

## Correlation studies

### Correlation is a relationship between two variables.

A **scatter diagram** is a tool for analysing relationships between two variables.

**Positive correlation +1**

**Negative correlation 0**

**No correlation -1**

Correlation studies should be based on an underlying theory, the variables should be carefully measured, and the scores on both variables should vary considerably from individual to individual.

Misinterpretation can lead to ethical issue (e.g. it is wrong to say: intelligence depends on genetic-racial bias) Interpretation of the result is difficult. There is problem with causality. Variables of interest may be operating.

- *If we are interested in hypothesis that watching violence on the TV leads to aggressive behavior, we would look correlation between the amount of violent television and the extent of the aggressive behavior.*
- *In different areas of the country I would measure the lead in the atmosphere and also measure the I.Q. of children in those areas. Then I would look at the extent to which the scores varied together using statistical procedure.*