

IPRES Tutorial 8: Descriptive Statistics I



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Agenda

- 1.) Check-in/dices
- 2.) Levels of measurement and types of variables
- 3.) Exercise 8 hands-on (Excel)
- 4.) Wrap-up and questions

Where we are

Part 2:

- Prerequisites of quantitative research: Experiments and comparative case studies (**Tutorial 7**)
- Descriptive Statistics I (**Tutorials 8**)
- Descriptive Statistics II (**Tutorial 9**)
- Samples and Sampling (**Tutorial 10**)
- Inferential Statistics (**Tutorial 11**)
- Limits of numbers and ethics/assignment prep. (**Tutorial 12**)

What is statistics about?

Making sense of randomness

- Throw the die for 1 minute
- Keep track of the each single number and number of throws
- Take the average/mean

What is statistics about?

<https://seeing-theory.brown.edu/basic-probability/index.html>

What is statistics about?

- Even the most random process is:
 - assessable
 - predictable (in limits)
 - useful: sampling and inference

<https://www.youtube.com/watch?v=hUGUWr-TjR8>

Averages

- Your number series - what about:
 - mean
 - median
 - mode?

Levels of measurement

- How can we use this to understand social phenomena?
 - “Put things into numbers”
 - or: create variables and use (simple) algebra

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 - or: create variables and use (simple) algebra
- 4 “levels” or types of measurement: Nominal, ordinal, interval and ratio

Levels of measurement

Categorical		Quantitative			
Nominal	Ordinal	Interval		Ratio	
		discrete	continuous	discrete	continuous

Levels of measurement

- Examples:
 - Party members?
 - Marital status?
 - Population size?
 - Share of extremely rich people?
 - Gender?
 - Grades?

Frequency tables

- What would we need in order to transform the table into a frequency/contingency table?

Frequency tables

- What would we need in order to transform the table into a frequency/contingency table?
 - Second variable, e.g.
 - how you voted
 - how many siblings you have
 - what type of ice cream you like