Observation and documentary methods

Sociological methods in medicine and dentistry

Practical Class 14 · Dental Public Health · 2026/2027

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Contents and aims of the lecture

After the lecture the student can

- define observation and classify its types;
- describe the procedure of observation and construct an observation chart (protocol);
- recognise observer errors and assess inter-observer agreement;
- classify documents and assess their quality;
- describe the official sources of health information in Bulgaria;
- carry out content analysis with units, categories and a coding sheet;
- explain triangulation and compare the four sociological methods.

Materials for the class

15-minute preparation

Tasks with model answers

Slides (PDF)

Continuation of Class 13: surveys and interviews ask people; observation and documents show behaviour and recorded facts.

CONTENTS

1. **Observation as a method**
2. Procedure of observation
3. Documentary method
4. Triangulation and choice of method

Observation: definition

Definition (department textbook)

Recording of primary information through purposeful perception of certain phenomena and processes of objective reality in real time and space (the behaviour of those studied), in accordance with the study programme. It answers the questions: **who, what, how, where, when, why and under what conditions**.

Distinctive feature

The observer records facts, actions and statements at the moment they occur, not from memory or from the respondent's account.

Scientific, not everyday observation

It differs from statistical "observation" (a synonym for a whole survey) and from everyday perception: it has a programme, units, categories and recording rules.

Dept. of SMPH, topic 32; Saykova & Chakalov (1977), p. 217; Chengelova in Atanasov et al. (2004), p. 164

When observation is used

Observation is recommended in order to

- obtain authentic information on behaviour with less influence from the study itself;
- identify natural behaviour patterns in a community;
- capture verbal and non-verbal aspects of behaviour;
- study small groups and closed communities that cannot be reached otherwise;
- collect additional information during an interview — the respondent's surroundings.

In dentistry

- dentist–patient communication when explaining the treatment plan;
- compliance with infection-control rules;
- children's behaviour during supervised tooth-brushing in kindergarten;
- organisation of the waiting room and waiting times;
- accessibility of the practice for people with disabilities.

Chengelova in Atanasov et al. (2004), p. 165; Mays & Pope (1995), doi:10.1136/bmj.311.6998.182

Features of observation

Feature	Content
Direct link with the object	The researcher is part of the society studied; "the eyes see what they want to see". Different observers describe the same group differently.
Emotional perception	The observer's personality affects the result. The closer the link with the object, the greater the risk of an emotionally loaded product.
Difficult verification (validation)	Another observer, or the same one at another time, obtains different results because the group changes.

Observation therefore requires predefined units, categories and recording rules, training and checking of agreement between observers.

Chengelova in Atanasov et al. (2004), pp. 165–166

Types of observation (department textbook)

Criterion	Types
By who observes	External observation · self-observation (recording by the persons themselves, e.g. a food diary)
By conditions	Natural conditions (home, workplace) · laboratory conditions (a place atypical for the individual)
By degree of anonymity	Overt · covert
By phenomenon studied	Non-verbal behaviour · verbal behaviour · simulation — of predefined actions
By frequency	Single · repeated
By technical means	Without technical means · audio · video · combined
By degree of involvement	Without a researcher · complete participant · participant as observer · observer as participant · complete observer

Chengelova adds the criterion **degree of formalisation**: structured and unstructured observation.

Dept. of SMPH, topic 32; Salchev P., Sociological method, slide 20; Chengelova in Atanasov et al. (2004), pp. 166–167

Observer role: from complete participant to complete observer

Role	Type of observation	Essence	Dental example
Complete participant	Internal covert	The researcher is a group member; the group does not know about the study	A student working as an assistant without disclosing the study — ethically unacceptable without special approval
Participant as observer	Internal overt	A group member who has disclosed the role	A dental assistant working in the team and recording a declared observation
Observer as participant	External overt	Brief contacts; the researcher role dominates	A researcher attends school check-ups with everyone's consent
Complete observer	External covert	No interaction with those observed	Recording waiting times in a waiting room — without identifying persons

The classification of roles was introduced by R. L. Gold (1958) and is adopted in the department textbook.

Dept. of SMPH, topic 32; Gold (1958), doi:10.2307/2573808

Types of observation according to Saykova and Chakalov

Type	Essence
Ordinary	The observer is outside the object and records facts from the side, "photographing" them
Participating	The observer is part of the group, takes part in the process and records facts in parallel
Included	The observer is a participant but observes covertly, without the others knowing
Experimental	The group is created artificially; new conditions are introduced; there are experimental and control groups (laboratory and field experiment)
Self-observation	The person observes himself or herself and records facts according to the programme
Instantaneous (work sampling)	Many observations at randomly chosen moments; share of time for an activity = moments with that activity / all observations

Saykova & Chakalov (1977), pp. 217–218

Structured and unstructured; overt and covert observation

Structured

Predefined categories and a chart; counting and measuring; allows comparison and checking of agreement. Suitable when the behaviour is known and can be defined operationally.

Unstructured

Detailed field notes; categories emerge during analysis. Suitable for new and poorly known phenomena.

Overt observation

Those observed know they are observed. Ethically more acceptable, but causes reactivity — a change in behaviour.

Covert observation

Reduces awareness-related reactivity but affects autonomy and privacy. In a health facility it requires justification before an ethics committee, data protection and usually subsequent debriefing; it is not used to identify persons.

Chengelova in Atanasov et al. (2004), pp. 166–167; Mays & Pope (1995)

Included (participant) observation

Essence

The researcher, becoming part of the observed group for a period, collects information by watching the usual, spontaneous behaviour of the persons in their natural setting. In the literature this usually means covert participant observation.

Functions

- generating new ideas at an early stage;
- testing theoretical models;
- studying the hierarchy of relations in the community;
- testing the system of indicators;
- testing the workability of questionnaires.

Risk: "abandoning" the scientific position

The researcher may integrate into the group and lose distance. The value of the conclusions is then in doubt.

Chengelova in Atanasov et al. (2004), pp. 167–168

From Bulgarian experience: participant observation in a work team

The case

In 1980 a sociology student (K. Manolov) studied staff turnover in an electrical maintenance team at a metallurgical plant. The shop manager knew the real aim; the team accepted the newcomer as a student on placement.

Course of observation

At first — a "solid wall" of looks without contact. Acceptance through the trust of a significant group member. Daily work alongside others, questions in suitable situations, recording from memory immediately after the working day.

Ethical moment

The manager asked the researcher to report what was happening in the shop. The researcher firmly refused, and the sociologists persuaded the manager that this was neither ethical nor possible.

Lessons: a clear prior agreement, protection of those observed, prompt recording, reflection on one's own role.

Chengelova in Atanasov et al. (2004), pp. 169–171

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1. Observation as a method
2. **Procedure of observation**
3. Documentary method
4. Triangulation and choice of method

Stages of observation

	Stage	Decisions
1	Programme	Problem, aim, tasks, hypotheses — as in any ESS
2	Objects	A team as a whole, a precisely defined group or individuals
3	Units of observation	Events, actions, behaviour patterns to be recorded
4	Categories and indicators	A system of concepts for description; operational definitions
5	Organisation	Period, days and hours, places, number of observers and their role
6	Instrument	Observation chart (protocol), diary, technical means
7	Training and pilot	Two observers independently; comparison; refining the rules
8	Conduct and recording	Immediate recording; separating description from interpretation
9	Processing and report	Relating to the categories; analysis; analytical report

Chengelova in Atanasov et al. (2004), pp. 165, 168–169

Units of observation and operational definitions

Unit of observation

The single element recorded: an event (a patient's question), an action (demonstrating a brushing technique), a behaviour pattern (avoiding eye contact), a time interval.

Category	Operational definition (when "yes" is marked)
Advice on fluoride toothpaste	The dentist explicitly names a fluoride toothpaste or its concentration
Demonstration of technique	Shows the movements with a brush or a model, not only describes them
Checking understanding	Asks the patient to repeat or show the instruction ("teach-back")
Patient's question	The patient asks about treatment, cost or home care

Without an operational definition two observers will mark different things under the same category.

Chengelova in Atanasov et al. (2004), pp. 168–169; Abramson (2008), ch. 11

Selecting observations: by time and by event

Time sampling

Predefined or randomly chosen moments or intervals are observed; what happens in them is recorded. Suitable for frequent and long-lasting activities.

Event sampling

Every occurrence of a defined event is recorded — e.g. every patient question about cost. Suitable for rare and clearly bounded events.

Instantaneous observations: a teaching calculation

At 200 random moments during the practice's working days, at 46 the dentist is talking with the patient about prevention.

Share of time = 46 / 200 = **23%**.

For an 8-hour working day (480 min): 0.23 × 480 ≈ **110 min**.

The multi-moment method also records the exact time of each observation and allows the duration of individual activities to be estimated.

Saykova & Chakalov (1977), p. 218; teaching data

Observation chart (protocol): contents

Title part

- observation and observer codes;
- date, start and end time;
- place (type of practice, no patient name);
- observer role (overt/covert, participation);
- conditions that may influence results.

Main part

- categories with codes and operational definitions;
- scale or count (yes/no; frequency; duration);
- space for short descriptive notes.

Requirements

- categories are exhaustive and mutually exclusive within one variable;
- one basis for each group of categories;
- quick recording — ticks, codes;
- separate fields for description and interpretation;
- instructions for the observer;
- piloting and checking agreement.

Ethics

The chart contains no names or data by which the patient can be identified.

Chengelova in Atanasov et al. (2004), pp. 168–169; Mays & Pope (1995)

Example: chart for observing the preventive conversation

OBSERVATION CHART No. ..... · Observer ..... · Date ..... · Start ..... · End ..... · Visit type: □ first □ follow-up · Role: overt, non-participant

No.	Category (see the operational definitions)	yes	no	Note (description)
1	The dentist asks about brushing method and frequency	□	□	
2	Gives advice on fluoride toothpaste	□	□	
3	Demonstrates the brushing technique	□	□	
4	Advises on interdental cleaning	□	□	
5	Discusses dietary habits (sugars)	□	□	
6	Checks understanding (teach-back)	□	□	
7	The patient asks at least one question	□	□	
8	Duration of the preventive conversation			..... min

Annotation: closed categories for counting; duration is a metric indicator; description is kept separate from interpretation.

Teaching example

Example: observing supervised toothbrushing in a kindergarten

Indicator (per child)	yes	partly	no
Uses fluoride toothpaste, a "pea-sized" amount	□	□	□
Brushes all surfaces	□	□	□
Brushes for at least 2 minutes	□	□	□
Spits out without heavy rinsing	□	□	□
The teacher corrects the technique	□	□	□

Organisation

Event sampling: each child in the group during one brushing session; two observers in the first 3 sessions; duration measured with a stopwatch.

Linking with other methods

A survey of parents on brushing at home and documents (health profiles) on caries — triangulation of behaviour, reported behaviour and outcome.

Consent

Written informed consent of parents and permission from the kindergarten.

Teaching example

Recording: diary, field notes, technical means

Ways of recording

- **chart (protocol)** in structured observation;
- **diary** — in participant observation the researcher writes down from memory everything noted during the day, as quickly as possible;
- **field notes** — brief during observation, expanded immediately after;
- **audio and video recording** — with informed consent and data protection.

Descriptive record	Interpretation (separate)
The patient looked at the clock twice after the price was given	The patient was worried about cost?
The dentist kept talking when the patient began a sentence	The dentist did not listen to the patient?
The patient asked what "interdental" means	Low health literacy?

The interpretation is recorded as a hypothesis and checked with other observations or methods.

Chengelova in Atanasov et al. (2004), p. 169; Mays & Pope (1995)

Observer errors

Error	Essence	How to limit it
Selective perception	The observer sees what he or she expects or wants to see	Predefined categories; two observers
Halo effect	The overall impression of a person colours the rating of individual indicators	Rate each indicator separately by definition
Logical error	Indicators that "should" go together are marked together	Operational definitions; review of discrepancies
Central tendency and leniency	Avoiding extreme ratings or systematically rating higher	Training with examples; scale anchors
Fatigue and "drift"	Gradual change in how categories are applied	Short sessions; periodic repeat double coding
Emotional involvement	Loss of distance in long participant observation	Reflexive notes; supervision

Chengelova in Atanasov et al. (2004), pp. 165–166; Abramson (2008), ch. 16

Reactivity and the Hawthorne effect

Reactivity

A change in behaviour because people know they are being observed. Part of the wider "research participation effect"; in the literature often called the Hawthorne effect.

Dental example

With overt observation of hand hygiene, compliance may rise only while the observer is present.

How to limit it

- a familiarisation period; data from the first sessions analysed separately;
- prolonged or repeated observation;
- an unobtrusive observer position;
- comparison with documents and other sources;
- reporting the limitation.

Not a "correctable constant"

The size and direction of the effect depend on conditions; the systematic review finds no single effect.

McCambridge et al. (2014), doi:10.1016/j.jclinepi.2013.08.015

Inter-observer agreement: a teaching calculation

Data

Two observers independently mark the category "demonstrates the technique" in 20 check-ups.

	B: yes	B: no	Total
A: yes	6	2	8
A: no	2	10	12
Total	8	12	20

Calculation

Observed agreement $p_o = (6 + 10)/20 = \mathbf{0.80}$.
Chance-expected $p_e = (8/20)(8/20) + (12/20)(12/20) = 0.16 + 0.36 = \mathbf{0.52}$.
Cohen's $\kappa = (p_o - p_e)/(1 - p_e) = 0.28/0.48 \approx \mathbf{0.58}$.

Interpretation

Agreement is not validity: both may apply a wrong definition in the same way. Category prevalence affects κ. Discrepancies are discussed and definitions refined.

Cohen (1960), doi:10.1177/001316446002000104; teaching data

Observation: advantages and disadvantages

Advantages

- systematic, planned and purposeful;
- studies the phenomenon in depth;
- in real time, place and setting;
- uses modern technical means;
- direct study of the object;
- can be repeated;
- information on actual, not reported, behaviour.

Disadvantages

- studies only present events;
- limited scope — small groups;
- requires many trained staff;
- subjectivity of perception;
- ethical problems with technical means and covert observation;
- time-consuming;
- adaptation of those observed in overt observation.

Observation shows what people do; it does not show why — that requires an interview.

Dept. of SMPH, topic 32; Salchev P., Sociological method, slide 21; Chengelova in Atanasov et al. (2004), p. 166

Ethics of observation in a health facility

Requirements

- informed consent of those observed in overt observation — patients and staff;
- permission from management and an ethics committee;
- minimal intrusion into care;
- treatment takes priority over observation;
- no recording of identifying data; video only when clearly needed and with consent;
- confidentiality in reporting — no dentist or patient can be recognised.

Covert observation

Acceptable only exceptionally — when the aim cannot be achieved otherwise, the risk is minimal and an ethics committee has approved it. The researcher does not become a tool for controlling staff.

Data protection

Video and audio are personal data; health information is a special category under GDPR Art. 9.

Chengelova in Atanasov et al. (2004), p. 170; Regulation (EU) 2016/679

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Documentary method: definition

Definition

A procedure for collecting primary empirical information from documents created mainly for other purposes.

Document

Any material carrier of information — written or non-written (a tool, a photograph, a work of art, a film, household objects), reflecting social phenomena and processes or people's participation in them.

The document is a given

The researcher cannot control how information was put into it. Before use, it is assessed how, why and by whom it was created.

A retrospective method

The information was fixed before the study. It allows past periods and trends to be studied — e.g. use of dental care over 10 years.

Dept. of SMPH, topic 33; Salchev P., Sociological method, slide 22; Saykova & Chakalov (1977), pp. 216–217

Types of documents

Criterion	Types	Dental example
By type (carrier)	Written: official (public and personal) and unofficial · non-written: drawings, photographs, audio and video recordings	Outpatient record; annual report; a patient's letter; radiograph; a child's drawing "At the dentist"
By origin	Spontaneous · produced on request (of the researcher)	A patient complaint · a food diary kept at the researcher's request
By information	Primary — created by a participant in the event · secondary — processing of primary ones	Record of the examination · aggregated NSI statistics
By authorship	Official (institutional) · personal	Regional Health Inspectorate report · private correspondence, a blog
By carrier (modern)	Paper · electronic	Electronic health record; social media posts

For personal documents the motive for their creation is an important point.

Dept. of SMPH, topic 33; Saykova & Chakalov (1977), p. 215

Medical and dental documents as a source

Patient-level documents

- outpatient record — diagnosis, procedures, codes;
- dental status (dental chart) and treatment plan;
- inpatient case history;
- referrals, prescriptions, informed consent;
- radiographs and photographs.

Facility-level documents

Appointment schedules and logs, activity reports, sterilisation records, complaints and reports.

Created for another purpose

The medical record serves care and reporting, not research. Not recorded does not necessarily mean not done — hygiene advice may have been given but not recorded.

Teaching audit

100 eligible records: 70 explicitly record advice, 10 explicitly record none, 20 are silent. Documentation = 70/100 = **70%**; among the 80 explicit records 70/80 = **87.5%**.

Abramson (2008), ch. 21, pp. 209–224; teaching data

Official sources of health information in Bulgaria

Institution	What it provides	Caution in use
National Statistical Institute (NSI)	Population, births and deaths; health-care resources; population surveys, including the European Health Interview Survey (EHIS)	Year of the data; definitions; weights in surveys
National Centre of Public Health and Analyses (NCPHA)	Health statistics from institutional reporting; the "Health Care" reference book	Reporting unit; coverage of reporting facilities
National Health Insurance Fund (NHIF)	Contracted providers; reported and reimbursed activity in the dental care package	Reflects reimbursed activity, not morbidity; excludes care paid entirely outside the NHIF
National Health Information System (NHIS)	Electronic records and statistical reports on dental activity	Coverage and definitions differ from NHIF reports
Regional Health Inspectorates, Ministry of Health, registries (e.g. National Cancer Registry)	Regional data, registered cases	Completeness of registration

Official websites of NSI, NCPHA, NHIF, NHIS; Dept. of SMPH, topic 33

Activity is not morbidity: a teaching calculation

Hypothetical data

District A: 1,200 reimbursed dental procedures for 10,000 residents. District B: 900 procedures for 5,000 residents in the same year.

Measure	Value
Activity in A	1,200/10,000 × 1,000 = **120** per 1,000
Activity in B	900/5,000 × 1,000 = **180** per 1,000
Ratio B/A	180/120 = **1.5**

Interpretation

These are procedures per 1,000 residents, not 12% versus 18% ill. One person has several procedures. The difference may reflect access, number of practices, need, reporting or funding. Check whether activity is counted by the patient's residence or by the provider's location.

Persons, visits, teeth and procedures are different denominators.

Teaching data; NHIF reports (methodology)

Procedure of the documentary method

	Step	Content
1	Aim and questions	What the document analysis must establish
2	Identifying sources	Which documents contain the information; access; permissions
3	Selection	All documents or a sample (by period, facility, random selection of records)
4	Assessing the document	Authenticity, credibility, representativeness, meaning
5	Extraction form	Indicators, codes, rules for missing entries
6	Pilot and training	Two extractors independently on part of the documents; agreement
7	Extraction and control	Logical checks; repeat extraction of a part
8	Analysis and interpretation	Quantitative and qualitative; limitations of the source

Abramson (2008), ch. 21; Bowen (2009), doi:10.3316/QRJ0902027; Scott (1990)

Assessing a document: four criteria

Criterion	Question	Dental example
Authenticity	Is the document genuine and of clear origin?	An original entry in the electronic record, not an unverified copy
Credibility	Is it free from error and distortion? Who created it and for what purpose?	A report linked to payment may overstate reported activity
Representativeness	Is it typical; have all documents survived?	Records of patients who moved to another practice are missing
Meaning	Is the content clear and comprehensible; what do the codes mean?	The procedure code changed in the middle of the period

The department textbook adds **selectivity**: both by the creator of the document and by the researcher.

Scott (1990), A Matter of Record; Dept. of SMPH, topic 33

Three ways of collecting information from documents

Way	Essence	Example
1. Transfer of information into the questionnaire	No analysis; use of already recorded information	Age, sex, number of visits from outpatient records
2. Qualitative analysis of the document	Analysis of its content with regard to its proper construction or functioning	Analysis of the informed consent form — is it comprehensible
3. Qualitative–quantitative analysis (content analysis)	The text is divided into parts; a list of problems, concepts, stereotyped phrases; classification into categories; counting and ratios	Analysis of 40 social media posts on oral health

Difficulty

When analysis is done by several persons, there is a risk that they assign items to categories differently.

Saykova & Chakalov (1977), pp. 215–216

Types of document analysis

According to the department textbook

1. **content analysis** — quantitative (number of words, reading time, most frequent words) and qualitative (themes, means of expression);
2. analysis of the means of dissemination;
3. analysis of the author;
4. analysis of the audience for which the text is intended;
5. analysis of the effect.

Analysis may be **complete** or **selective** — only certain aspects, depending on the aim.

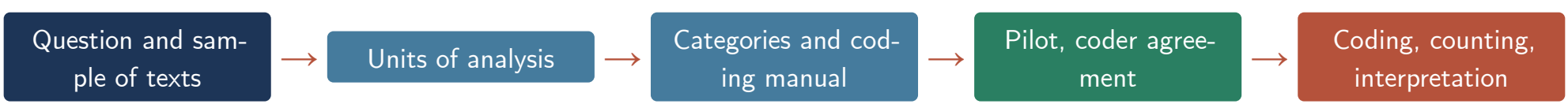
Applied to a dental leaflet

- **content:** what advice it gives, is it accurate;
- **means:** paper leaflet or social network;
- **author:** professional organisation or commercial brand;
- **audience:** parents, children, adults;
- **effect:** does knowledge change after reading.

Content analysis: definition and steps

Definition

A research technique for the objective, systematic and quantitative description of the manifest content of communication (Berelson, 1952). Qualitative content analysis interprets meaning through systematic coding and identification of themes.



The key question is how categories are formed and on what basis; the guiding principle is the aims of the study.

Saykova & Chakalov (1977), p. 216; Hsieh & Shannon (2005), doi:10.1177/1049732305276687

Units of analysis

Unit	Definition	Example
Sampling unit	The document that enters the sample	One social media post; one leaflet; one outpatient record
Recording (coding) unit	The part of the text assigned to a category	Word, statement, theme, character, image
Context unit	The wider part needed to understand the recording unit	The whole post, to see whether the advice is ironic
Enumeration unit	How presence is measured	Frequency (count), space or time (seconds of video), presence/absence

Quantitative measures in the textbook

Number of words, reading time, most frequent words — simple measures of the volume and emphases of a text.

Dept. of SMPH, topic 33; Saykova & Chakalov (1977), p. 216; Hsieh & Shannon (2005)

Categories and coding manual

Requirements for categories

- derived from the aim and hypotheses;
- **exhaustive** — every unit has a place;
- **mutually exclusive** within one variable;
- **a single basis** of classification;
- **operationally defined** — with examples and borderline cases;
- a reasonable number — over-fragmented categories hinder generalisation.

Coding manual (codebook)

For each variable: name; definition; codes; inclusion and exclusion rules; examples from the text; decisions in case of doubt. The manual is piloted and refined before main coding begins.

Deductive and inductive categories

Categories may be set in advance from theory or derived from the texts during the pilot.

Saykova & Chakalov (1977), p. 216; Hsieh & Shannon (2005)

Example: coding sheet for posts on oral health

Coding sheet · Post no. ..... · Coder ..... · Date posted ..... · Platform ..... · Number of reactions .....

Variable	Codes
V1. Author	1 dentist / professional organisation · 2 clinic (advertising) · 3 commercial brand · 4 lay person · 9 unclear
V2. Main theme	1 prevention · 2 treatment · 3 aesthetics (whitening, veneers) · 4 other
V3. Accuracy of advice	1 consistent with recommendations · 2 partly · 3 contradicts recommendations · 7 no advice
V4. Fluoride mentioned	1 positively · 2 negatively · 3 not mentioned
V5. Commercial appeal	1 yes · 2 no
V6. Target group	1 children/parents · 2 adults · 3 older adults · 4 unspecified

Accuracy is judged against predefined recommendations; V3 = 3 if the post contains at least one contradictory statement. With several target groups, the main one is coded.

Teaching example

Example: results of the analysis of 40 posts

Main theme (V2)	n	%
Prevention	18	45.0
Treatment	12	30.0
Aesthetics	8	20.0
Other	2	5.0
Total	40	100

Author (V1) × inaccurate advice (V3 = 3)	n	inaccurate
Professionals and clinics	32	1 (3.1%)
Lay persons	8	4 (50.0%)

Interpretation

- Almost half of the posts are about prevention.
- Inaccurate advice appears in 5 of 40 (12.5%), but 4 of these are from lay persons.
- The sample is small and not random; the conclusion concerns the posts analysed, not all posts.

Check

Two coders independently code at least part of the posts; agreement on V3 is calculated before results are interpreted.

Teaching data

Reliability of coding

Why it is needed

Coding involves judgement: if two coders assign one unit to different categories, the result depends on the coder, not on the text.

Procedure

Training on the manual → independent coding of 10–20% of units → percentage agreement and κ for each variable → discussion of discrepancies and refinement of rules.

Teaching example

For V3 the two coders agree on 18 of 20 posts: percentage agreement 90%. κ also accounts for chance agreement — so κ is lower than 90%.

Reliability $\neq$ validity

Identical coding does not prove that the category "accurate advice" is correctly defined against professional recommendations.

Saykova & Chakalov (1977), p. 216; Cohen (1960); Landis & Koch (1977), doi:10.2307/2529310

Qualitative document analysis and thematic analysis

Approaches (Hsieh & Shannon)

- **conventional** — categories are derived from the data;
- **directed** — an initial theory or earlier studies provide the first codes;
- **summative** — counting key words, followed by interpretation of the context.

Document analysis (Bowen)

Superficial examination → thorough reading → interpretation; documents are used alongside interviews and observation.

Dental example

Analysis of 30 written patient complaints to a regional body. Themes: "unclear price", "long wait", "insufficient explanation", "pain during treatment". Quotations are anonymised.

Limitation

Complaints are spontaneous documents: mainly dissatisfied people write. They do not give the frequency of the problem among all patients.

Hsieh & Shannon (2005); Bowen (2009), doi:10.3316/QRJ0902027

Secondary data analysis

Essence

A new analysis of data collected by another researcher or institution for another purpose — e.g. microdata from a national health survey or from an earlier departmental study.

Advantages

Saves time and money; large, often representative samples; comparison over time and between countries.

Limitations

Questions and categories were set by others; needed indicators may be missing; the sample, weights, definitions and data year must be understood.

Example

The proportion of persons who visited a dentist in the last 12 months, by age and income — from health interview data collected by the NSI, applying weights.

Abramson (2008), ch. 21; NSI (official website)

Documentary method: advantages and disadvantages

Advantages

- objectifies certain social facts;
- retrospective study of events over a long period;
- shows the direction of development of social processes;
- can be studied repeatedly;
- information on contradictions between the individual and the social environment;
- typological characterisation of individuals or categories of persons;
- no reactivity — the document already exists.

Disadvantages

- limited representativeness (textbook: "none"): depends on coverage and selection;
- information was produced for another purpose;
- selectivity — by the creator and by the researcher;
- risk of deliberate distortion of phenomena;
- incomplete records and changes in definitions;
- limited access and data-protection requirements.

Dept. of SMPH, topic 33; Salchev P., Sociological method, slide 23

Ethics and data protection when working with documents

Medical documents

- access only with permission from the facility and an ethics committee;
- extraction of only the necessary indicators;
- pseudonymisation at extraction; the key is kept separately;
- no direct identifiers in the analytical database (data remain personal while the key exists);
- reporting only in aggregate.

Public online documents

Being public does not remove ethical issues: authors of posts and comments can be identified through a quotation. Quotations are paraphrased or used without identifying data.

GDPR

Health data are a special category (Art. 9); research is subject to safeguards under Art. 89, including pseudonymisation.

Regulation (EU) 2016/679; Bowen (2009)

CONTENTS

1. Observation as a method
2. Procedure of observation
3. Documentary method
4. **Triangulation and choice of method**

Triangulation

Principle

The object is studied from several research angles — sources, investigators, theories or methods. Chengelova states the principle as "at least three angles", e.g. in-depth interview, observation and focus groups; in a broader sense two sources or methods also constitute triangulation.

Type (Denzin)	Example
Data	Patients, dentists and assistants; different practices and periods
Investigator	Two observers or coders independently
Theory	Explaining delay through the health belief model and through socio-economic barriers
Methods	Survey, observation and documents for the same practice

Agreement of results increases confidence; disagreement is not a failure but a prompt for a new explanation.

Chengelova in Atanasov et al. (2004), p. 175; Denzin (1978)

Mixed methods: main designs

Design	Sequence	Dental example
Explanatory sequential	Quantitative first, then qualitative — to explain the results	The survey shows a high proportion of delay among older adults; interviews explain the reasons
Exploratory sequential	Qualitative first, then quantitative — to build an instrument	Focus groups with parents → a questionnaire on barriers to preventive check-ups
Convergent (parallel)	Both types of data are collected at the same time and compared	Observation of the preventive conversation and a patient survey after the visit
Nested	One method is embedded in the other in a subordinate role	A few open questions in a large survey

Integration

Results are linked in a joint display: for each theme — the numbers, the quotations and whether they agree, complement or contradict each other.

Leavy (2017), pp. 171–179; Fetters et al. (2013), doi:10.1111/1475-6773.12117

Running example: four methods for one practice

Method	Question	Result (teaching)	Limitation
Documents	Is preventive advice documented?	70% of records show advice	What is not recorded may have been done
Observation	Is advice actually given?	Advice in 15 of 20 observed check-ups (75%)	Reactivity; small number
Patient survey	Do patients remember the advice?	60% report receiving advice	Recall; social desirability
Interview	How do patients understand the advice?	Themes: "too fast", "no demonstration"	Gives no frequencies

A possible explanation to test: advice is given more often than it is documented and remembered. A firm conclusion needs linked data on the same check-ups.

Teaching example; Fetters et al. (2013)

Comparison of the four sociological methods

	Questionnaire survey	Interview	Observation	Documentary method
Source	The person's self-awareness — in writing	The person's self-awareness — orally	Behaviour	Documents by and about the person
Information	Opinions, knowledge, reported behaviour	Opinions, motives, experiences	Actual behaviour at the moment	Facts recorded for another purpose
Scope	Large; representative with random selection	Large (standardised) or small (in-depth)	Small	Large, often retrospective
Main risk	Non-return; social desirability	Interviewer effect	Reactivity; subjectivity	Selectivity; incompleteness
Dental example	Proportion who delayed treatment	Reasons for fear of treatment	Preventive conversation in the practice	Activity under NHIF contract

Dept. of SMPH, topics 32–33; Salchev P., Sociological method

How to choose a method

Questions for the choice

1. Where is the information — in awareness, in behaviour or in documents?
2. Is a population frequency needed, or an understanding of meaning?
3. Past, present or intentions?
4. Is the topic sensitive?
5. What are the resources — people, time, money?
6. What are the ethical constraints?

Examples

- "How many older adults have unmet need?" → survey with a probability sample;
- "Why don't parents bring their children?" → interview or focus group;
- "Is the technique demonstrated?" → observation;
- "How has prosthodontic activity changed over 10 years?" → documents.

The method follows from the research question; complex questions require a combination.

Dept. of SMPH, topics 32–33

Summary and questions for discussion

Key points

- observation records behaviour in real time according to a programme with units, categories and a chart;
- the observer's role and overtness determine reactivity and ethics;
- documents were created for another purpose — assess authenticity, credibility, representativeness, meaning;
- content analysis requires units, categories, a manual and a check of agreement;
- triangulation links the methods.

For discussion

1. How would you define "explains the treatment plan" operationally?
2. Why do more reported procedures not mean more ill people?
3. Which method would show the difference between advice given and advice recorded?

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Official websites: NSI · NCPHA · NHIF · NHIS · Regulation (EU) 2016/679.

Thank you for your attention!