Assisting the PhD student in writing research papers

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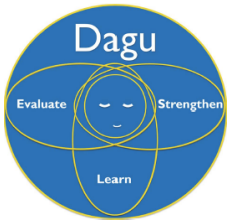
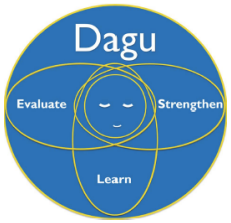


Assisting the PhD student in analysis and interpretation; plan for appropriate reporting

- Reporting of observational epidemiological studies: STROBE guidelines
  http://strobe-statement.org/index.php?id=strobe-home
- Reporting of trials: CONSORT guidelines
  http://www.consort-statement.org
- Reporting of qualitative studies: COREQ guidelines
  http://www.equator-network.org/reporting-guidelines/coreq/

Assisting the PhD student in writing research papers

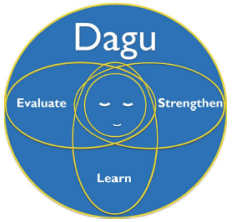


Coach the student to read literature!

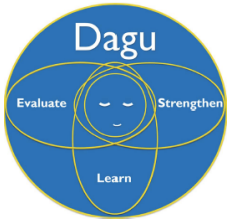
- Teach how to use the net to follow literature
- Stimulate by showing relevant papers
- Encourage broader interests than just a narrow focus on the planned studies
- Literature club?
- Give the student manuscripts to review, discuss the review

Assisting the PhD student in writing research papers

- Coach the student to write the work up step by step (literature review, organizing references, describing aims and methods..)
- To learn from others (and by reading lots of research articles) but no plagiarism!
- What is title of the paper? Helps the student to focus what the paper is about



Assisting the PhD student in writing research papers: writing an abstract

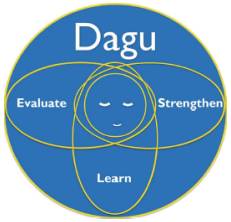


A first draft of the abstract is useful for the student at an early stage (maybe before results):

- Why was it worth doing (rationale) and aim
- What did you do?
- How did you do it?
- What were the key results?
- What are the implications of your results?

Assisting the PhD student in writing research papers:

Common structure of the paper



Title

Authors (plan at an early stage, only those contributing)

Abstract

Background, maybe theoretical framework rationale. Maybe hypothesis.

Aims (objectives)

Methods

- Study area
- Study design
- Study population
- Sample size
- Study methods
- Analyses

Ethical considerations

Results (deliver results as promised in aims)

Discussion (short summary of findings, validity, discuss key findings in relation to other research)

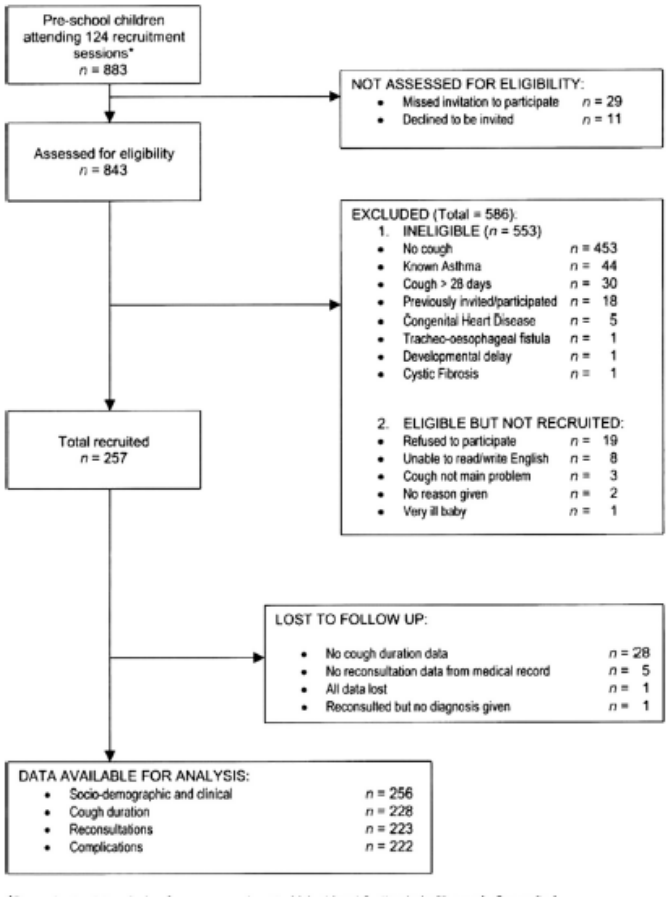
Conclusion (of the findings presented)

Contributions, Funding, Acknowledgements

References

Assisting the PhD student in writing research papers: graphs and tables

- The study flow – not only in trial reports



See STROBE and CONSORT guidelines

Discuss with the student: making a table

Table 1. Level of education among 30-year old women and men in Fictitia 2014.

Primary, Secondary, University. Women, Men.

Table? How? Make a dummy table

Table 1. Level of education among 30-year old women and men in Fictitia 2014.

Level	Women	Men
Primary		
Secondary		
University		

Table 1. Level of education among 30-year old women and men in Fictitia 2014

Level	Women	Men
Primary	300	150
Secondary	150	250
University	50	100

These were the numbers, what about %?

Table 1. Level of education among 30-year old women and men in Fictitia 2014.

Level	Women	Men
Primary	300 (60)	150 (30)
Secondary	150 (30)	250 (50)
University	50 (10)	100 (20)

Data are n (%)

Table 1. Level of education among 30-year old women and men in Fictitia 2014.

Level	Women	Men
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Data are n (%)

Statistics? Where should that be written?

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Level	Women	Men
Primary	300 (60)	150 (30)
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Data are n (%). Chi^2 91.7, $p<0.001$

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But we would like to show this for urban and rural areas? How?

Table 1. Level of education among 30-year old women and men in urban and rural areas of Fictitia, 2014.

Geographical area	Level of education	Women	Men
Urban	Primary	100 (42)	50 (18)
	Secondary	100 (42)	150 (53)
	University	40 (16)	80 (29)
Rural	Primary	200 (77)	100 (43)
	Secondary	50 (19)	100 (43)
	University	10 (4)	30 (13)

Data are n (%)

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Level	Women	Men
Primary	300 (60)	150 (30)
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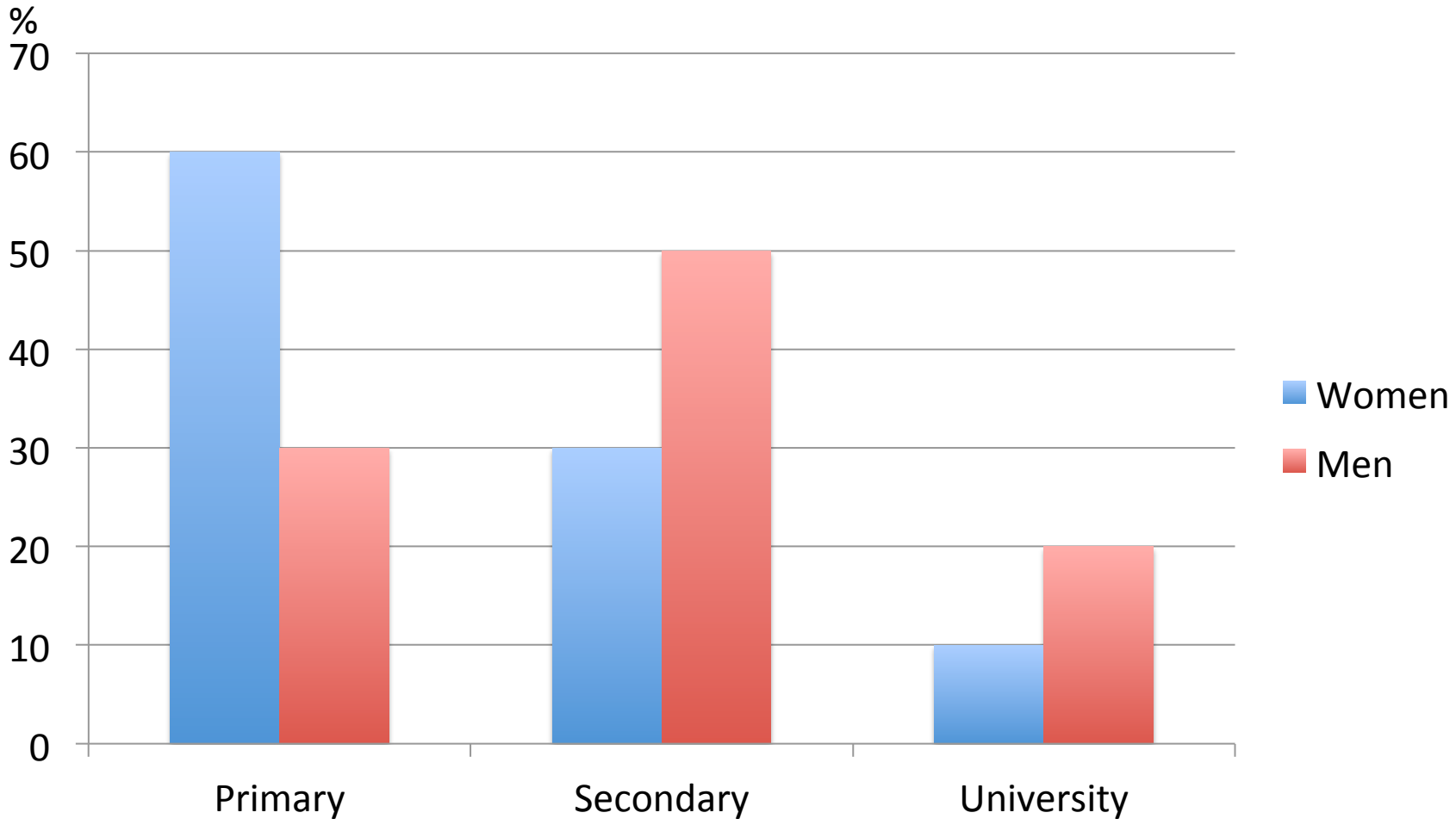
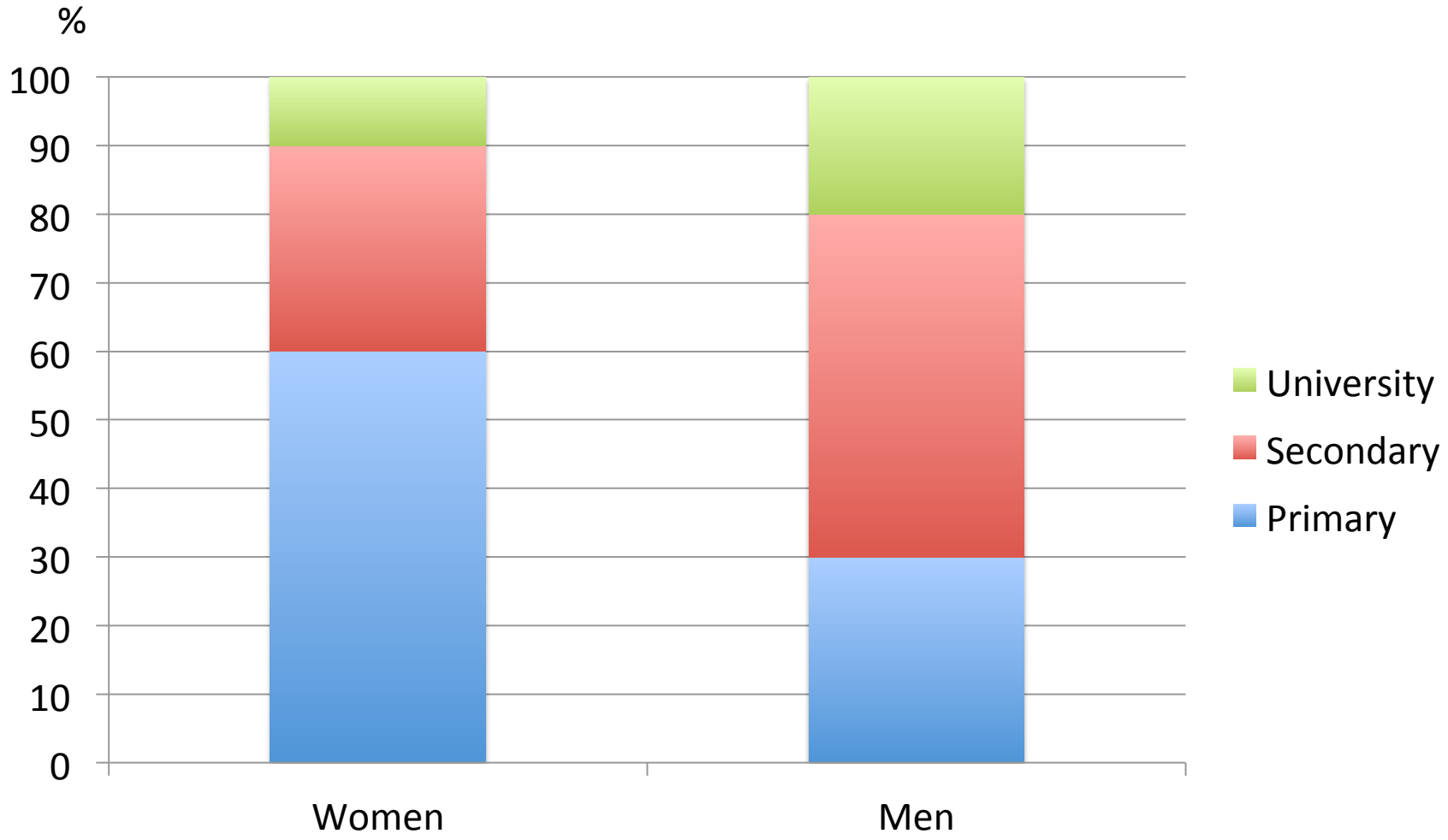
Could we show this in a graph?

Level of education among 30-year old women and men in Fictitia 2014



Other ways of making the graph?

Level of education among 30-year old women and men in Fictitia 2014



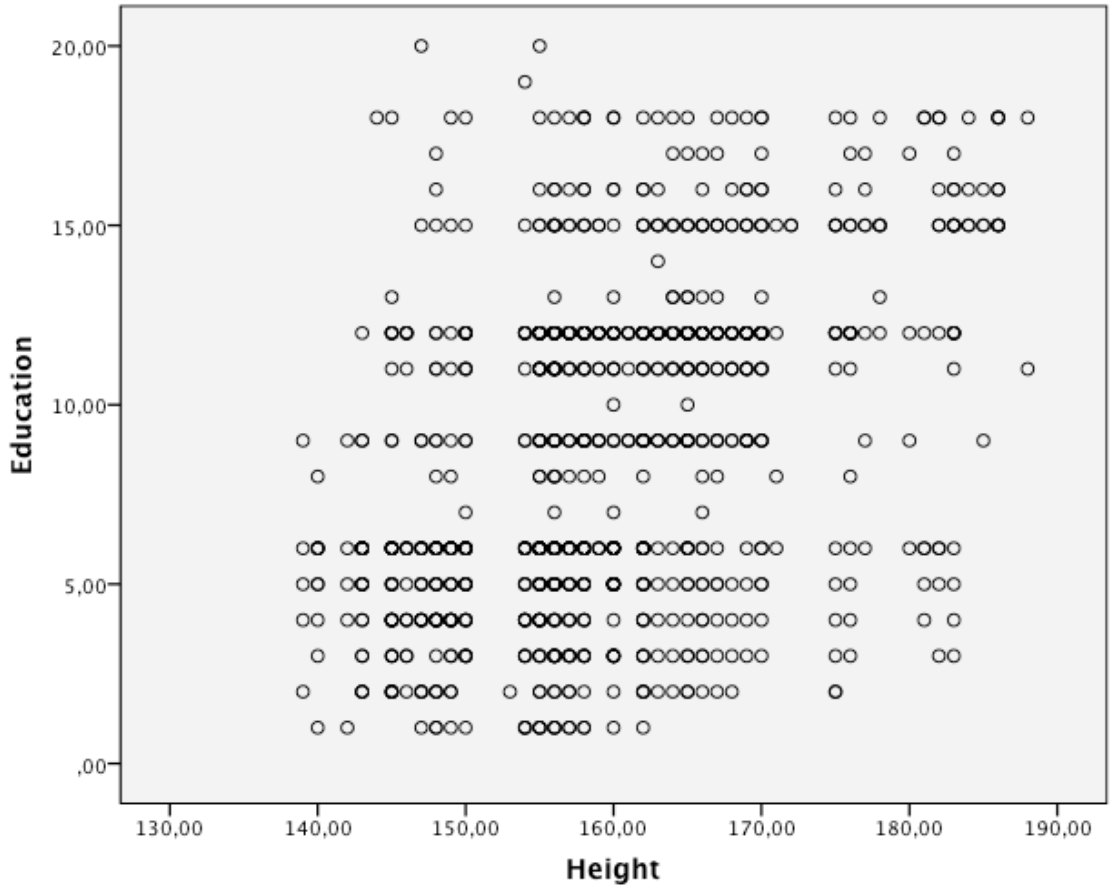
What about if we have two continuous variables?

And we want to show their relation in a graph

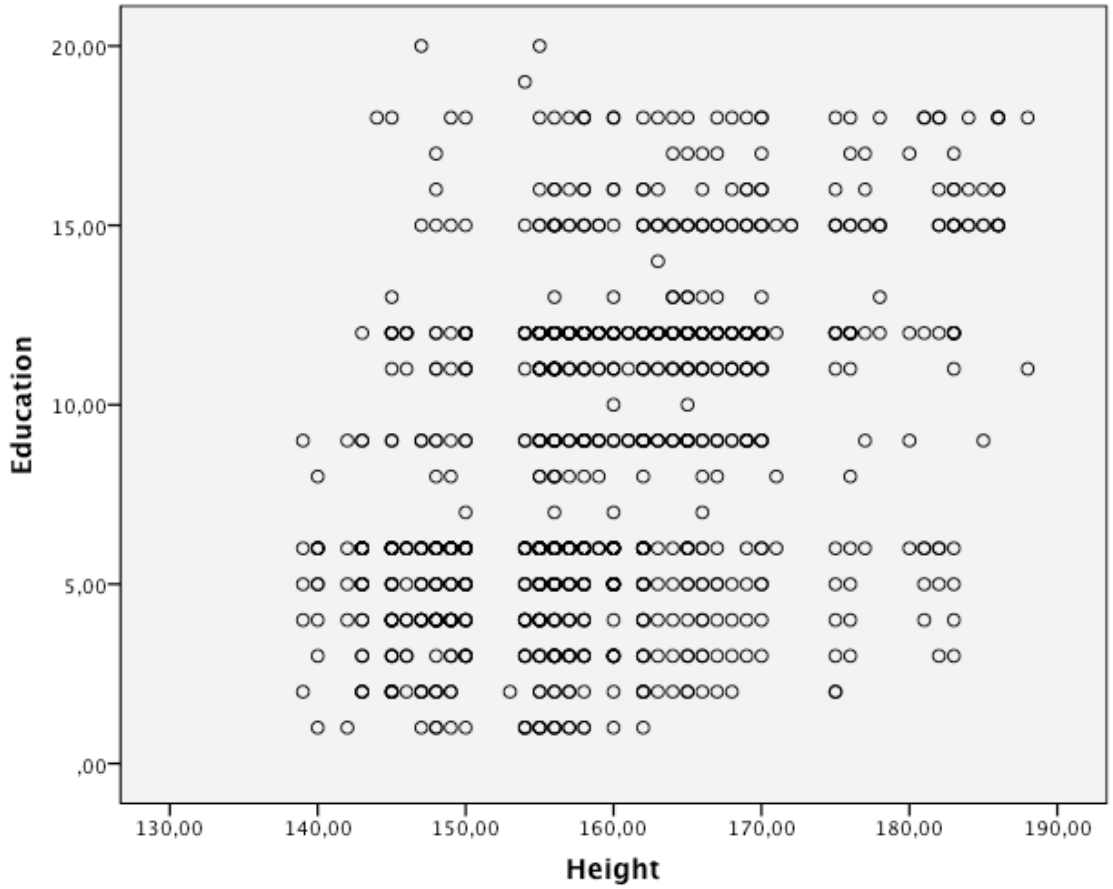
Maybe we have years of education, and height of the individual (cm)

What sort of graph?

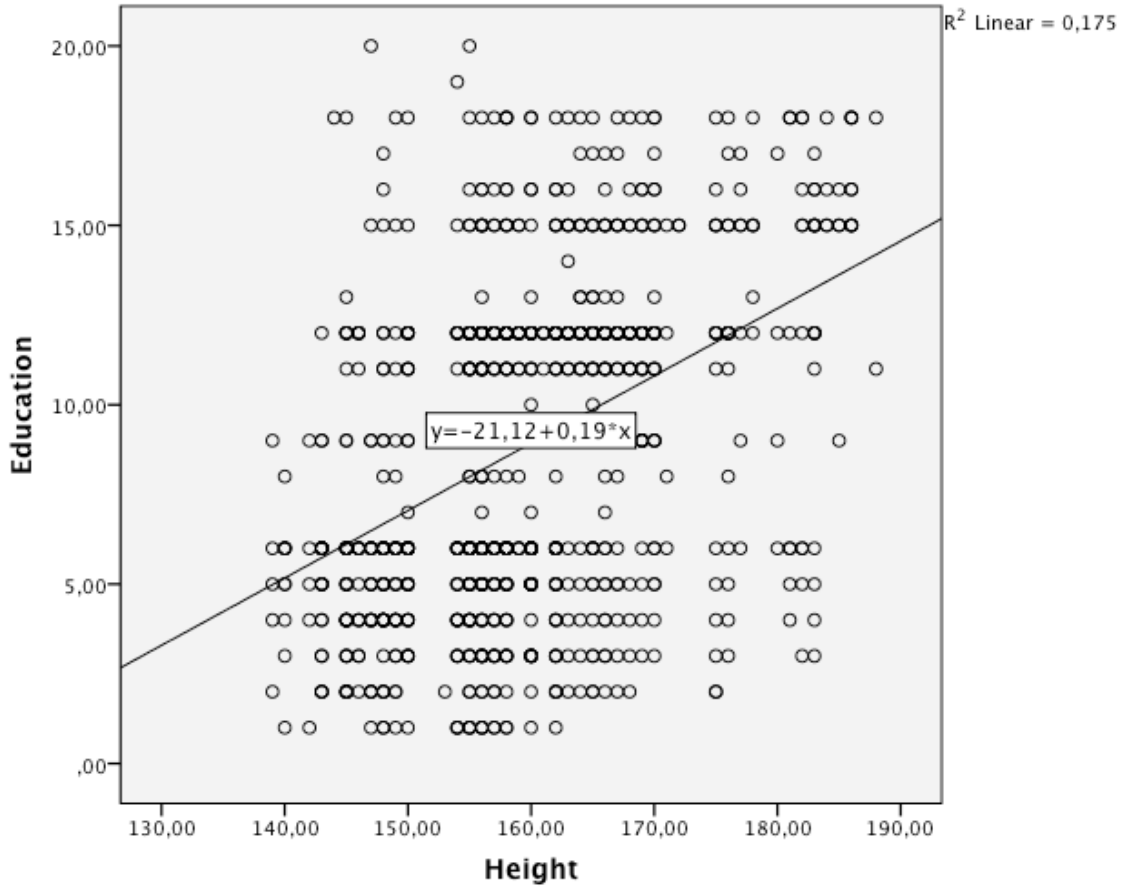
A scatterplot



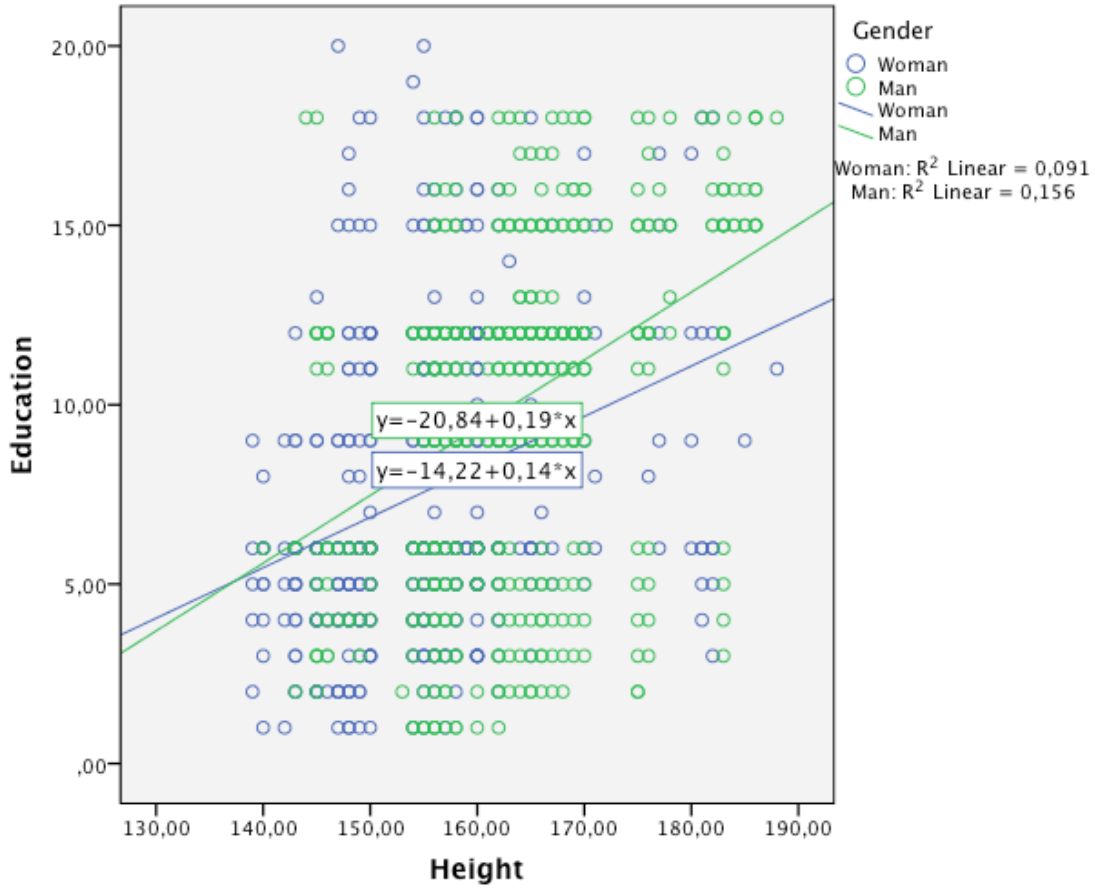
A scatterplot
Is there an association?



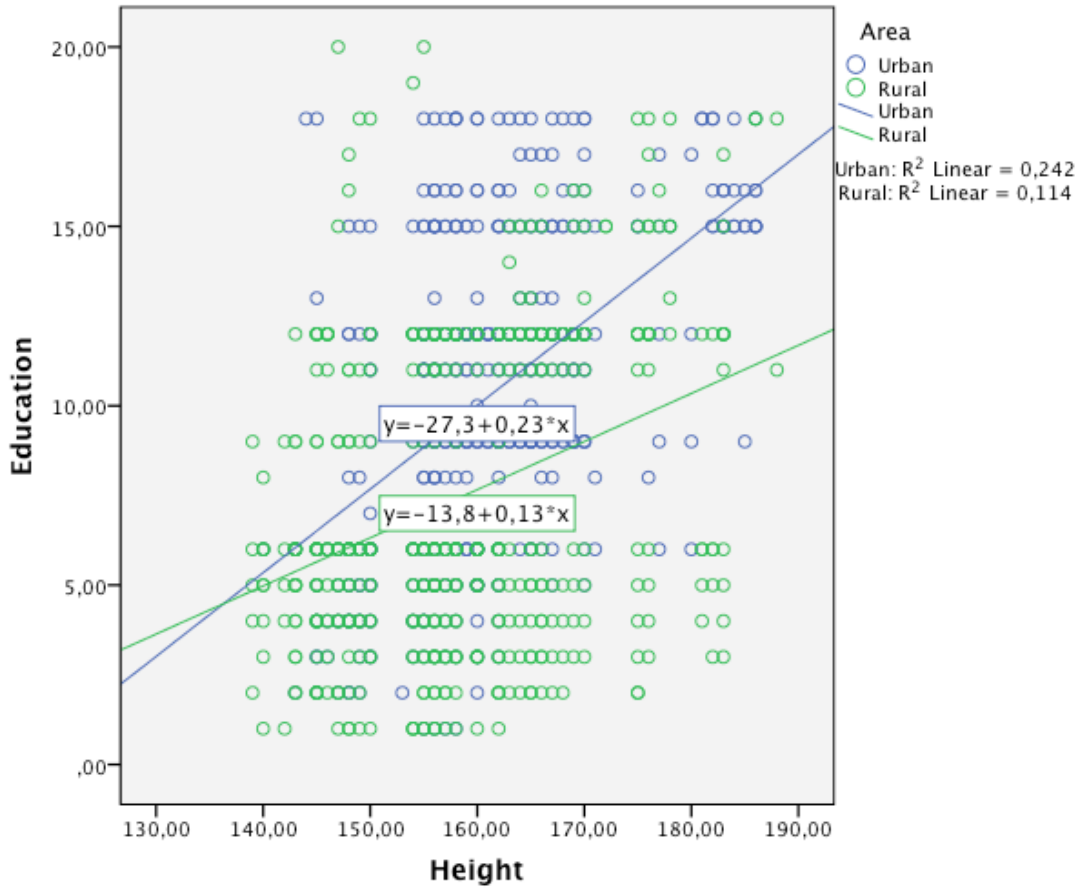
Now we have added the regression line



And now we have noted who is woman and who is a man



And now for urban and rural areas



Help the student to check the logical flow