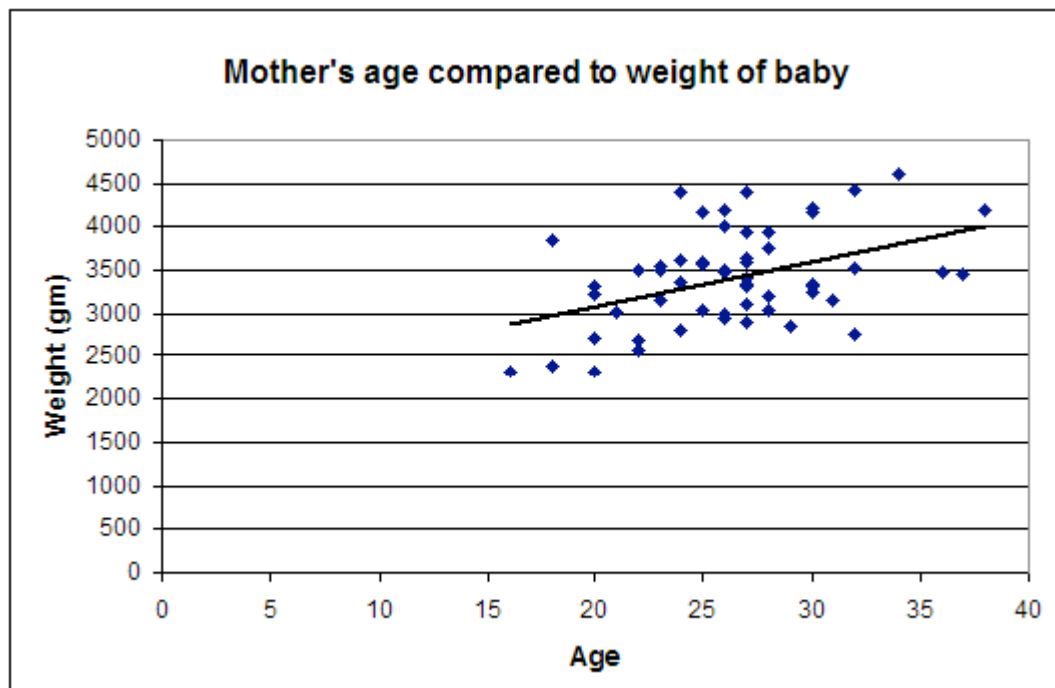


Bi-variate comparison

Question

Do older mothers have heavier babies?

Data Organised



Summary statistics

Range mother's age is 22 years (16-38 years)

Range babies weights is 2280 grams (2330g – 4610 g)

Mean weight of babies is 3413grams (0dp)

Mean age of mothers is 26.3 years (1dp)

Answer

There is an upward trend in the scatter graph suggesting that older mothers do have heavier babies. The trend is of medium strength but there are still a number of variations from the trend.

The two heaviest babies' mothers were 34 years old and 32 years old which based on this sample is older since the range of ages is from 16 years to 38 years (range is 22 years) The lightest babies were born to two of the three teenage mothers which supports the claim that older mothers have heavier babies.

There are a few extreme variations e.g. a younger 18-year-old mother had a heavier baby, 3850-gram baby (the mean weight is 3413g) and an older 32-year-old mother had a lighter 2770-gram baby.

For each specific age there is still a spread of baby weights. There are nine 27 year old mothers and the weight of their babies ranges quite a lot from 2900 – 4400 grams suggesting that babies can vary greatly in weight even though their mothers are the same age (middle age for this group).

Limits and Improvement

I could have done some more comparisons for specific ages or broken up the ages into decade sub groups like under 20, 20-30, 30-40 and analysed each group.

More data showing a greater range of ages including some 40 year olds and more teenage mothers may have enabled me to be more convinced of this trend.

Comment

The mean age of these mothers seem quite young as people are having children later nowadays. Maybe this data is from a few years ago.

What I have learnt

There is a trend in this data that older mothers have heavier babies, but it can be a bit variable. I would have expected that the younger women were smaller and probably this would mean that they had lighter babies.

I played around with the sizing of the scatter graph I made in Excel and discovered by stretching it up I could make the trend line look steeper. I learnt that the length of scale you use on the graph makes a difference to how steep the graph looks.