

Research Skills

questionnaire development, surveys

15. Dezember 2011

Agenda

- 1 TNS and Kantar Health – general company information
- 2 Questionnaire development – general principles
- 3 Questionnaire development – question types
- 4 Ten rules for questionnaire development – examples and solutions
- 5 Practical application
- 6 Definition survey und examples for international surveys

1

TNS and Kantar Health – general company information

History of the institution TNS Healthcare / Kantar Health

- 1968** Foundation of Infratest
- 1991** Joint-venture with GfK (Society for Consumer Research)
- 1998** Member of NFO (National Family Opinion) WorldGroup
- 2003** Integration in the global Taylor Nelson Sofres Group (TNS)
- 2009** Merger with WPP / Kantar Group

www.kantarhealth.com

www.tnsglobal.com

In-depth Expertise Across Multiple Market Sectors

Trusted Insight Around the Globe

- Automotive
- Consumer & Retail
- Finance
- Healthcare
- Industry Products & Services / Energy
- Interactive
- IT / Telecoms
- Legal Research
- Media Research
- Political and Polling
- Qualitative
- Social Marketing
- Social Research
- Sports and Sponsoring Research
- Trade Research
- Travel, Tourism & Transportation

TNS Infratest in Germany 2011

Professional Data Collection

- 4.000 Interviewers
- 730 CATI-stations in 8 telephone studios, located in Munich, Berlin, Bielefeld, Göttingen, Parchim and Güstrow
- 1.500 CAPI-stations
- More than 5 million interviews per annum
- Mail Access Panels: Market leader in Germany with 90,000 households (Europe: 135,000; USA 600.00)
- Online Access Panel with 35,000 households and 138,000 panellists in Germany (Europe: 600,000 panellists)



Kantar Health

Who we are

WPP's research insight and consulting companies, forming a separate umbrella group known as [Kantar](#); Kantar Health and TNS belongs to the Kantar Group, as well as MillwardBrown, Lightspeed Research and Added Value



WPP is a global media communications services company with its main management office in [London](#)

Annual sales : ca. 10 Mrd. Euro

135.000 Employees in 107 countries

Kantar Health

Who we are

Kantar Health (once TNS Healthcare)

- Over 40 years experience in nutrition and health research in Germany
- Affiliate company of Infratest
- Part of the worldwide WPP network
- Part of the global Health Sector, which is represented in UK, France, Spain, Italy, Germany and USA
- Member of Kantar Group
- **Consists of:**
 - Kantar Health (Munich)
 - Kantar Health (Bielefeld) (once Emnid)
 - Center of Health Research and Epidemiology (ZEG) (Berlin)
 - Clinical Research Munich (KFM)

Kantar Health

Our employees

Altogether Kantar Health employs 110 people, including 60 project manager from the following disciplines:

- biologists
- communication scientists
- economists
- nutritionists
- physicians
- psychologists
- sociologist
- statisticians, biometricians

For project processing all departments of TNS Infratest are also available (samples, statistic, IT, field organization, etc.).

Kantar Health

Areas of work

KANTAR HEALTH		
Pharma Marketing	Drug Surveillance / Clinical Research	Public Health
	Pharmazeutische Industrie	Bundes- und Länderministerien
Medizintechnik	Drug Authorities	Kranken- und Sozialversicherungen
Diagnostika etc.		Forschungseinrichtungen etc.
Pricing and Positioning, Forecasting	Post Marketing Surveillance	Epidemiologie
Product Tracking	Active Drug Surveillance	Evaluation von Versorgungsmodellen und Leistungsangeboten
Stakeholder and Sales Force Management	Klinische Forschung (Phases II and IV)	Health Economics Research etc.
Health Care Marketing	Registries	Gesundheitssurveys

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Questionnaire development – general principles

General principals

Questionnaire-creation



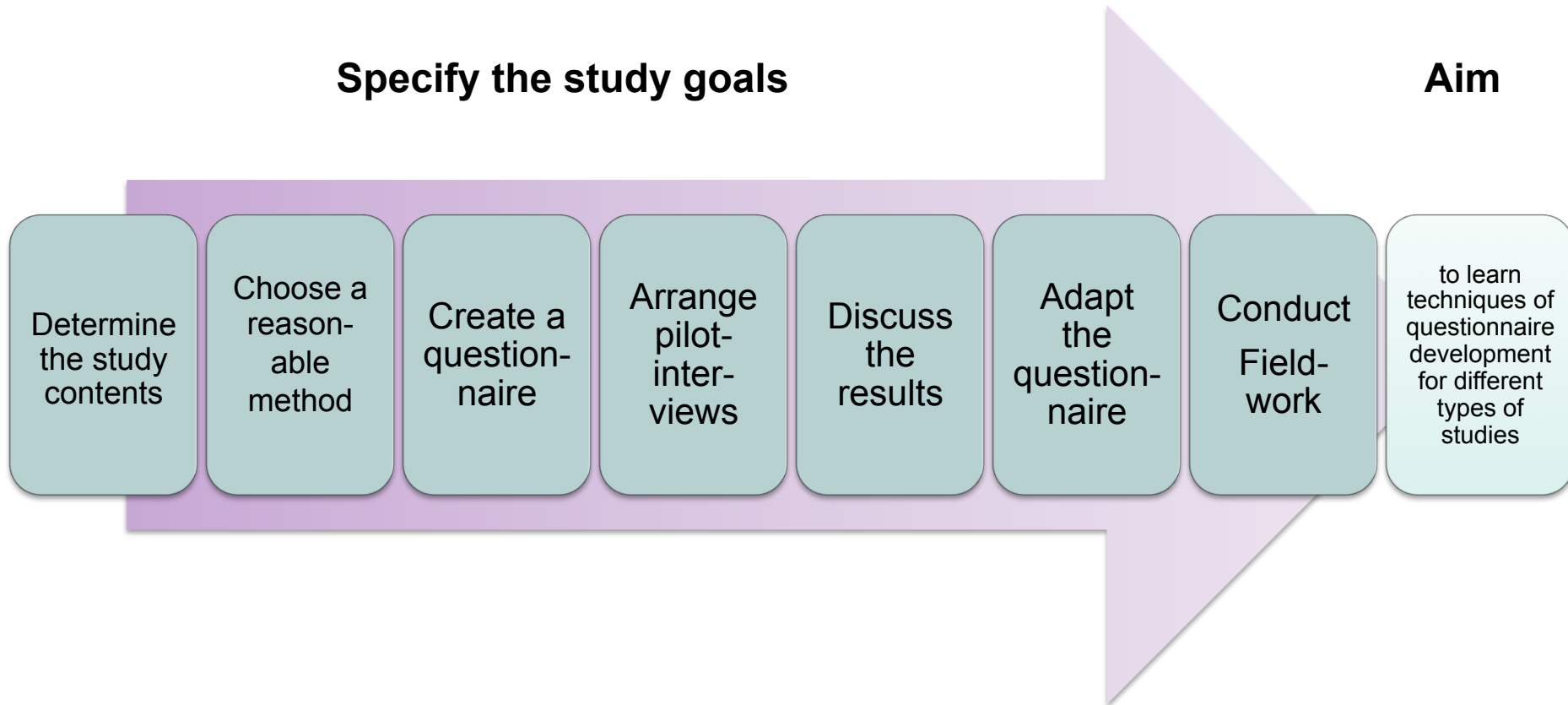
Post a question and you get a reply!
(Klaus Wöhler 2002)



**Even after years of experience,
no expert can write a perfect questionnaire.**
(Sudman/Bradburn 1982)

General principals

Questionnaire: work steps



Questionnaires should be distinguished by

- **level of structuredness**
- **form of communication**

General Principals

Questionnaire: level of structuredness



Narrative Interviews

Interview in depth – only the topic is given

Guideline Interviews

In global questions the Interview will be structured

Standardized Interviews

The goal is to product the same interview conditions for all interviews
Keyword: reliability

General Principals

Questionnaire: form of communication

1. Face-to-face Interview (paper and pencil or CAPI)



2. Self-Completion Interview (paper and pencil or online)

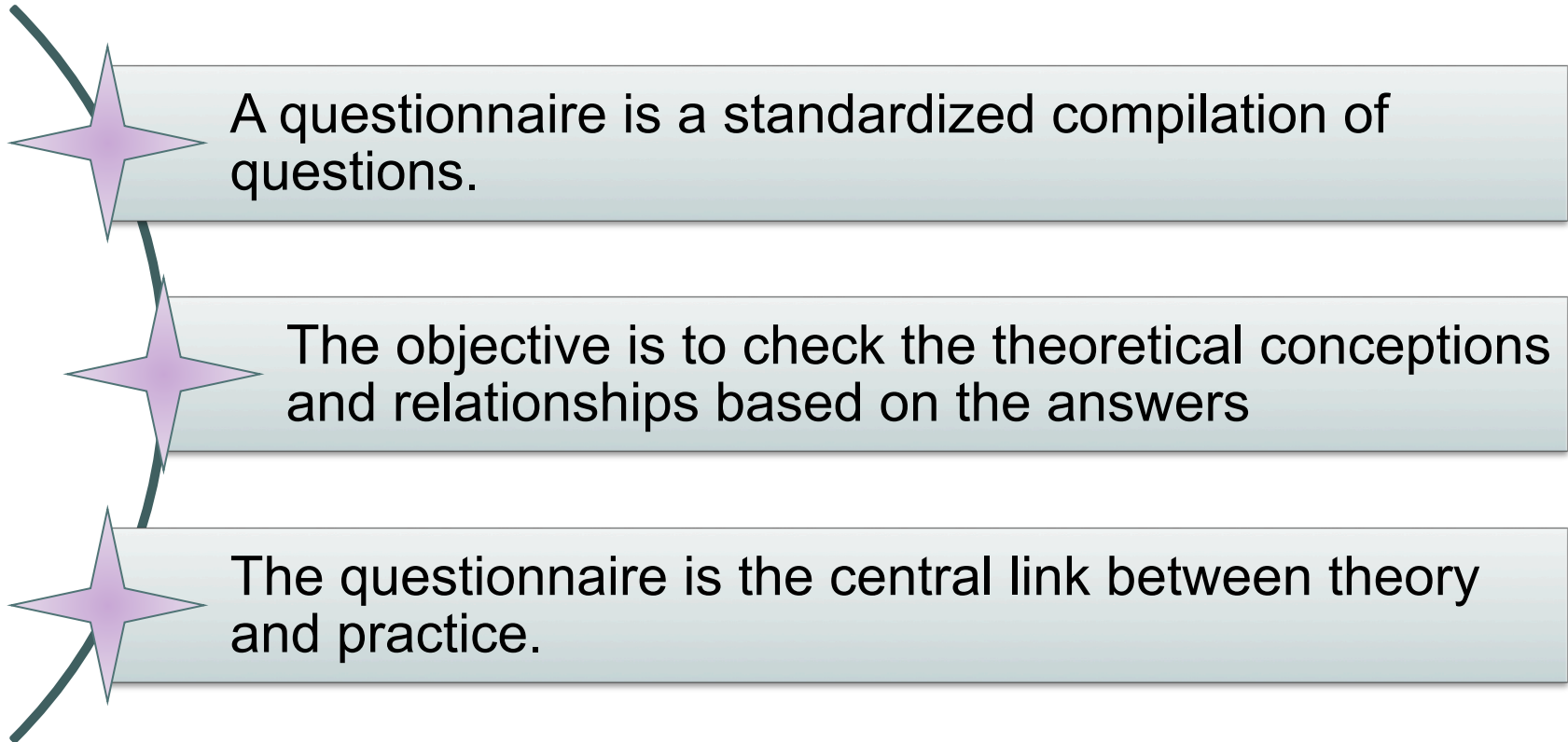


3. Telephone Interview (CATI or paper and pencil)



General Principals

Questionnaire: definition



Conversational logic: Maxims of conversation (Paul Grice)

In social science generally the **cooperative principle** describes how people interact with one another. The cooperative principle can be divided into four maxims, called the *Gricean maxims*, describing specific rational principles observed by people who obey the cooperative principle; these principles enable effective communication. Grice proposed four conversational maxims that arise from the pragmatics of natural language. The Gricean Maxims are a way to explain the link between utterances and what is understood from them (Wikipedia)

- **Maxim of quantity: all necessary information – but no unimportant information**
- **Maxim of quality: tell the truth**
- **Maxim of relevance: is the answer important for the question?**
- **Maxim of manner: talk clearly and understandable**

Consequence of conversational logic:

Both, respondent and interviewer, should keep the maxims.

- ➔ **The answer of the respondent counts as true, even if the respondent doesn't tell the truth.**

Even if the respondent acts arbitrary and uncooperative, for the interpretation of the answer following applies :

The respondent

- **provides the necessary information (from its own perspective)**
- **doesn't lie,**
- **keep the answer important for the interview,**
- **will be understandable.**

(and is willing to follow the instructions of the interviewer)

Consequence of conversational logic:

The respondent acts on the assumption that

- questions and
- predefined responses

are reasonable and motivating!

Example: TV Consumption

A: How many time per day you watch TV?

☐ ☐ ☐ ☐ ☐ ☐

Less than 0,5 h 0,5 -1 h 1 to 1,5 h 1,5 to 2 hours 2 to 2,5 h more than 2,5 h

Result: Mean 1,5 hours

B: How many time per day you watch TV?

☐ ☐ ☐ ☐ ☐ ☐

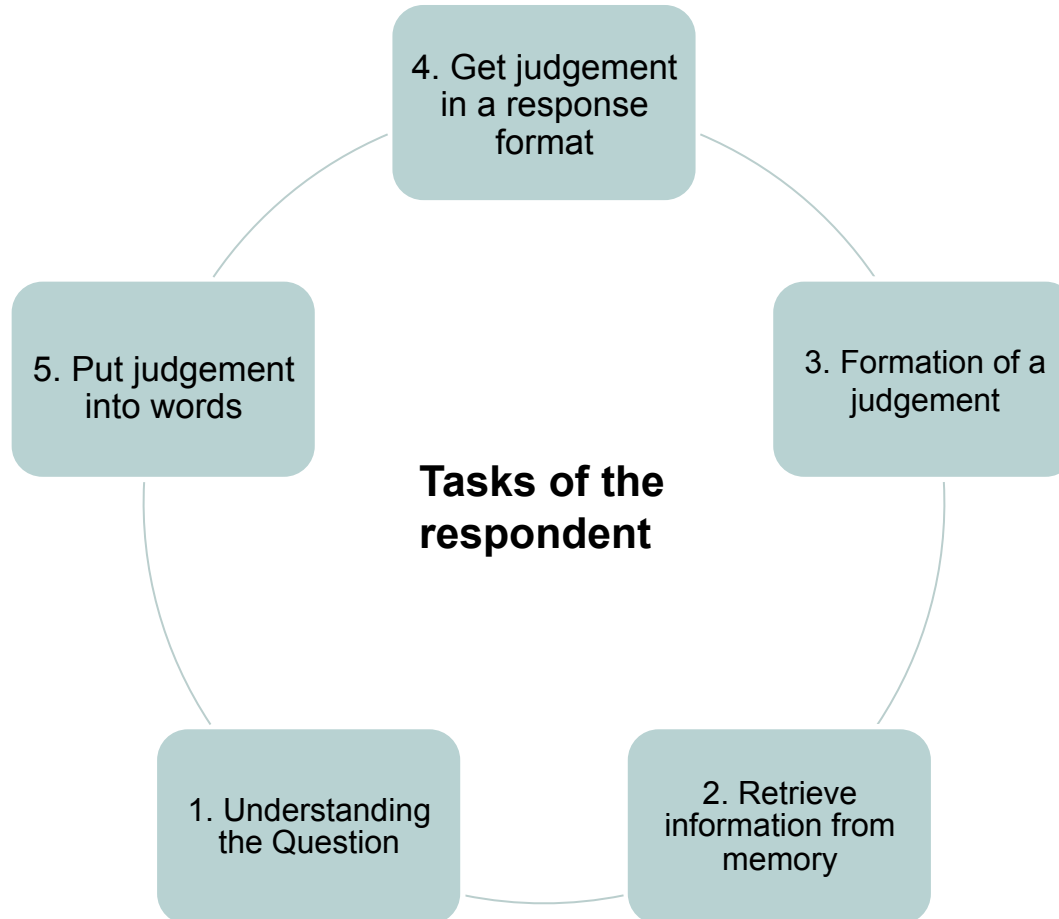
Less than 1,5 h 1,5 to 2 h 2, to 2,5 h 2,5 to 3,5 h 3,5 to 4,5 more than 4,5 h

Result: Mean: 2,9 hours

Solution: The valid response fields should reflect the real distribution (e.g. percentiles)

General Principals

Cognitive basics



General Principals

Questionnaire: possible sources of error

Motivation



the more
the better

(to get
adequate
answers)

Communication

question not
comprehensible

own interpretation

e.g. "How many patients
would you inform about
side-effects of therapy
X?". Who informs whom:
The doctor the patient or
the patient the doctor?

Knowledge

evasive or
wrong
answers to
disguise lack
of knowledge

Memory

none or
wrong
memories

e.g. number
of patients in
the last 6
month

3

Questionnaire development – question types

Questionnaire

Question types

1. **Closed (response) question** includes every suggested responses

e.g. Your age group

- ☐ 18 to 24
- ☐ 25 to 39
- ☐ 40 to 60
- ☐ 60 plus

CAVE: suggested responses could enormously influence the response behaviour

What should parents teach their children?

Suggested answer: “independent thinking“

Results:

Closed question: 62%

Open-ended question: 5%

2. Half opened-ended question

includes suggested responses and additional the possibility for an open-ended question ("Other, please specify:")

e.g. What did you buy in the shop (Please tick as many boxes as apply)?

☐ Toiletries

☐ Souvenirs

☐ Clothing

☐ Stationery

☐ Other

☐ Please specify

3. Open-ended question

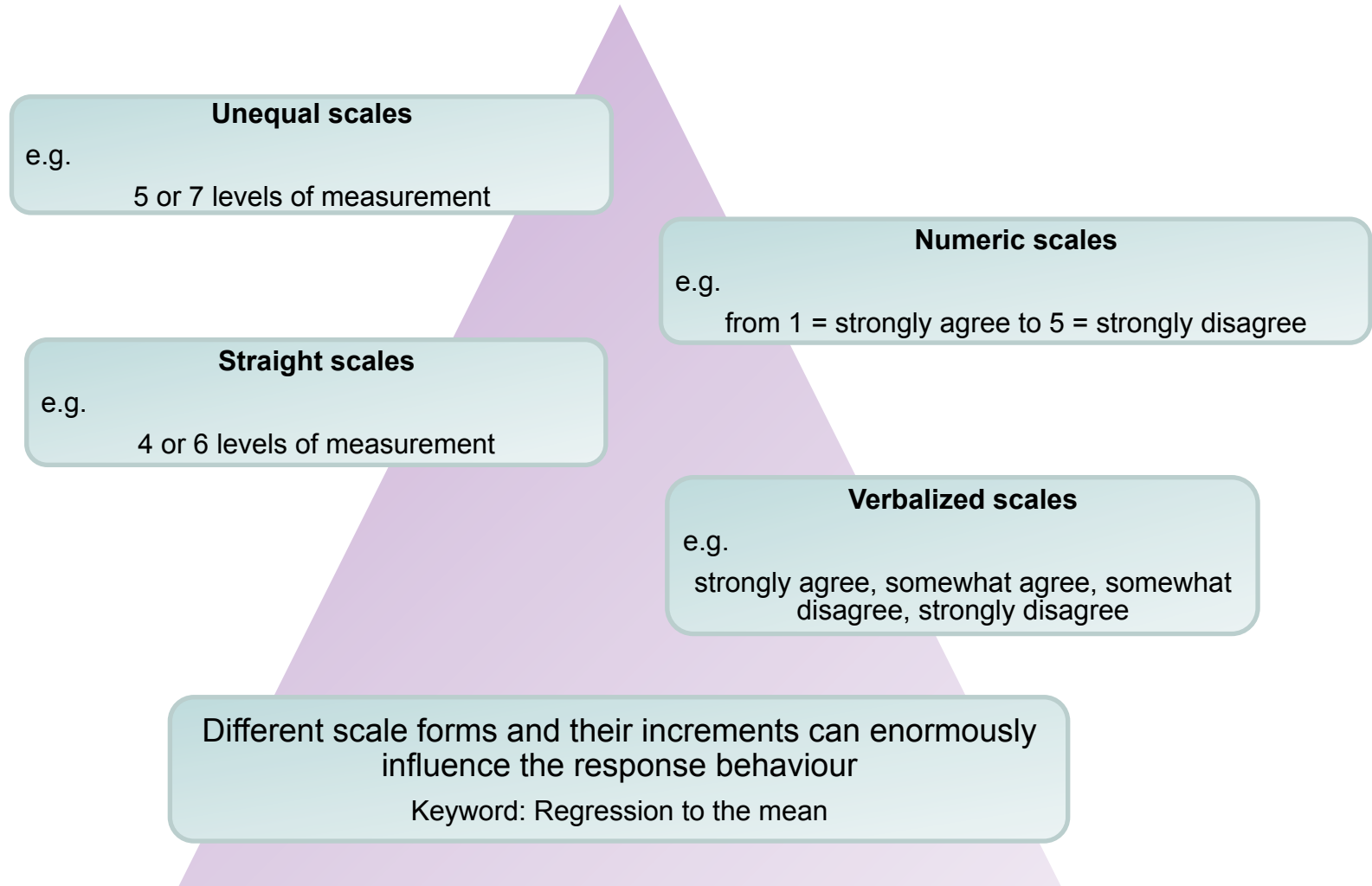
W-question without suggested responses

e.g. "Why do you mean this?"

"Who informed you about X"

Questionnaire

Types of scale



Order of questions

Opening

- **Do NOT begin with “difficult” questions**
e.g. “Do you ever suffer from eating disorders?”
- Questions could be difficult, if they
 - **Unmask the respondent**
(e.g. a difficult to answer knowledge question)
 - **violate the personal sphere**
(e.g. reasons for/ against the regulation of a particular preparation)
 - **are not in the area of the respondents interest**
(e.g. advertisement test)
 - **Closed questions in personal interviews (prefer to start here with open “icebreakers”)**
 - **Open-ended question in written inquiries**

Ten rules for questionnaire development – examples and solutions

Ten rules of question wording

Rule 1

Use simple and clear terms, so respondents could understand in the same way

- Do not overstress the respondent!
- Ask as „concrete“ as possible
- Avoid foreign words!

Example –Ask as concrete as possible

Which educational status do you have? (ask an open question)?

better:

Which highest educational status do you have?

1	Less than high school diploma
2	High school graduate or equivalent, no college
3	Some college or associate degree
4	Bachelor's degree
5	Master's/professional/doctoral degree
6	Other: _____
99	Don't know

Ten rules of question wording

Rule 2

Avoid long and complex questions

Ten rules of question wording

Rule 3

**Do not use subjunctive questions:
Avoid hypothetical questions, which query the validity**

***If you had dundruff and if an effective anti-
dundruff shampoo exists, which contains only
natural active ingredients and is available in
pharmacy.***

Would you test this shampoo?

Ten rules of question wording

Rule 4

Avoid duplication of stimuli and double negative

Negative Example – Avoid double negative

***Are you averse, that we offer your information
the sales representatives ?***

☐ **yes**

☐ **no**

Ten rules of question wording

Rule 5

Avoid assumptions and suggestive questions

Example – Avoid assumptions

Do you think the United States was right or wrong in sending American troops to stop the Communist Invasion of South Korea?

(National Opinion Research Center, Januar 1951)

Wrong: 36%

Right: 55%

Don't know: 9%

Do you think the United States made a mistake in deciding to defend South Korea, or not?

(Gallup, Januar 1951)

Mistake: 49%

Not a mistake: 39%

Don't know: 13%

Ten rules of question wording

Rule 6

Avoid questions, which need information the respondent didn't have

Ten rules of question wording

Rule 7

Questions should have a clear temporal relationship

Example –Ask for a clear defined subject and time period

How many articles related to NSCLC you have read in the last time?

Better

How many articles related to advanced NSCLC you have read in the last 4 week in medical journals?

Ten rules of question wording

Rule 8

The used response categories must be exhaustive and may not overlap

***How often do you eat fish (all kind of fish meals)
in the last 4 weeks?***

- **Daily**
- **5-6 per week**
- **2-4 per week**
- **Once per week**
- **2-3 per month**
- **Once per month**
- **Less than one a month**
- **Never**

Ten rules of question wording

Rule 9

The context of a question should not affect the answer

Ten rules of question wording

Rule 10

Define ambiguous terms

How many patients with NSCLC you see per month?

Better:

What is the total number of patients with advanced non-small cell lung cancer (NSCLC) that you personally have treated in the past month?

Summary of 10 Rules

- Rule 1: Use simple and clear terms, so respondents could understand in the same way**
- Rule 2: Avoid long and complex questions**
- Rule 3: Do not use subjunctive questions:
Avoid hypothetical questions, which query the validity**
- Rule 4: Avoid duplication of stimuli and double negation**
- Rule 5: Avoid innuendos and suggestive questions**
- Rule 6: Avoid questions, which need information the respondent didn't have**
- Rule 7: Questions should have a clear temporal relationship**
- Rule 8: The used response categories must be exhaustive and may not overlap**
- Rule 9: The context of a question should not affect the answer**
- Rule 10: Define ambiguous terms**

- **Interviewer assignments to control the behaviour**
- **Install interviewer instructions:**
 - Apply lists and card games
 - Information to reading of instructions and articulation
 - Information to single- and multiple replies
 - References with regard to pronunciation
- **simple „warming-up“ question**

Questionnaire

What else is there to consider?

- Pre-Test
- Questionnaire length (2 questions = 1 minute
4 scales-items count as much as 1 question)
- Knowledge about the target group
- The questionnaire author bears the methodical responsibility („but my boss / the customer wanted it like that" is no apology for methodical mistakes)

5 Practical Application

- **Never alone**
- **Not reinvent everything**
- **Use expertise**
- **In formulating the question should be clear how to evaluate them**
- **Error in the questionnaire are irreversible !!**

Time flow of questionnaire development

- Step 1: What do I want to know / discover?**
- Step 2: Decide, which information are necessary**
- Step 3: Look for similar questions / scales from other analysis**
- Step 4: Phrase in compliance with the 10 rules and the evaluation**
- Step 5: Tabulate the questions**
- Step 6: Prepare simple, concise instructions for interviewers and respondents**
- Step 7: Check the draft to you, colleagues, friends ...**
- Step 8: Perform a pretest with the target group (n=10 to 50)**
- Step 9: Eliminate incomprehensible / difficult issues and questions that bring unintended or irrelevant information**
- Step 10: if necessary retry the pilot study and revision according to step 9**

Knowledge Questions

e.g. Knowledge about nutritional recommendations

- **Easiest form**

Have you ever heard or read about the campaign 5 a day?

- **Most difficult form = open definitions**

What does the campaign indicate?

- **Ask multiple-choice-questions**

What does “5 a day” mean?

- ☐ Eat something 5 times a day
- ☐ 5 a day physical activity
- ☐ Eat 5 times a day fruits and vegetables
- ☐ Drink something 5 times a day

- **Example: Please define from your point of view**

Behavioural questions

Examples of a questionnaire on eating habits

- **Diaries / patient protocols over a limited period of time** (e.g. a two weeks weighing protocol)
- What's your actual weight? kg
- If I have trouble I often eat too much

☐ true ☐ not true
- How often did you already make slimming diets? (only one answer please)

☐ 1-3 times ☐ 4-8 times ☐ over 8 times ☐ at regular intervals
☐ I consider diet as good as ever ☐ never
- Do you often by low-calorie food?

☐ Always ☐ often ☐ rarely ☐ never

Literature

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6

Definition survey und examples for international surveys

Definition Survey

- The english term survey is also for several decades common in different disciplines of the German technical language (e.g. [ALLBUS](#), [SOEP](#), [ESS](#), [General Social Survey](#), [ISSP](#), [Survey on Health, Ageing and Retirement SHARE](#)).
- In the anglo-american area „survey" primary means a [measurement](#), but also to procure a [overview](#) about [charging](#), an inspection or [prospection](#) as well as it derived a statistical [enquiry](#) or [inspection](#) of a trade expert.

„Survey is a more or less systematic search for relevant data of a specific field“

- **Health surveys**

Comparatively diversified surveys of the status quo of the health situation and health care situation in a population

International surveys from the field of health and nutrition – Selection 1

Name	Land/ Region	Question / Goals	Implementation perspective
Nationale Health and Nutrition Survey	USA	<ul style="list-style-type: none"> ▪ Distribution of different measurement categories ▪ Prevalence of diseases and risk factors ▪ Changes in health ▪ Causes of diseases 	Health monitoring
Nurses Health Study	USA	<ul style="list-style-type: none"> ▪ Which dietary factors have a preventive or disease-causing effect ▪ What percentage of the development of various diseases (e.g. breast cancer) can be explained by dietary factors or other characteristics 	Importance of nutrition and other features for the development of several chronic diseases
European Prospective Investigation into Cancer and Nutrition	D, F, E, I, GR, GB, NL, DK, S	<ul style="list-style-type: none"> ▪ How large is the proportion of cancers that are associated with the diet ▪ What is the likely impact of changes in eating habits on the risk for a given type of cancer 	Importance of nutrition for the development of cancer and other chronic diseases

International Surveys from the field of health and nutrition – Selection 2

Name	Land/ Region	Question / Goals	research design / study characteristics
B ehavioral R isk F aktor S urveillance S ystem	USA 50 staates	<ul style="list-style-type: none"> ▪ Health behaviour ▪ Prevalence of diseases and risk factors ▪ Use of medical services and utilities ▪ Development of trends 	<p>Representative cross-sectional population study</p> <p>Telephone survey since 1984</p> <p>Population aged 18 years</p>
Y outh R isk F aktor S urveillance S ystem		<ul style="list-style-type: none"> ▪ Health behaviour ▪ Focus on prevalence of obesity and asthma 	<p>Representative cross-sectional population study since 1991</p> <p>Via schools</p>

Merry Christmas



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Thank you very much for your attention