Drug Utilisation Research: QUALITATIVE RESEARCH METHODOLOGY

Ilse Truter & Margaret Oluka

(acknowledgement: BC Knoesen)

June 2017

WORKSHOP OBJECTIVES

- **Distinction between quantitative and qualitative drug utilisation research (DUR) methodologies**
- **Overview of qualitative DUR methods**
  - Interviews
    - Semi-structured
    - Unstructured/in-depth
  - Focus group discussions
  - Observations
  - Delphi & nominal group techniques
  - Consensus development
  - Content analysis
- **Practical examples of qualitative DUR methods**

DRUG UTILISATION STUDIES

Distribution, marketing, prescription, use and dispensing of medicines in a society - with specific emphasis on social, medical and economic consequences

↓

Ultimate goal:
To assess whether medicine therapy is rational or not

DRUG UTILISATION METHODOLOGIES

Two research methodologies:

Quantitative (mostly used and widely accepted)

- Majority of DUR studies
- Examples of studies:
  - To quantify the current state of drug use
  - Drug use cost
  - Drug use trends
  - Time course of drug usage at various levels

Qualitative research methods

- Derived from social sciences
- Increased awareness since 1980s
- Increasingly used in drug utilisation research, especially in understanding patient & prescriber perspectives
- Main focus is exploration of a given phenomenon to get a wider understanding of why and how it appears
- Build on various theoretical underpinnings/ schools of thought

Definition of qualitative research

Can be defined by 4 characteristics:

- **Purpose:** Understanding the meaning of individuals' experiences
- **Primary instrument:** Data collected and analysed by the researcher him-/herself
- **Inductive process:** Researchers use qualitative studies to gather evidence to develop theories & hypotheses
- **Product:** Descriptive data (words or pictures); not numbers

What is qualitative research?

It is an inquiry process in which the researcher:

- Explores one key concept
- Asks participants general, broad questions
- Obtains participants' views in words/images
- Conducts analysis and codes data for themes
- Themes used to describe participants' views
- Interprets meaning by focusing on personal reflection & past research

Qualitative versus quantitative

Qualitative	Quantitative
Multiple realities	Single reality
Reality is social & contextual	Reality is objective & context-free
Holistic	Reductionistic
Inductive reasoning	Deductive & inductive reasoning
Discovery of meaning → basis of knowledge	Basis of knowledge → cause & effect relationships
Develops theory	Tests theory

Qualitative versus quantitative (continued)

Qualitative	Quantitative
Meaning of concepts	Measurement of variables
Process orientated	Outcome orientated
Basic element of analysis = words	Basic element of analysis = numbers
Unique	Generalisation
Trustworthiness of findings	Control of error

Commonly used traditions/types of qualitative research

Basic qualitative research	• To understand individuals' meanings of their experiences • Collect data by document analysis/ observations/interviews /focus groups
Ethnography	• Study of culture & society • Researcher forms part of culture/society
Phenomenology	• Studying conscious experiences of people in their "life-world"
Grounded Theory	• Builds theories based on changes occurring over time with a certain phenomena

When should qualitative research be used?

(1) Exploring peoples' **experiences or views** of something

For example:

- Peoples' experiences towards taking certain drug therapies
- Consumers' perceptions of pharmaceutical advertisements

(2) Exploring **"new areas"** where its issues are not understood or identified

For example:

- Studies where questionnaire surveys are required

(3) Assessing if a new service can be implemented

For example:

- Discussing the value of a drug abuse awareness campaign at university

PUSHBACK
AGAINST DRUG ABUSE

- Focusing on the context of something
- Sensitive topics in which flexibility will reduce distress
- Questions that cannot be answered by measuring or counting something

Common methods in basic qualitative research

- **Interviews**
  - Semi-structured
  - Unstructured/in-depth
  - Also: Informal, open-ended, guided approach, closed-fixed response, telephonic

- **Focus group discussions**
- **Observation**
- **Delphi & nominal group techniques**
- **Consensus development**
- **Content analysis**

Interviews

Focus groups

- Term "focus group" was coined in 1956
- Activity where an interviewer/facilitator asks participants specific questions about a topic
- Qualitative data collection procedure consists of a planned group discussion of a main topic of interest
- Aim: to obtain diverse ideas & perceptions of the topic; aim is not to achieve consensus
- Conducted in relaxed environment to foster participation

Activities necessary to conduct focus groups

Three phases:

- **Phase 1:** Conceptualisation
- **Phase 2:** Group discussion
- **Phase 3:** Analysing and reporting

Phase 1: Conceptualisation

- Purpose
- Whom to study
- Planning

Purpose & whom to study

- What do you want to achieve with the focus group? Type of information?
- From whom can you get this information?
- Ties in with the aim and objectives of the study

Planning

Physical administrative activities to plan before the focus group can be conducted:

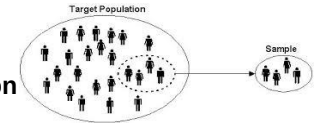
- **Venue** to conduct focus group
- **Transport** of participants
- **Invitation:** Preamble & consent form
- Food
- Obtaining a **facilitator** to lead the focus group
- **Budget**
- Two (2) **voice recorders**

Digital voice recorders

Phase 2: Group discussion

- Participant selection
- Development of questions
- Skills required by facilitator

Participant selection



- What type of people do you want to invite to participate?
- **Sampling:** *Random* vs *convenience* vs *purposive* vs *stratified*, etc.
- **Sample size:** Usually 6 – 12 participants

Development of questions

- Need to develop a **focus group protocol**
- **Protocol**:
  - Detailed plans written down to ensure order during focus groups
  - Consists of steps (introduction & conclusion) tasks, questions and/or prompts
- **Probes and clarifying questions**
  - Ensures that participants will give more than just one sentence answers
  - Assists in more detailed information on the topic

Do's & don'ts of asking questions/prompts

- Keep participants talking
- Listen and do not finish participants' thoughts
- See things from the participants' perspectives
- Participants should be viewed as experts
- Do not make assumptions, ask simple questions
- Do not ask leading questions, e.g., "Don't you think…"

Skills required by facilitator

- Ability to lead a group and be comfortable
- "*Think on their feet*"
- Make participants feel comfortable and at ease; open to talk
- Ability to "*draw information out of people*"
- Advisable to use psychologists/psychology postgraduate students

Phase 3: Analysing and reporting

- Analysis of discussion
- Reporting of data

Analysis of the discussion & recording of data

- Discussion recorded by means of voice recorder (preferably 2)
- Researcher needs to listen to recorded data at least twice within a 24 hour period
- Capture recorded data verbatim (word for word, including sounds made)
- Conduct thematic analysis based on Tesch's technique of descriptive analysis
- Descriptive statements used to discuss the findings - quoting excerpts from the raw data

Advantages and disadvantages of focus groups
Advantages • Generates rich information quickly • Information comes directly from people who have insight • Provides diverse opinions & ideas • Relatively low cost & efficient
Disadvantages • Susceptible to facilitator bias • Few vocal individuals can dominate discussion • Limited generalisability to larger populations

Rigour in thematic analysis

- General principles to which qualitative research have to adhere to
- "Good practice guidelines"
- Will add credibility, reliability, and validity to the focus group results
- *Green and Thorogood* or *Lincoln and Guba's* criteria

Ethical considerations

- **Confidentiality**: No names of participants may be published; any names in recordings must be written as a 'code reference'
- Inform participants that focus group is **voluntary** and that they can **withdraw at any moment**
- Inform participants beforehand about **voice recorders**
- Invite by means of a **preamble** & **consent form must be signed** by each before focus group (**also verbal**)
- Humans involved – requires **ethical clearance** from a research committee

Content analysis

- Components of quantitative and qualitative methodology
- Research method that provides a systematic and objective means to make valid inferences from verbal, visual or written data to describe and quantify specific phenomena
- Analysis of contents of communication, e.g. textbooks, newspapers, essays, magazines, articles, speeches, advertisements & pictures

Measurement to ensure trustworthiness and authenticity of a study

Trustworthiness: Degree of confidence qualitative researchers has in their data, assessed by using:

- Credibility
- Transferability
- Dependability
- Confirmability
- Authenticity

Trustworthiness is also establishing ***validity*** & ***reliability*** of qualitative research

Qualitative research is trustworthy when it accurately represents the experiences of the study participants

QUALITATIVE RESEARCH IN DUR

- **Types of DUR studies**
  - ❑ Appropriateness of drug utilisation
  - ❑ Prescription data linked with drug indications
- **Uses of qualitative studies in DUR**
  - ❑ Study appropriateness of drug usage in terms of indications, dosage & duration
  - ❑ Assess clinical efficacy of drugs
  - ❑ Assist in understanding barriers to using evidence-based medicine, and its limitations in informing decisions about treatment

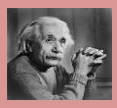
Other advantages of qualitative research

- Effective in mixed-method methodologies → qualitative & quantitative methods
- Focus groups → themes identified can be used to develop questions/statements to conduct unique surveys, e.g. consumer surveys and health professional surveys

CONCLUSION

- Need to give DUR a "human perspective"
- Qualitative methods should be encouraged in drug utilisation research

"*Everything that can be counted does not always count; everything that counts cannot always be counted*"



Albert Einstein

REFERENCES

Bricki, N & Green, J. 2007. A guide to using qualitative research methodology. Medicines SANS Frontieres. [Web:] http://fieldresearch.msf.org/msf/bitstream/10144/84230/1/Qualitative%20research%20methodology.pdf [Date of access: 18 June 2015].

Cresswell, JW & Plano Clark, VH. 2004. Principles of Qualitative Research: Designing a qualitative study. [Web:] https://www.andrews.edu/leaderpart/RoundTable/2004/workshops/2b/AU-Qual-071504-jwc-vpc.pdf [Date of access: 18 June 2015].

Dyas, J & Ockleford, L. N.d. Basics of qualitative research design. National Institute for Health Research. [Web:] http://obssr.od.nih.gov/pdf/qualitative.pdf [Date of access: 22 June 2015].

Flick, U. 1999. *An Introduction to Qualitative Research*. London: SAGE Publication. 293p.

Green, J & Britten, N. 1998. Qualitative research and evidence based medicine. *British Medicines Journal*. Vol 316, p1230.

Green, J & Thorogood, N. 2005. *Qualitative research methods for Health Research*. London: SAGE Publications Ltd. 262p.

Lewis, M. 1995. Focus group interviews in qualitative research: A review of the literature. [Web:] http://scu.edu.au/schools/gcm/ar/arr/arow/rlewis.html [Date of access: 25 June 2007].

Mahmood, K. N.d. Managing Qualitative Research. [Web:] www.paklag.org/Khalid-Qualitative% 20research% 20 workshop.ppt [Date of access: 20 June 2015].

Marczak, M & Sewell, M. 1994. Using focus groups for education. [Web:] http://ag.arizona.edu/fcs/cyfernet/cyfer/focus.htm [Date of access: 25 June 2007].

McNamara, C. N.d. Basis of conducting focus groups. [Web:] www.adrc-tae.acl.gov/tiki-download_file.php?fileId=27128 [Date of access: 20 June 2015].

Salas, M. 2012. Drug Utilisation Studies. [Web:] http://www.pharmacoepi.org/pub/1c22e0d8-2354-d714-51fe-68590802a0ae [Date of access: 20 June 2015].