Questionnaire and interview

Empirical sociological research in medicine and dentistry

Practical Class 13 · Dental Public Health · 2026/2027

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Contents and aims of the lecture

After the lecture the student can

- describe the stages of an empirical sociological study and the documents of its programme;
- operationalise a concept into indicators and questions;
- distinguish sampling models and the conditions of representativeness;
- classify questions and recognise wording errors;
- construct a questionnaire and a codebook;
- compare types of survey and interview.

Materials for the class

15-minute preparation

Tasks with model answers

Slides (PDF)

Running example: a study of access to dental care among adults aged 65 and over in the city of Plovdiv.

CONTENTS

1. **The sociological approach in medicine**
2. Stages of an empirical sociological study
3. Sampling
4. The questionnaire and classification of questions
5. Wording the questions
6. Constructing the questionnaire
7. The survey method: types of survey
8. Interview

Sociology and medical sociology

Sociology

The science of society as a whole and of small social groups. The term was introduced by Auguste Comte (1838). Its subject is the social relations and interactions in society and the person within the social structure. Sociology is divided into theoretical and empirical; empirical sociology studies concrete manifestations of social life through concrete studies.

Medical sociology

The first definition was given by Charles McIntire in 1894. Its object is medicine and health care as subsystems of the social structure of society. Its subject is the social relations, regularities of development and functioning of medicine as a social system.

Health cannot be isolated from its social context: the patient has ways of thinking, habits, customs and beliefs that affect his or her health.

Salchev P. Sociology and medicine (lecture course), slides 2–14

Uses of the sociological approach in social medicine

Three main directions

1. studying medico-social problems — doctor–patient relations, health needs, satisfaction;
2. studying social cause–effect links between health status and social factors;
3. developing approaches to the management and functioning of the health service and health care.

In dentistry

- Why do some older adults not see a dentist when in pain?
- How do patients rate access to services contracted by the NHIF?
- How does dental anxiety lead to avoidance of check-ups?
- How is prevention organised in schools?

The use of sociological methods in social medicine to collect primary sociological information is called an **empirical sociological study (ESS)**.

Dept. of SMPH, Social Medicine, topic 32; Salchev P., Sociological method, slide 6

Sources of sociological information and methods

Source	Information collected	Method
The person studied (his or her self-awareness)	Spoken or written information on opinions, knowledge, motives, behaviour	Questioning: interview (oral) or questionnaire survey (written)
The person's entourage — family, relatives, colleagues	Information about the person from people who know him or her	Questioning; indirect survey
The person's behaviour	Visual or audio information in real time	Observation
Documents by and about the person	Written or other information created for another purpose	Documentary method

The method follows from where the required information is located, not from the researcher's habit.

Dept. of SMPH, topic 32; Salchev P., Sociology and medicine, slide 40

Types of ESS by aim and methodological basis

Type	What it reveals	Dental example
Descriptive	The state of the phenomenon	How many adults 65+ saw a dentist in the last 12 months
Explanatory	The causes of the phenomenon	Are costs and anxiety associated with delayed treatment
Prognostic	Trends in its development	How will demand for prosthodontics change as the population ages
Prescriptive	Possible solutions and their effect	Which information model increases preventive check-ups

Methodology and methodics

Methodology is a body of theories, general principles and rules of scientific research. **Methodics** (research technique) is its concretisation, adapted to the topic and tasks of a study.

Salchev P., Sociology and medicine, slides 18–22; Saykova & Chakalov (1977), pp. 18–21

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An ESS is a sequence of research procedures

Department textbook, Salchev	Saykova and Chakalov (1977)	Abramson & Abramson (2008)
I. Preparation of the study	a) Planning	1. Preliminary steps; 2. Planning; 3. Preparing for data collection
II. Conduct (fieldwork)	b) Conduct	4. Collecting the data
III. Processing and analysis of data	c) Processing and statistical analysis	5. Statistical analysis
(includes interpretation and publication)	d) Summarising results and main conclusions	6. Interpretation; 7. Report

Same logic, different number of stages

There is no agreement on the number of stages: Oshavkov and Zdravomislov name five, Yadov seven, St. Mihaylov three plus an intermediate pilot study. What matters is that each stage depends on the previous one, and the pilot and the analysis may send the researcher back to the programme.

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), pp. 22–23; Abramson (2008), pp. 35–37

Sub-stages of planning (programme and methodology stage)

Programme and methodology

1. preliminary study and formulation of the problem;
2. topic, object, subject, aim and tasks;
3. working hypotheses;
4. theoretical model and operationalisation — indicators and their categories;
5. plan for data processing.

Methods and organisation

6. method of registration — choice of method and instrument;
7. sampling method;
8. organisational plan and budget;
9. pilot study, evaluation and correction;
10. final documentation (instruments) of the study.

The questionnaire is the end product of a long preparation, not its starting point.

Saykova & Chakalov (1977), pp. 23, 207; Salchev P., Sociology and medicine, slides 23–28

Formulating the problem

The problem

A gap between what is known and what must be known to make a decision. It is formulated after analysing the literature and available data; the real nature and social importance of the phenomenon are assessed.

Running example

Official reporting shows low use of dental care among older adults but does not explain why. It is not known how far delay is due to costs, distance, the organisation of appointments or fear.

Before collecting new data

Do not include questions whose information can be obtained from other sources. The preliminary study is both theoretical and empirical.

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), pp. 207–208, 221

Topic, object and subject of the study

Concept	Definition	Running example
Topic	Clearly stated; linked to the subject; reflects the specific problem	"Access to dental care and reasons for delaying treatment among adults aged 65+ in Plovdiv"
Object	The area of social reality or the set of homogeneous cases to be studied, together with the aspect of study	Persons aged 65 and over with a permanent address in Plovdiv on 1 January 2027
Subject	Those aspects, properties and features of the object that attract attention and reflect the phenomenon studied	Use of dental care, unmet need, barriers, dental anxiety

The same group may be the object of an economic, demographic or ethical study. The aspect defines the profile of the study and prevents collection of unnecessary information.

Salchev P., Sociological method, slide 9; Saykova & Chakalov (1977), p. 207

Aim and tasks

Aim

States briefly and clearly the result the researcher wants to achieve.

Aim: To estimate the prevalence of unmet need for dental care and to explore the reasons for delaying treatment among adults aged 65+ in Plovdiv.

Tasks

Break the aim down into concrete steps with exact parameters. Each task must be feasible and verifiable.

1. To establish the proportion who visited a dentist in the last 12 months.
2. To determine the proportion with delayed or forgone necessary care.
3. To examine the association of delay with income, distance, health insurance and anxiety.
4. To explore through interviews the experiences that lead to avoidance of visits.

Dept. of SMPH, topic 32; Salchev P., Sociology and medicine, slides 24–25

Working hypotheses

Hypothesis

A scientifically grounded assumption about the expected results, which the study confirms or rejects. It must be testable with the data the programme plans to collect.

Type	Content	Example
Descriptive	The actual state; expected values	At least one third of older adults delayed necessary dental care in the last 12 months
Explanatory	The causes of the state	Delay is more frequent among people with lower income and higher dental anxiety
About trends	What is recurrent and stable in the process	The proportion with unmet need increases with age

A descriptive hypothesis contains a quantitative expectation; an explanatory one states the direction of an association but does not prove causation in a cross-sectional survey.

Salchev P., Sociology and medicine, slide 25

Population, unit of observation, respondent

Concept	Definition and example
General population	The human community within which the object is studied and which carries the characteristics examined. It determines whether the study is exhaustive or sample-based (representative).
Unit of observation	Each single case that carries the empirical information. Here: one person aged 65+. In documents: one visit or one outpatient record.
Respondent	The person (or a relative from the entourage) who falls into the sample and is to be studied.
Entourage	Family, relatives, friends, colleagues, neighbours — a source of information about the person in an indirect survey.

The unit defines the denominator

"Visit" and "person" are different units: 300 visits are not 300 patients.

Salchev P., Sociology and medicine, slides 27–28; Chapter 10, slide 10

Operationalisation of concepts

From a theoretical concept to a question

The object is represented as a system of elements (a theoretical model). Each **qualitative characteristic** shows itself through observable **indicators** (attributes). Indicators have **categories** (varieties). In the questionnaire indicators take the form of questions, and categories the form of a classification of possible answers.



Choosing indicators is a sociological, not a statistical, problem: identifying the characteristics means revealing the essence of the problem studied. Overly fragmented categories hinder the detection of regularities.

Saykova & Chakalov (1977), pp. 208–212

Running example: operationalising "access to dental care"

Dimension	Indicator	Question and categories
Use	Visit in the last 12 months	"When did you last visit a dentist?" — under 6 months; 6 to under 12 months; 1 to under 2 years; 2 years or more; never
Need	Perceived need for care	"In the last 12 months did you need a dental check-up or treatment?" — yes; no; don't know
Unmet need	Delayed or forgone care when needed	"Did you delay or not receive care you needed?" (only if "yes" to the previous question)
Financial barrier	Reason "cost" given	Reasons — more than one answer: cost; distance; difficult booking; fear; other
Psychological barrier	Dental anxiety	Validated scale (e.g. MDAS) in an approved version
Social status	Income, education, insurance	Background (demographic) questions at the end

Saykova & Chakalov (1977), pp. 209–211; teaching example

Objective and subjective indicators

Objective characteristics

- **social status and roles:** education, occupation, income, housing, age, marital status, sex;
- **actual behaviour:** visits, toothbrushing, smoking, attendance at follow-up visits.

Subjective characteristics

- **opinions and assessments** of a fact: satisfaction with service;
- **motives** — the driving forces of behaviour: why the person delays treatment;
- **intentions** for future action: will the person see a dentist if pain appears.

Answers are not reality itself

Answers always carry a subjective shade — they are "objectivity refracted through the respondent's consciousness". The person may conform to public opinion. Control questions and comparison with other sources are therefore developed.

Saykova & Chakalov (1977), pp. 210–211, 222

Levels of measurement and metric indicators

Scale	Property	Dental example	Permitted summaries
Nominal	Categories differ only	Sex; type of dental practice	Frequencies, proportions, mode
Ordinal	Order without equal intervals	Self-rated oral health: excellent ... poor	Median, rank methods
Interval	Equal intervals, no absolute zero	Temperature in °C	Mean, standard deviation
Ratio	Equal intervals and absolute zero	Number of teeth; DMFT; distance to the practice	All, including ratios

Metric and non-metric categories

The categories of "social position" differ descriptively, those of "age" quantitatively (metrically). Metric indicators allow a deeper analysis of associations.

Saykova & Chakalov (1977), pp. 212–213; Abramson (2008), ch. 13, pp. 125–131

The study programme and its documents

The programme answers "What will be studied?"

The methods answer "How?"; the organisational plan "Who, when, where and with what?".

The project is complete

only after all its elements have been discussed by competent specialists.

Study dossier

1. rationale, topic and aims;
2. study programme;
3. questionnaires (self-completion, interview schedule, observation and document forms);
4. method of registration;
5. data-processing plan;
6. sampling method;
7. organisational plan and budget;
8. fieldwork instructions;
9. other — certificates, letters, ethics committee approval.

Saykova & Chakalov (1977), pp. 284, 287–288

Organisational and technical stage: organisational plan

Contents of the plan

- timetable: persons responsible, place and deadline for each operation;
- selection of research team and interviewers;
- budget: design, printing, training, fees, travel, transport, processing, publication;
- printing and distribution of the instruments;
- agreement with institutions and an ethics committee.

Running example — timetable

- January: programme, questionnaire, codebook;
- February: pilot with 30 persons, corrections;
- March: training of 8 interviewers;
- April–May: fieldwork and control;
- June: data entry, checking, analysis;
- September: report to the municipality and the Regional Health Inspectorate.

Research ethics requires not to conduct a study without the minimum resources that guarantee its scientific level.

Saykova & Chakalov (1977), pp. 284–286; Dept. of SMPH, topic 32

Pilot (trial) study

What it tests

The suitability of the instruments, the soundness of the programme, the registration and sampling methods, the organisation, the preparation of interviewers; it gives preliminary information to refine the sample size. It is required for every new or revised project.

"Micro-study" variant

The study is reproduced in full on a minimal sample. It tests all aspects and gives data on variability.

Ordinary variant

Mainly testing the questionnaire on 50–100 persons of each "type". Quick and cheap, but at risk of being merely formal.

What to look for in the pilot

Misunderstood words, skipped questions, recurring "other" answers, wrong skips, completion time. A cognitive interview asks: "What did you understand by 'delayed'?"

Saykova & Chakalov (1977), pp. 286–287; Dept. of SMPH, topic 32; Abramson (2008), ch. 24

Selection and training of interviewers

Fieldwork instructions

Practical guidance only: aim, study units, questionnaires and how to complete them, how to select persons, duties and conduct of the interviewer, reporting forms.

Interviewer effect

The interviewer's sex, age, education and manner influence contact and answers. It is not always appropriate for young interviewers to survey older people, or vice versa.

Training covers

reading each question verbatim, neutral probes, handling skips and show cards, recording "no answer", rules for repeat visits, data protection.

The interviewer is not the treating dentist

In a study of satisfaction with dental services the treating team does not administer the survey: this creates pressure and distorts answers.

Saykova & Chakalov (1977), pp. 287–289; Chengelova (2016), ch. 5

Fieldwork: conduct and control

Fieldwork

Sequential collection of primary information with the chosen method. Time and place affect quality: a questionnaire completed in a hurry after work or in a noisy place is compromised.

Finding the persons

Example rule: 1st visit — weekday, working hours; 2nd — weekday after working hours; 3rd — Saturday or Sunday. After three unsuccessful attempts the person is written off. Substitution by another person is not allowed.

Consent to take part

The interviewer distinguishes a firm refusal from a soft one. Firm refusals are not pursued; a soft refusal may become consent while voluntariness is respected.

Control is exercised by the interviewer (logical check of the form) and by the field supervisor — a repeat visit or call to some of the persons, without breaching anonymity.

Haralampiev K., Sampling models, p. 3; Saykova & Chakalov (1977), pp. 289–290

Processing: logical checking, coding, data entry

Logical check

- were completion instructions followed;
- are there unanswered questions;
- were skips followed;
- are related answers consistent.

Coding

Each answer receives a code from the codebook. Open answers are coded with a developed classification. Data entry is checked by double entry of part of the forms.

Contradiction between two facts

Age "25 years" but date of birth "1 April 1897". Best — check with the person, if possible; otherwise both answers are cancelled. Arbitrary correction is not allowed: a "not shown" answer is better than a subjective guess.

Contradiction between opinions

Not corrected. It is revealed in the analysis with cross-tabulations.

Saykova & Chakalov (1977), pp. 290–291

Analysis, interpretation and report

From individual to aggregate information

1. **organising and presenting the data** — scaling, coding, tables, graphs, statistical measures;
2. **analysis** — testing hypotheses, examining associations, trends, comparisons;
3. **interpretation** — conclusions supporting or rejecting hypotheses, limitations, need for further research;
4. **publication** or delivery of results to interested institutions.

Structure of the report

Rationale and aim; methods (object, sample, instrument, period, respondents); results; discussion; conclusions and recommendations; appendices — questionnaire and codebook.

Without a description of the sample and the response rate the result cannot be assessed.

Dept. of SMPH, topic 32; Salchev P., Sociology and medicine, slide 30; Saykova & Chakalov (1977), pp. 296–300

Running example through all stages

Stage	Decisions in the study of access to dental care among adults 65+
Problem and aim	Low use with unknown reasons $\longrightarrow$ estimate unmet need and barriers
Hypotheses	Delay $\geq 1/3$; more frequent with low income and high anxiety
Operationalisation	Use, need, delay, reasons, anxiety, social status
Method and instrument	Structured home interview with a questionnaire; 12 in-depth interviews
Sample	Stratified by city district, random selection from an address list
Organisation	8 interviewers, January–September timetable, ethics approval
Pilot	30 persons; three questions and one skip corrected
Fieldwork and control	Up to 3 visits; call-back to 10% of persons
Processing	Codebook, double entry of 10%, logical checks
Analysis and report	Proportions with 95% CI, comparisons by income; report to the municipality

Teaching example

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Basic concepts

Why a sample

Exhaustive observation of a large or rapidly changing population requires huge resources — people, time and money. The solution is to observe part of the units and draw conclusions about the whole population.

Concept	Meaning
General population	The population studied
Sample	The observed part of it
Parameter	A characteristic in the population
Estimate	The characteristic computed from the sample
Interval estimate	Confidence interval around the point estimate

A point estimate almost never coincides exactly with the parameter. An interval is therefore computed that contains the unknown parameter with a stated probability.

Haralampiev K., Models of representative and non-representative samples, pp. 1–2

Three conditions of sample representativeness

	Condition	Explanation
1	A precisely and clearly defined population	A sample is representative only of the population from which it was drawn. An exhaustive list is needed (in multistage selection — at each stage).
2	Random selection	Each unit has a known, non-zero chance of selection; only then does probability theory apply.
3	No substitution	A person not found is not replaced ad hoc by another: substitution distorts proportions and estimates.

Violating even one condition

makes the sample non-representative. Low response may also distort proportions.

Haralampiev K., pp. 2–3

Sample size: precision, not representativeness

Size and representativeness

Size is unrelated to representativeness: a sample may be small but representative, or large and non-representative. Size determines **precision**: a larger sample gives a narrower error.

Size depends on

the type of selection; the variability of the characteristic; the confidence level (z); the tolerated error (Δ). Variability comes from earlier studies, expert estimates or a pilot.

Example: proportion who delayed treatment

Unknown proportion, $p = 0.5$ (maximum variability); $\Delta = 0.05$; $z = 1.96$.

With replacement: $n = z^2p(1-p)/\Delta^2 = 3.8416 \times 0.25 \,/\, 0.0025 = 384.2 \longrightarrow$ **385**.

Without replacement, $N = 2000$: $n = z^2p(1-p)N \,/\, (\Delta^2N + z^2p(1-p)) = 1920.8 \,/\, 5.9604 = 322.3 \longrightarrow$ **323**.

With 70% expected response, invite $323 \,/\, 0.70 \longrightarrow$ **462** persons.

Angelova P., Slaveva K. (2017), pp. 18–19; Haralampiev K., p. 4

Models of representative (probability) samples

Model	Procedure	Running example
Simple random sampling	Lottery from an exhaustive list; with replacement or without replacement	462 random numbers from the list of 2000 persons aged 65+
Systematic sampling	Interval = N/n; random start; risk if the interval coincides with a cycle in the list	For n = 400: interval 2000/400 = 5; start 3 → 3, 8, 13 ...
Stratified sampling	Grouping by characteristics related to those studied; random selection within each stratum. Improves precision.	Strata — the six districts of the city; selection proportional to the share of 65+ in each
Cluster sampling	Random selection of clusters (geographically close units); one-, two- or multi-stage. Cuts costs, but intra-cluster correlation reduces precision.	20 random postcode areas, 23 persons in each (460)

In practice models are combined: stratification by region, then two-stage cluster selection.

Haralampiev K., pp. 4–10

Non-representative samples

Model	Feature	Limitation
Quota	Grouping as in stratified sampling, but the interviewer chooses persons until the quota is filled	No equal chance; substitution is part of the model; precision cannot be assessed
Typological	"Typical" units chosen by the researcher or experts	Subjective selection; suitable for the preparatory stage
Self-selected respondents	Questionnaires left in an accessible place — e.g. a waiting room	Conclusions only about those who responded, not patients in general
Snowball	Each participant names the next; for hard-to-reach groups	Similar social networks
Postal / online survey	Random selection, but usually about 1/4 of forms return; unknown who completed them	Low response creates a risk of bias

Haralampiev K., pp. 5–10; Chengelova (2016), p. 77; Saykova & Chakalov (1977), p. 223

Respondents and non-respondents: a teaching calculation

Data

Of 200 selected eligible persons, 120 complete the survey; 80 are not found or refuse. 36 of the respondents delayed necessary care.

Measure	Value
Response rate	120/200 = 60%
Delay among respondents	36/120 = 30%
Bound if none of the 80 delayed	36/200 = 18%
Bound if all 80 delayed	116/200 = 58%

Interpretation

The extreme bounds show how uncertain the conclusion is for all 200 persons. They are not a confidence interval and do not correct the error. If non-respondents differ systematically — e.g. sicker or poorer — the estimate of 30% is biased (non-response bias).

Good practice

Report the numbers selected, not reached, refused and completed; compare respondents with the known structure of the population.

Teaching data; AAPOR Standard Definitions

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The questionnaire — the main instrument of an ESS

Definition

The questionnaire is the main instrument and material carrier of individual sociological information and a mandatory element of every sociological survey. It expresses the study programme. Its structural unit is the question.

Types of questionnaire

- self-completion questionnaire;
- interview schedule;
- observation form (chart);
- form for extracting information from documents.

Two kinds of questions

- **research (programme) questions** — in the programme; define the object, subject and hypotheses;
- **survey questions** — in the questionnaire; they collect individual information.

A research question is not put to the respondent verbatim.

Dept. of SMPH, topic 32; Salchev P., Sociology and medicine, slide 41; Chengelova (2016), p. 44

Classification of questions: overview

By content (subject area)	By form of answers	By form of the scale	By place and function	By wording of the question
Factual	Open	Dichotomous (alternative)	Introductory (contact)	Ordinary — direct and indirect
Knowledge (test questions)	Closed	Single answer (multiple choice)	Filter	Illustrated
Opinions, assessments, attitudes	Semi-closed	More than one answer	Main	Case (situational)
Motives		Ranking	Control	Dialogue
Behaviour and intentions		Likert, VAS, semantic differential	Identification (background)	Associative
		Table (matrix)		

A question belongs in every column: "When did you last visit a dentist?" is factual, closed, single-answer, main and direct.

Dept. of SMPH, topic 32; Salchev P., Sociological method, slide 14; Saykova & Chakalov (1977), pp. 220–221

Questions by content

Type	What it measures	Dental example
Facts	Objective events and characteristics	"How many natural teeth do you have?"; "Do you have a removable denture?"
Behaviour	Actual behaviour in a defined period	"In the last 7 days, how many times a day did you brush your teeth?"
Knowledge (test)	Awareness; checked against a correct answer	"Which of the following contains fluoride?" — with one correct option
Opinions and assessments	Subjective assessment of a fact	"How do you rate the service at the dental practice?"
Attitudes	A stable disposition towards an object	"Preventive check-ups are a waste of time" — agreement on a scale
Motives	Reasons for behaviour	"What was the main reason you delayed treatment?"
Intentions	Future actions	"Will you see a dentist in the next 6 months?"

Behavioural and subjective indicators may show different trends because they measure different things.

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), pp. 210–211, 220; Chengelova (2016), pp. 45–46

Open, closed and semi-closed questions

Type	Example	Strengths	Weaknesses
Closed	"How would you rate your teeth and gums?" 1 excellent; 2 very good; 3 good; 4 fair; 5 poor	Quick to answer; easy coding and processing; for well-known phenomena	Hard to construct; no in-depth answers; pressure of ready-made options
Open	"How would you rate your teeth and gums?"	In-depth answers; for new phenomena; respondent's own language	Harder to answer and record; costly coding
Semi-closed	1 good; 2 average; 3 poor; 4 other opinion	Combines both; useful when knowledge is incomplete	Pointless if "other" is not processed

When a question is left open

(1) for a new subject, when it is unclear how respondents think; (2) to test knowledge; (3) when any closing would "tip the scales". After the pilot, open answers can be recoded and the question closed.

Dept. of SMPH, topic 32; Salchev P., Sociology and medicine, slides 33–36; Chengelova (2016), pp. 52–54

Closed questions: number and type of answers

Dichotomous (alternative)

Two mutually exclusive options.

Do you have health insurance? □ yes □ no

Single answer (multiple choice)

Several non-overlapping and exhaustive categories.

Last visit: □ under 6 months □ 6 to under 12 months □ 1 to under 2 years □ 2 years or more □ never

More than one answer

Proportions may total more than 100%; each option is analysed as a separate (yes/no) variable.

Reasons for delay (tick all): □ cost □ distance □ difficult booking □ fear □ other .....

Ranking

Ordering in 1st, 2nd and 3rd place.

Rank the three most important when choosing a dentist: ... price ... proximity ... recommendation

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), pp. 220–221; Chengelova (2016), pp. 51–52

Scale questions: the Likert format

Variants in the textbook

- **5- or 7-point** scale with a midpoint;
- **4-point forced** scale without a midpoint;
- separately, the textbook lists a **2-point alternative** scale: yes / no.

> "An annual preventive check-up is necessary even without complaints."
>
> 1 strongly agree · 2 somewhat agree · 3 neither agree nor disagree · 4 somewhat disagree · 5 strongly disagree

Requirements for the scale

- balanced positive and negative points;
- the same direction throughout a block or declared reverse coding;
- "don't know" and "not applicable" outside the scale, not as a midpoint;
- a single Likert item is ordinal; a sum of items requires evidence of one common concept.

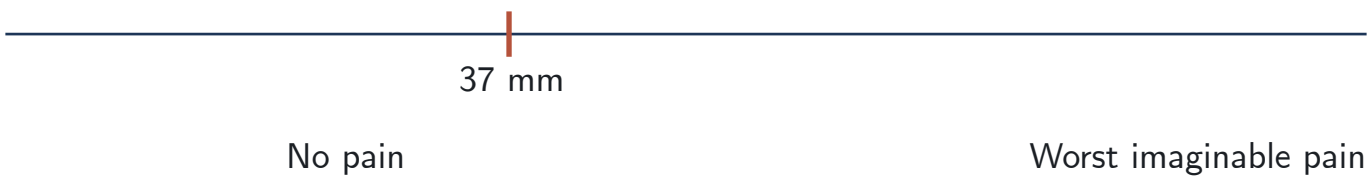
The first and last options attract more answers; in nominal lists the order of options is rotated.

Dept. of SMPH, topic 32; Salchev P., Sociology and medicine, slides 37–38; Chengelova (2016), pp. 50–51

VAS, numerical scale and semantic differential

Visual analogue scale (VAS)

A 100 mm line with labelled ends; the respondent places a mark, and the distance from the start is the score. Choosing a whole number 0–10 is a **numerical rating scale**, not a VAS.



Semantic differential

Pairs of opposite adjectives with 7 points between them; measures the connotative meaning of an object.

Dental treatment is:	1	2	3	4	5	6	7	
painful	□	□	□	□	□	□	□	painless
expensive	□	□	□	□	□	□	□	affordable

Hawker et al. (2011), doi:10.1002/acr.20543; Abramson (2008), ch. 14

Table (matrix) questions

How far do you agree that ...	strongly agree	somewhat agree	neither	somewhat disagree	strongly disagree
a) I can book an appointment when I need one	1	2	3	4	5
b) the cost of treatment is affordable for me	1	2	3	4	5
c) the practice is accessible to me by transport	1	2	3	4	5
d) the staff explain things clearly	1	2	3	4	5

Advantages

Save time and space; compact questionnaire; clear logic of the researcher.

Risks

Monotonous rhythm and mechanical answering ("straight-lining"); a show card is needed for more than 10 sub-items; interviewers need training. Use sparingly, with 3- or 5-point scales.

Chengelova (2016), pp. 54–55

Questions by place and function in the questionnaire

Type	Function and place	Dental example
Introductory (contact)	At the start; introduce the topic, build rapport, give general information	"How would you describe your general health?"
Filter	Divide persons into subgroups; the next question goes only to those concerned	"Did you need dental treatment in the last 12 months?" — if "no" → go to D1
Main	Cover the topic of the study fully	Visits, delay, reasons, anxiety
Control	Check the reliability of other answers; placed several questions away, not right after the one controlled	Age in completed years — and date of birth
Identification (background)	At the end; socio-demographic characteristics	Sex, age, education, income, insurance

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), pp. 220, 223, 227

Filters and skips

C1. In the last 12 months did you need a dental check-up or treatment?

1 yes · 2 no → **go to D1** · 8 don't know → **go to D1**

C2. (Only if "yes" to C1.) Did you receive all the care you needed?

1 yes, without delay → **go to D1** · 2 yes, but after delaying · 3 no, I did not receive it

C3. (If 2 or 3 at C2.) What were the reasons? (all that apply)

Rules

- the skip instruction is placed next to the answer, not in the general instructions;
- "not applicable" (question not asked) is coded separately from "no answer";
- the filter is not built into another question: the two contents get mixed;
- the pilot tests every route through the questionnaire.

Denominator

State which proportion you report: among those in need (C1 = 1) — a conditional proportion; among all respondents — prevalence in the population.

Chengelova (2016), p. 48; Saykova & Chakalov (1977), p. 220

Control questions and "trap questions"

Control questions

A means of revealing contradictions and checking objectivity: the same fact requested with different wording; comparison of related answers; comparison with other sources.

Examples

- "Age in completed years" and "Year of birth";
- "Have you visited a dentist in the last 12 months?" and "When did you last ...?";
- checking against the record with the person's consent.

"Trap question"

A question about a non-existent object, e.g. a fictitious prevention programme: "Have you taken part in the 'Healthy Smile 65+' programme?" A "yes" signals careless or socially desirable answering. Use sparingly, declare it in the protocol, exclude it from the person's score, and never embarrass the respondent.

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), pp. 222, 227

Questions by wording

Type	Essence	Example
Ordinary direct	Asks about the fact directly	"Did you visit a dentist last month?"
Ordinary indirect	The fact is inferred from a broader answer	"What did you do the last time you had toothache?"
Illustrated	With pictures or diagrams; for children or people with low literacy	A faces scale (smiling ... frowning) for pain in children
Case (situational)	A situation is described; an assessment or course of action is asked for	"Two people argue: one says ... , the other ... . Who do you think is right?"
Dialogue	The question is presented as a conversation; an attitude is asked for	Lines of a patient and a dentist about the cost of treatment
Associative	An association evoked by a word or concept	"What comes to mind when you hear the word 'dentist'?"

Indirect, situational and associative questions are used for sensitive topics where a direct question would invite a socially desirable answer.

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), p. 220

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Requirements for questions

Content

- no double, vague or multiple questions;
- no negation or double negation in the wording;
- understandable to people with the least education;
- neutral form, not suggesting an attitude;
- no questions affecting the person's dignity or embarrassing them;
- no questions unrelated to the aims;
- no quantities the person cannot give at the moment.

Technical

- questions, answers and explanatory notes clearly separated;
- a question and its answers on one page;
- enough space for open answers;
- good visual layout;
- format suited to the object of study.

The more complex the phenomenon, the simpler the question should be.

Salchev P., Sociological method, slides 12–13; Dept. of SMPH, topic 32; Chengelova (2016), p. 58

How the respondent's answer is formed

1. Decoding — understanding the words of the question → **2. Interpreting** — what is asked, recall, judgement → **3. Encoding** — choosing an answer from the scale

Where errors arise

- **decoding:** unknown word ("periodontium"), jargon, translation;
- **interpreting:** different understanding of "regularly", "the other day"; difficult recall;
- **encoding:** no suitable category, pressure towards the "safe" answer.

Ten rules of Bulgarian researchers (selected)

The question measures what we think; short and clear; unambiguous; no two questions in one; understandable; no suggestion; suitable type for the indicator; matched to respondents' knowledge; precise time frame.

Chengelova (2016), pp. 45–50, 237–241

Typical errors: double, leading, negative, jargon

Error	Poor wording	Correction
Double-barrelled	"Do you brush your teeth and floss regularly?"	Two questions: brushing frequency in the last 7 days; number of days with interdental cleaning (0–7)
Leading (suggestive)	"Don't you think preventive check-ups are important?"	"In your opinion, how important are preventive check-ups?" — scale from "very important" to "not at all important"
Presumption	"Why do you neglect your teeth?"	"Have there been times when you delayed a visit? If so — what were the reasons?"
Negation / double negation	"Are you not against water fluoridation?"	"Do you support or not support water fluoridation?"
Jargon	"Do you have gingival bleeding during oral hygiene?"	"Do your gums bleed when you brush your teeth?"

Salchev P., Sociological method, slide 13; Chengelova (2016), pp. 46–48

Typical errors: memory, period, categories, social desirability

Error	Poor wording	Correction
Memory burden	"How many times in your life have you had toothache?"	"In the last 12 months have you had toothache?" — yes/no; if "yes" — how many times
Vague period	"Do you see a dentist regularly?"	"When did you last visit a dentist?" with clear intervals
Overlapping categories	Age: 60–65; 65–70; 70–75	60–64; 65–69; 70–74; 75+
Non-exhaustive categories	Cover: NHIF; private insurance	NHIF; private; both; none; don't know
Social desirability	"Do you brush twice a day, as dentists recommend?"	"How many times did you brush your teeth yesterday?" — no recommendation in the question
Impossible quantities	"How much did you spend on dental services in the last 5 years?"	Spending in the last 12 months in intervals

Dept. of SMPH, topic 32; Chengelova (2016), p. 49; Saykova & Chakalov (1977), pp. 221–223

“Don’t know”, the neutral point and order of answers

Options “don’t know”, “can’t say”

Researchers are divided. Supporters want maximum freedom; opponents note that these options are chosen by people unwilling to state an opinion, unwilling to make an effort or not feeling competent. Forcing a choice may produce social conformity.

A decision for each question

For facts and knowledge — “don’t know” is a meaningful answer. For attitudes — decide after the pilot. Always a separate code for “no answer”.

Balance and order

- the scale has equal numbers of positive and negative points around a neutral point;
- in nominal lists the first and last options attract more answers — rotate;
- for strongly taboo topics the scale may start with the negative end;
- after three identical answers in a table the interviewer reminds the respondent of the scale.

Chengelova (2016), pp. 50–51

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Structure of the questionnaire

Part	Content
Title part	The institution conducting the survey; type of questionnaire and topic; form number and interviewer code; date and start time
Address to respondent	Aim of the survey; how the person came into the sample; how information will be used; assurance of anonymity and voluntariness; thanks
Instructions	General guidance on marking answers; instructions at specific questions (skips, "all that apply")
Introductory part	Introductory, easy and neutral questions
Main part	Thematic blocks with main, filter and control questions; difficult ones in the middle
Background section	Identification (socio-demographic) questions
Closing part	Thanks; space for interviewer notes; end time

Dept. of SMPH, topic 32; Salchev P., Sociology and medicine, slides 42–44; Chengelova (2016), p. 56

Address to the respondent: an example

Dear Madam / Sir,

The Department of Social Medicine and Public Health of the Medical University of Plovdiv is conducting a survey on access to dental care for people aged 65 and over in Plovdiv. You were chosen by random selection from the city's address list. Your opinion is important for better planning of prevention and treatment.

Participation is voluntary. You may decline any question or stop at any time, and this will not affect your treatment. Your answers are confidential: names and addresses are not written on the questionnaire, and results are presented only in aggregate. It takes about 15 minutes.

Circle the number of the answer that applies to you, unless the question says otherwise.

Thank you for your time!

— Example address (teaching text)

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), pp. 221, 224

Order of questions

Principles

- from easy and interesting to more difficult; the most difficult in the middle;
- do not start with personal questions — sex, education, income at the end;
- logical blocks with short transition phrases;
- **funnel:** from general to specific — "general health" → "oral health" → "last visit" → "reasons";
- a constant recall period within a block;
- control questions several questions away from the one controlled;
- sensitive questions after trust is established.

Blocks in the running example

A. General and oral health (introductory)

B. Use of dental care

C. Need, delay and reasons (filters)

D. Opinions on access (table question)

E. Dental anxiety (validated scale)

F. Background

G. Thanks and notes

Saykova & Chakalov (1977), p. 223; Chengelova (2016), pp. 48, 56

Length, duration and layout

Guide	Source
Up to 30–40 minutes for self-completion; up to 1 hour for an interview	Department textbook; Salchev
Up to 25–30 questions in a group survey	Salchev, Chapter 10
No more than 30–35 questions in a questionnaire	Saykova & Chakalov, p. 224
An interview over 15–20 minutes tests respondents' patience	Chengelova, p. 45

Graphic layout

Clearly separated blocks and transitions; questions, instructions and answers clearly distinguished; a different font for interviewer notes; numbering of questions and codes.

Personal data are not on the form

Names, address and telephone are not written on the questionnaire. Contact data are kept separately, in the contact sheet. While linkage remains possible, the data are confidential (pseudonymised), not anonymous.

Dept. of SMPH, topic 32; Chengelova (2016), pp. 45, 55–57

Codes and codebook

No.	Variable	Question (short)	Codes	Missing
B1	last_visit	Last visit	1 under 6 mo.; 2 6–<12 mo.; 3 1–<2 y; 4 ≥2 y; 5 never	9 no answer
C1	need12	Need for care, 12 months	1 yes; 2 no; 8 don't know	9 no answer
C2	unmet	Was care received	1 without delay; 2 after delay; 3 not received	7 not applicable; 9
C3a–e	reason_cost ...	Reasons (all that apply)	Each option: 1 ticked; 0 not ticked	7 not applicable; 9 question left blank
D1a–c	acc_book ...	Opinions on access	1–5 (1 = strongly agree)	9 no answer
F2	age	Age in completed years	Number	999 no answer

The codebook is prepared before fieldwork

For each variable: name, exact wording, codes, direction of the scale, reverse coding, codes for "not applicable" and "no answer", rules for open answers. It is an appendix to the report.

Saykova & Chakalov (1977), pp. 214, 228; Abramson (2008), ch. 23

Sample questionnaire (1): title part and blocks A–B

MEDICAL UNIVERSITY OF PLOVDIV · Department of Social Medicine and Public Health

QUESTIONNAIRE "Access to dental care for people aged 65+" · Form no. ..... · Interviewer ..... · Date ..... · Start .....

Block A. Health

A1. How do you rate your general health?

1 very good · 2 good · 3 fair · 4 poor · 5 very poor

A2. And the condition of your teeth and gums?

1 very good · 2 good · 3 fair · 4 poor · 5 very poor

A3. How many natural teeth do you have?

1 none · 2 1–9 · 3 10–19 · 4 20 or more · 8 don't know

Block B. Use of care

B1. When did you last visit a dentist?

1 under 6 months · 2 6 to under 12 months · 3 1 to under 2 years · 4 2 years or more · 5 never

B2. (If B1 = 1 or 2) What was the reason?

1 preventive check-up · 2 pain or problem · 3 dentures · 4 other .....

B3. Was the practice contracted by the NHIF?

1 yes · 2 no · 8 don't know

Annotation: introductory questions (A1–A2), factual with "don't know" (A3), filter with skip (B2), semi-closed (B2).

Teaching example

Sample questionnaire (2): block C — need and delay

Block C. Need for care (last 12 months)

C1. Did you need a dental check-up or treatment?
1 yes · 2 no → **D1** · 8 don't know → **D1**

C2. Did you receive all the care you needed?
1 yes, without delay → **D1** · 2 yes, but after delaying · 3 no, I did not receive it

C3. What were the reasons? (**tick all that apply**)
a □ cost · b □ distance / transport
c □ difficult booking · d □ fear of treatment
e □ other (specify) .....

C4. Which of these was the **main** one? (**one answer**) .....

Annotation

- C1 is a filter; "don't know" leads to the next block;
- C2 separates delay from not receiving care;
- C3 is semi-closed, with more than one answer; each option is a separate variable;
- C4 sets a priority: the "main reason" is not inferred from C3;
- the conditional proportion "delayed" is calculated among persons with C1 = 1.

Teaching example; Chengelova (2016), pp. 48, 51–53

Sample questionnaire (3): blocks D–G

Block D. D1. How far do you agree: 1 strongly · 2 somewhat · 3 neither · 4 somewhat not · 5 not at all
a) I can book an appointment when I need one ... 1 2 3 4 5
b) the cost of treatment is affordable for me ... 1 2 3 4 5
c) I can easily reach the practice ... 1 2 3 4 5
Block E. Dental anxiety — Modified Dental Anxiety Scale MDAS (5 items) in an approved language version.
Block F. F1. Sex · **F2.** Age in completed years ..... · **F3.** Education · **F4.** How do you manage your monthly expenses? 1 easily ... 4 with great difficulty · **F5.** Are you health-insured?
Block G. Thank you! · End ..... · Interviewer notes .....

Annotation

- D is a Likert table question with one direction;
- E uses a validated instrument without changes;
- F — background at the end; income is asked indirectly via managing expenses, which reduces refusals;
- G — thanks and control of duration.

Teaching questionnaire

Not a validated instrument: requires a pilot, cognitive interviews and reliability assessment.

Teaching example; Humphris et al. (2009), doi:10.1186/1472-6831-9-20

Reliability and validity of the questionnaire

Reliability

Consistency of results on repeated measurement under the same conditions.

- **test–retest:** the same persons after 2 weeks;
- **internal consistency:** Cronbach's alpha for items of one scale;
- **inter-rater:** agreement of two interviewers or coders.

Alpha: a teaching calculation

$k = 4$ items; sum of item variances $= 4$; variance of the total score $= 10$.

$\alpha = k/(k-1) \times (1 - 4/10) = 4/3 \times 0.6 = \mathbf{0.80}$.

Validity

The extent to which the instrument measures what it is intended to measure.

- **face and content:** does it cover all dimensions of the concept;
- **criterion:** agreement with an external criterion, e.g. clinical examination;
- **construct:** the expected relations with other concepts.

High alpha does not prove validity

It shows consistency in a given sample, but not that the scale measures the intended concept or is unidimensional.

Abramson (2008), ch. 16–17; Cronbach (1951), doi:10.1007/BF02310555; Tavakol & Dennick (2011)

Established dental instruments and adaptation

OHIP-14

Short-form Oral Health Impact Profile: 14 items from 7 domains of oral health-related quality of life; usually 0–4 per item, total 0–56. A higher total means more frequent adverse impacts. It is not a count of carious teeth.

MDAS

Modified Dental Anxiety Scale: 5 items scored 1–5, total 5–25; 19 or more points signal high anxiety, but are not a diagnosis.

Translation and adaptation

A free translation is not a validated version. The task is to find an exact Bulgarian equivalent that keeps the meaning; otherwise respondents misunderstand the question. Forward and back translation, expert review, cognitive interviews and psychometric testing are needed.

Keep the validated wording, answers, period and scoring rules.

Slade (1997), doi:10.1111/j.1600-0528.1997.tb00941.x; Humphris et al. (2009); Chengelova (2016), p. 47

Ethics, anonymity and data protection

Basic requirements

- voluntariness and informed consent; refusal does not affect treatment;
- real, not merely declared, anonymity: forms are not collected by someone linked to the persons at work;
- in a direct group survey — a sealed envelope and a box;
- the minimum data needed for the aim;
- ethics committee approval for research with patients.

GDPR — Regulation (EU) 2016/679

- health data are a special category (Art. 9);
- a legal basis (Art. 6) and an Art. 9 condition are needed;
- informing data subjects (Arts 13–14);
- **pseudonymisation is not anonymisation:** coded data remain personal if the key exists;
- security measures (Art. 32) and safeguards for research (Art. 89).

Saykova & Chakalov (1977), p. 224; Chengelova (2016), pp. 56–57; Regulation (EU) 2016/679

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The survey (questionnaire) method: definition

Definition

A research method in which information is collected through **questions posed in writing and answers recorded in writing**, organised in a specially prepared questionnaire. It collects information on opinions, attitudes, motivation, value orientations, wishes and intentions, social role and position of the persons studied.

Surveying according to Salchev

Direct · non-direct · indirect surveying.

Mass surveys according to Chengelova

Two classes: (1) varieties of the standardised interview; (2) self-completion survey methods, including online.

Terminology

A questionnaire survey is usually self-completed. A structured (standardised) interview uses a questionnaire, but answers are recorded by the interviewer. The indirect survey is a kind of structured interview.

Dept. of SMPH, topic 32; Salchev P., Sociological method, slide 18; Chengelova (2016), pp. 23–24

Types of survey: advantages and limitations

Type	Advantages	Limitations
Direct group — persons are gathered and complete forms simultaneously	Many persons in a short time; anonymity; few interviewers; convenient for organised groups (students, staff)	Complex organisation; unsuitable for unorganised persons; group of 8–10 to 35–40; up to 25–30 questions
Direct individual — the person completes it alone	Reaches each person; convenient time and place	Slow; doubts about anonymity; influence of third parties; not for testing knowledge
Postal / online	No interviewers; wide coverage; economical	Incomplete return; unknown who completes; not for knowledge; digital exclusion
Indirect — the interviewer completes it from various sources	Information on all intended persons; no limit on questions; independent of educational level	Expensive; many well-trained interviewers; possible distortion

Dept. of SMPH, topic 32; Salchev P., Sociological method, slide 19

Direct group anonymous survey with a ballot box

Organisation

Persons are gathered in a room in groups of no fewer than 7–8 (for anonymity) and no more than 15–20 (for independence of answers). The interviewer ensures independent completion; conversation between participants is not allowed because it makes answers uniform. Completed forms are sealed in an envelope and dropped in a box.

Dental example

A survey of oral health habits among dental students: completion in a classroom, without a teacher from the course present, a box at the exit, no attendance list on the forms.

Anonymity "in words only"

A survey declared anonymous but collected by someone who knows the persons at work is not anonymous.

Saykova & Chakalov (1977), p. 224

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Interview: definition and characteristics

Definition

A form of questioning based on direct verbal communication between two or more persons through oral questions and oral answers, in order to collect primary empirical sociological information. It differs from a journalistic interview and a job interview. Taking a medical history is an interview in which the interviewer is the doctor.

Characteristics

- information on the person's behaviour and self-awareness;
- questions and answers are recorded by the researcher;
- requires psychological qualities and sociological training;
- allows repeat meetings.

Preparation

- type of interview;
- place and time;
- developing and testing the questionnaire or guide;
- selection and briefing of interviewers.

Dept. of SMPH, topic 33

Types of interview

Criterion	Types
By the questionnaire (degree of standardisation)	**Structured** (standard, formal) — questionnaire with mainly closed questions; **semi-structured** (semi-free) — guide with open, semi-open and closed questions; **unstructured** (free, open, in-depth) — no fixed order, answers recorded in the person's own words
By the number of persons	Individual; collective — group interview and focus group
By frequency	Single; repeated (repeat meetings, panel)
By mode	Face to face; remote — telephone, online
Computer-assisted	CAPI — computer-assisted personal interview; CATI — computer-assisted telephone interview; CAWI — web survey (self-completion)

Chengelova also discusses the narrative interview — a story of lived experience that the interviewer does not interrupt.

Dept. of SMPH, topic 33; Salchev P., Sociology and medicine, slide 46; Chengelova (2016), pp. 24–25, 62–66

Standardised interview: advantages and limitations

Strengths

- answers are recorded by the interviewer;
- repeat meeting and clarification of unclear points are possible;
- additional information on behaviour, not only on awareness;
- a time convenient to both sides;
- better quality of information;
- the influence of third parties is removed;
- accessible presentation and approved explanations, keeping the wording.

Weaknesses

- requires good psychological and sociological training of the interviewer;
- additional costs for selecting, training and supervising staff;
- note-taking distracts the interviewee and causes unease;
- interviewer effect on answers.

Dental example

For older adults with poor eyesight, a structured home interview replaces self-completion.

Salchev P., Sociology and medicine, slide 47; Chengelova (2016), ch. 1

In-depth interview: essence

Essence

A purposeful research contact in the form of a relaxed conversation in the person's natural setting. Each interview is unique: the researcher "digs" where the respondent's reasoning points. The instrument is minimally structured — a list of very general questions; in classical qualitative research the researcher is the main instrument.

Strengths

A spontaneously reproduced social reality, as the person sees and experiences it; new ideas and hypotheses; people's language and concepts for building a later questionnaire.

Limitations

Knowledge concerns a small group and is not transferred to the population; the situation cannot be repeated. Themes are not population percentages.

Chengelova (2016), pp. 66–68

Technology of the in-depth interview: eight stages

	Stage	Content
1	Subject field	A broad problem; more clearly defined if the interview follows a quantitative study
2	Aims and functions	According to the research strategy — case study, phenomenology, etc.
3	Research question	One central question and 5–7 sub-questions
4	Choice of units	Purposive selection, snowball; the number — up to the "saturation point", when explanations start to repeat
5	Instruments	A guide with open questions in the respondent's language
6	Techniques	Neutral "ice-breaking" questions; active listening; neutral probes; audio recording
7	Fieldwork	Conducted by the researcher or by an interviewer familiar with the subject
8	Processing and analysis	Transcription, coding, thematic analysis and interpretation

Chengelova (2016), pp. 75–80

Semi-structured interview guide: an example

Central question

How do older people decide to seek or to delay dental care?

Opening: "Tell me about the last time you thought of going to the dentist."

Topics and sub-questions:

1. How did you realise you needed care?
2. Whom did you ask for advice?
3. What made it easier or harder?
4. What was the experience at the practice?
5. What would make you go earlier?

Closing: "Is there anything I haven't asked?" — "Who else could talk about this?"

Probes

"What happened next?" · "Can you give an example?" · "What do you mean by …?" — neutral, without suggestion.

Selection

People with and without delay, men and women, with different incomes and from different districts — for diversity of experience, not representativeness.

Chengelova (2016), pp. 76–79; Britten (1995), doi:10.1136/bmj.311.6999.251

Conditions of the interview and role of the interviewer

Conditions

- the person must not feel interrogated; their trust is won;
- they are not criticised or lectured for their opinions;
- they are guided and kept from rambling, unnecessary answers;
- start with general questions and gradually deepen the topic.

Principles for the interviewer

- no preconceptions about expected answers;
- ability to listen and summarise what was said so that the person agrees;
- no suggestion of any opinion;
- observation of one's own and the other's reactions;
- no heated argument;
- the conversation is guided, but only in the desired direction.

The department textbook gives an example plan for gradual deepening — from introduction and age to values, fears and intimate topics. The plan illustrates an approach, not a template.

Dept. of SMPH, topic 33; Saykova & Chakalov (1977), pp. 225–226

Interviewer–respondent interaction

Phases of interaction

1. **contact-establishing** — introduction, aim, consent;
2. **mutual reflection** — each side forms an image of the other;
3. **communicative exchange proper** — questions and answers;
4. **closing** — thanks, respondent's questions, parting.

Interviewer effect

Deviations in answers due to the characteristics and behaviour of the interviewer.

Psychological types of respondents (Salchev)

- **sophist** — frequent contradictions; seek the truth;
- **eager to confess** — many unnecessary details; keep the conversation going;
- **egocentric** — exaggerates their own role; show more interest in the person;
- **naive** — sincere; direct approach;
- **scholarly** — logic and erudition; careful preparation.

Chengelova (2016), ch. 4–5, pp. 142–200; Salchev P., Sociological method, slide 16

Recording, transcription and refusals

Recording

An in-depth interview is always recorded — usually audio; less often notes or shorthand. The recording allows returning to the source and comparing accounts. The person is informed beforehand and may refuse.

Transcription

Verbatim, with pauses and non-verbal reactions marked; identifying details are removed; participant codes are kept separately.

Why people refuse

Prior attitudes; perception of the organisers, topic and aim; the mode of the interview; the interviewer; the situation. In Bulgarian practice refusals in telephone interviews reach 50%.

How to reduce refusals

A clear and meaningful aim; respect for time; guaranteed confidentiality; a convenient time; a well-trained interviewer.

Chengelova (2016), pp. 42, 79, 326–343

Focus group

Essence and organisation

- a conversation with several participants, focused on one problem area;
- usually 8–12 participants; 1.5–2 hours;
- script: opening, introductions, aim; a few key questions and aids;
- **moderator** — introduces topics, does not judge opinions; **assistant moderator** — notes and support;
- audio and video recording after prior notice;
- participants are not in hierarchical or competitive relations; best if they do not know each other.

Cognitive potential

Typical attitudes and orientations; delicate topics; generating hypotheses and questions for a quantitative study.

Limitations

The group norm suppresses dissenting views; dominant participants. Confidentiality outside the group cannot be guaranteed.

Dental example

Two groups of parents — on why they do not bring children for preventive check-ups.

Dept. of SMPH, topic 33; Chengelova in Atanasov et al. (2004), ch. 9, pp. 173–176; Kitzinger (1995)

Comparison: questionnaire survey and interview

Criterion	Survey (self-completion)	Standardised interview	In-depth interview / focus group
Recording	In writing, by the person	Orally, recorded by the interviewer	Audio recording, transcription
Instrument	Questionnaire	Questionnaire / interview schedule	Guide with open topics
Number of persons	Hundreds and thousands	Hundreds	Tens; 8–12 in a focus group
Selection	Probability — for representativeness	Probability	Purposive; until saturation
Strength	Anonymity; low cost; speed	Completeness; fewer omissions; clarification	Motives, meanings, experiences
Main risk	Non-return; misunderstanding	Interviewer effect; costs	Not for prevalence; subjectivity
Result	Proportions, means, associations	Proportions, means, associations	Themes, typologies, hypotheses

Dept. of SMPH, topics 32–33; Salchev P., Sociological method; Chengelova (2016)

Summary and questions for discussion

Key points

- an ESS passes through preparation, conduct, processing and analysis; the questionnaire is the end product of the programme;
- operationalisation links the concept with indicators and questions;
- representativeness requires a defined population, random selection and no substitution;
- every question has content, form, function and place;
- survey and interview complement each other.

For discussion

1. What are the indicators of "dental anxiety" and of "unmet need"?
2. Why are 1000 questionnaires in a waiting room not representative of the population?
3. When would you prefer an in-depth interview to a survey?

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Thank you for your attention!