

## Operationalization: developing indicators

### Operationalization:

- process of developing operational indicators (actual measurement)

### Responses to questions:

- must be exhaustive (exhaust every possible response)
- must be mutually exclusive (responses must not overlap)

### Range of variation:

- yes/no or degree of response

## Levels of measurement (n=4)

- ✓ Nominal: categorical responses
- ✓ Ordinal: rank-ordered responses
- ✓ Interval: standard interval between responses
- ✓ Ratio: interval responses with true zero point

## Guidelines for developing questions

- Exhaustive & mutually exclusive
- Open- vs. closed-ended
- Brief and clear
- No double-barrelled
- Relevance
- No negative items
- No biased items
- No socially desirable questions

## Reliability and validity (evaluating the adequacy of indicators)

Reliability:

- ✓ how consistent is the indicator?

Validity:

- ✓ does indicator measure concept?

## Modes of data collection

- Classical experiment
- Field research
- Content analysis
- Analysis of existing data
- Survey research
- In-depth interviewing