

# Inference on Proportion or Centre (median)

When working with ordinal data, it is important you distinguish whether you are carrying out inference procedures on the proportions of your data at each rank or the centre of your data. A basic example below outlines the difference in these two inference procedures.

## Example:

A researcher is carrying out an opinion survey on a new brand of yoghurt being launched in ASDA. They asked male and female shoppers to rate their opinion of the yoghurt for different flavours. If the researcher was doing inference based on the centre of the data, they would be draw conclusions based around average responses. For example they may predict:

- ❖ Men rated a certain yoghurt flavour higher than women.

(Basically the median opinion is higher for men than women or vice versa).

If the researcher was doing inference based on the proportions in the data, they would be comparing the ranges of responses in the two datasets. For example the average (median) of the data for men and women may be the same, but women may have stronger opinions for or against the yoghurt brand whereas men may be neutral, i.e. men and women have different response profiles. So the researcher may predict:

- ❖ Women have a different response profile from men.