: Can be traditional (linear measurements, angles) or geometric (landmark-based shape analysis using methods like Procrustes superimposition).

In neuroscience or medical imaging: For example, a morphometric study may evaluate brain atrophy by comparing the volumes of specific brain regions across individuals or over time using MRI data (e.g., voxel-based morphometry or surface-based morphometry).