

APPLICATION OF MIXED-METHOD STUDY DESIGNS IN HEALTH-ECONOMIC-RELATED STUDIES. A NARRATIVE REVIEW.

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BACKGROUND

- Qualitative and quantitative research designs have their individual advantages and disadvantages.
- Mixed methods design combines both research methods and offers richer insights into the studied topic (Caruth et al., 2013).
- This method is most popular in the social, behavioral, and health sciences (Cresswell, 2013).
- First publication with mixed method design in the mid 1980s (Cresswell, 2013).
- The German Institute for Quality and Efficiency in Health Care (IQWiG) recommends to combine qualitative and quantitative data to generate a wider spectrum of information for evaluation of health care services.

OBJECTIVE

- This review aims to give an overview over mixed method designs used in health care research studies published over the last five years.

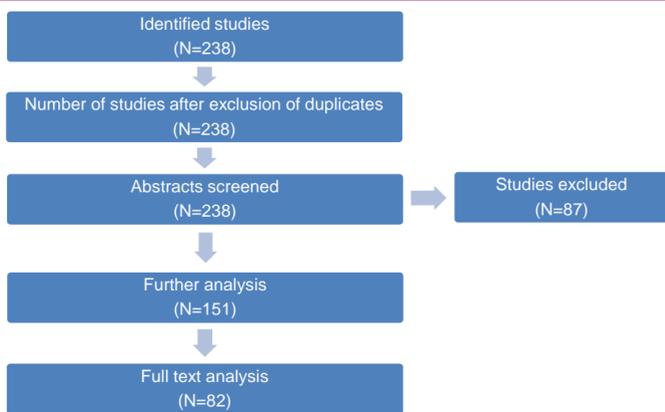
METHODS

- A narrative database search was conducted in Pubmed.
- Search term: ("mixed method"[Title/Abstract] AND (((((((((((("Benefitcost"[Title/Abstract]) OR "cost analysis"[Title/Abstract]) OR "cost control"[Title/Abstract]) OR "cost effect*"[Title/Abstract]) OR "cost effic*" [Title/Abstract]) OR "cost efficient"[Title/Abstract]) OR "cost efficiency" [Title/Abstract]) OR "cost-benefit"[Title/Abstract]) OR "cost-utility" [Title/Abstract]) OR economic*[Title/Abstract]) OR "cost-effectiveness" [Title/Abstract]) OR cost*[Title/Abstract]) OR QoL[Title/Abstract]) OR QALY[Title/Abstract]) OR "quality adjusted life years"[Title/Abstract]) OR ICER[Title/Abstract]) OR econom*[Title/Abstract]) OR "Budget impact"[Title/Abstract])
- Filter: published in the last 5 years
- Search period: 22.-26.05.2017
- Inclusion criteria:
 - Study design: mixed method
 - Combination of quantitative and qualitative survey procedures
 - Published in the last 5 years
- Exclusion criteria:
 - Study design: Reviews or pre-intervention study protocols
 - Survey procedures titled with mixed methods, which only include several qualitative OR quantitative methods
 - No reference to health topics
 - No further information about the used methods (because of missing full text)
- According to pre-defined inclusion and exclusion criteria, titles and abstracts were screened regarding re-search location and mixed method designs and research methods. In a second step, full-text screening was used to extract details.

RESULTS

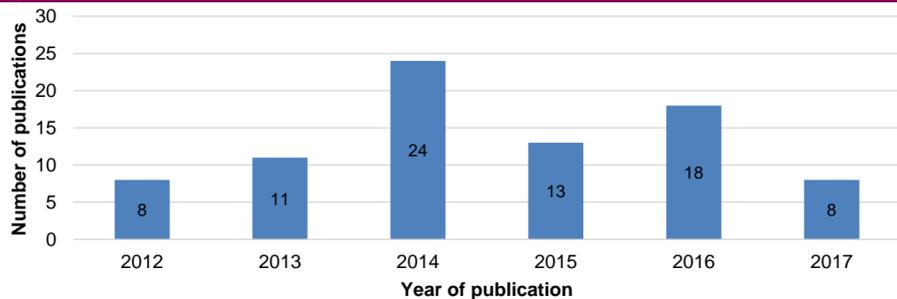
- In total n=238 research papers were identified.

Figure 1: Flowchart



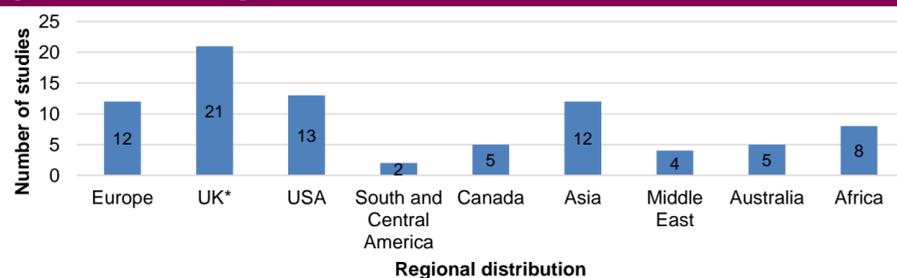
- For full text screening n=82 studies remained and were included in the analysis.

Figure 2: Relevant studies per year of publication (N=82)



- 25% of the evaluated studies (n=21) came from the UK, only n=3 relevant studies were conducted in Germany.

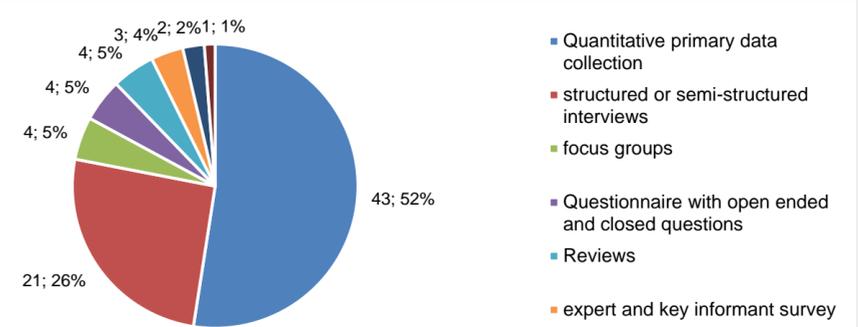
Figure 3: Countries using mixed methods



Note: UK is shown single to visualize the number of publication out of this country. This graphic shows the regional distribution of the country of origin of the studies not the country on which the studies refer

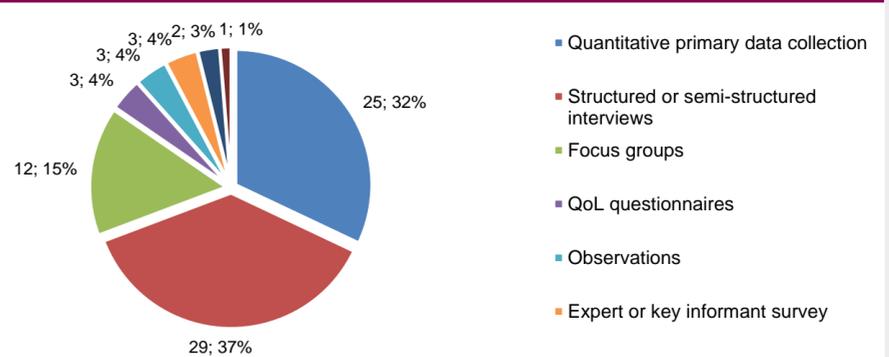
- The three main research fields were public health (n=27), followed by prevention & promotion (n=22) and health policy (n=16).

Figure 4: First method used in relevant studies



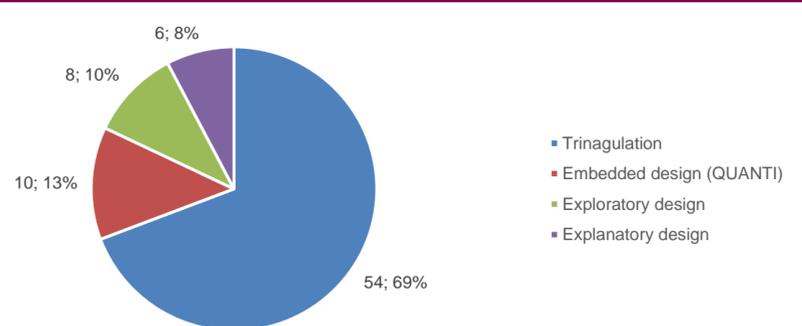
- The majority of the studies used quantitative primary data collection as main research method (n=43).

Figure 5: Additional method used in relevant studies



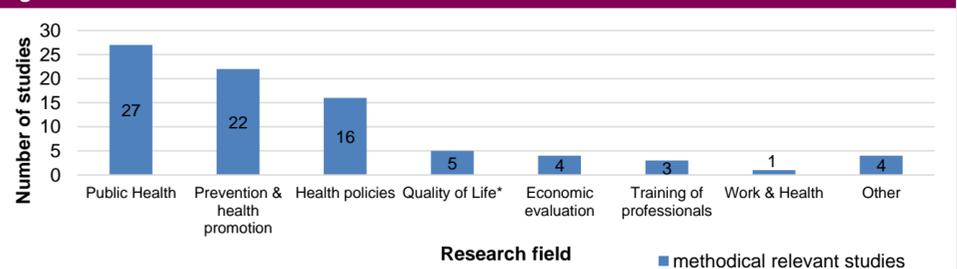
- Qualitative interviews as an add-on methodology were used most frequently (n=29).

Figure 6: Classification of design



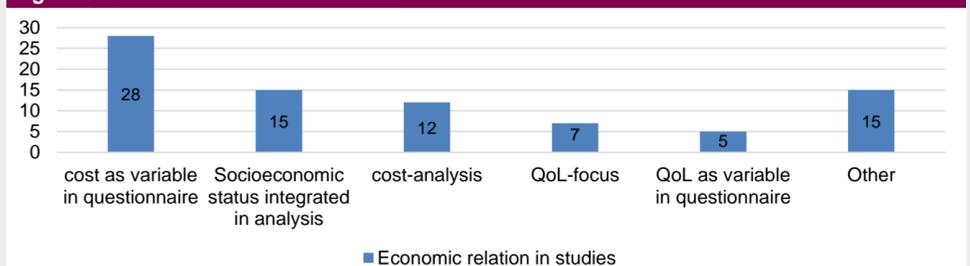
- N=54 studies applied a data triangulation design.

Figure 7: Main research fields



- 25% of the evaluated studies (n=21) came from the UK, only n=3 relevant studies were conducted in Germany.

Figure 8: Economic relation in studies



- Costs or socioeconomic factors were addressed in questionnaires or interviews in n=43 studies.
- Cost-analysis were integrated in n=12 studies as an add-on method.

CONCLUSION

- Usage of mixed methods in health economic- related studies are rare.
- Search results were mostly prevention and health promotion studies with a cost-relation part
- Triangulation as mixed-methods design was used in over 50% of the reviewed studies.
- As first method the analysis of quantitative Surveys and other data analysis were mostly used, followed by structured and semi-structured interviews. These two data collection methods were also mostly used as second method, but in reverse order.
- No trend over time can be identified, except an increase in mixed methods use in studies with a cost-relation from 2012-2014

