Qualitative Research Methods

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Presentation Outline

- Distinguishing qualitative and quantitative approaches
- Qualitative methods –
  - Types of qualitative methods
  - Advantages vs. Disadvantages
- Real World Examples
- Survey Questionnaire Critique
- Winter Storm Scenario/Focus Groups
## Qualitative and Quantitative Approaches

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Usually) Non-probability based sample</td>
<td>Typically a probability-based sample</td>
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<tr>
<td>Non-generalizable</td>
<td>Generalizable</td>
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<tr>
<td>Formative, earlier phases</td>
<td>Tests hypotheses, latter phases</td>
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<tr>
<td>Data are “rich” and time-consuming</td>
<td>Data are more efficient, but may miss contextual detail.</td>
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<tr>
<td>Design may emerge as study unfolds</td>
<td>Design decided in advance</td>
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<tr>
<td>Researcher IS the instrument</td>
<td>Various tools, instruments employed</td>
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Qualitative “vs.” Quantitative?

- Research question guides the choice
- Choice of methods is situational
- Complementary
  - Research more complete with both
- Each requires resources and time
  - Can be amended for rapid analysis
Types of qualitative methods
Interviews

- **Informal** – researcher is required to recollect discussion
- **Unstructured** – e.g. ethnographic interviewing – researcher allows interview to proceed at respondent’s pace and subjects to vary by interviewee (to an extent)
- **Semi-structured** – researcher uses an interview guide
- **Structured** – researcher uses identical stimuli and adheres to interview schedule
Semi-structured Interviews
Focus Groups

- Recruited to discuss particular topic
- One focus group is ONE unit of analysis
- Complement surveys – often the 1st step in tapping critical questions to be used in a survey
- Identify why people feel certain way and elucidate steps in their decision-making process
Focus Group Methods

- Ideal size: 6 – 12 people and a moderator/note taker
- Series of groups is necessary for validity
- Homogeneity and anonymity in selection of groups
  - people may open up with others who are perceived to think along similar lines
  AND whom they may never see again
Focus Group Methods, cont.

- Often segment according to expected meaningful differences (e.g. disease status, gender...)
- Running a focus group – fine line between leading too much and not getting people to contribute
- Important to keep discussion on topic w/o shutting people down
- No right or wrong answers
Focus Group Methods, cont.

Analysis

- Tapes are usually transcribed verbatim
- Text is sorted into emergent themes by at least 2 researchers to ensure validity either through pile-sort method or computerized version such as CDC’s EasyText (free!)
- Themes are compared with field notes taken by second researcher
Focus Group Methods, cont.

Thematic coding factors:
1. Frequency – number of times something is mentioned
2. Specificity – details
3. Emotion – enthusiasm, passion, etc. in responses
4. Extensiveness – how many different people said something
Structured Interviews
Questionnaires

Three methods:

1. Face-to-face interviews
2. Self-administered questionnaires
3. Telephone interviews
Face-to-Face Interviews (and intercept interviews)

Advantages:

- Can be used with respondents who wouldn’t be able to provide information in another format – bedridden, illiterate, etc.
- Researcher can elicit more in-depth response or fill in information if participant doesn’t understand the question
- Different data collection techniques – open-ended questions, visual aids, etc.
- Certainty about who answered the questions
Face-to-Face Interviews, cont.

Disadvantages:

- Intrusive and reactive
- Cost time and money
- Difficult to locate respondents for callbacks
Self Administered Questionnaires

Advantages:

- Post Office locates participants
- Everybody gets the same questions
- Researcher can ask more complex questions
- No response effect (willing to divulge more info w/o face-to-face contact; less likely to try to impress interviewer
- Can be computer-based
Self Administered Questionnaires, cont.

Disadvantages:

- No control over participant interpretation
- Low response rates
- Uncertainty about who actually filled out the questionnaire
- Useless with non-literate, illiterate populations (same problem with English language sampling) or hard-to-reach populations
Telephone Interviews

Advantages:

- Combo of face-to-face personal quality with impersonal self-administered questionnaires
- Inexpensive and convenient (maybe)
- Safe for interviewers
Telephone Interviews, cont.

Disadvantages:

- Changing demographics – more cell phones?
  - May miss certain population segments
- Survey must be short or people will hang up
- “No Call Lists” presenting increasing challenge
Focus Groups vs. Surveys

- Surveys offer quantitative measurements based on a representative sample

- Focus groups offer content insight – the **why** of what people think
Real World Examples

- West Nile Virus (WNV) focus group research in CO in 2003
- 11 semi-structured focus group interviews were conducted
  - Groups were recruited through community gatekeepers and composed of participants from senior centers, health departments, neighborhood and volunteer organizations and local businesses
- Purpose was to explore and contextualize use/non-use of repellent and KAP around WNV and mosquitoes in CO
Real World Examples

- WNV in Colorado – Selected results
  - CO residents didn’t perceive mosquitoes to be a problem in the “high plains”
  - The high proportion of WNV Fever cases diagnosed in some areas led to perception that “everyone was sick” and higher levels of concern
  - Younger people wanted to get infected before risk of neuroinvasive disease increased
  - Residents perceived that media overplayed the issue
Real World Examples

- Border Research
  - WNV focus group research in Imperial Valley along MX/CA border in 2004
  - WNV focus group research in Tijuana/San Diego in 2005
  - Traditional surveys would be especially difficult due to international agreements, lack of phones, lack of sampling framework, inability to contextualize responses with neighborhoods
Methods

Topics Covered

- Knowledge about WNV
- Sources of information
- Perceptions re presence of mosquitoes
- Actions to avoid/kill mosquitoes/prevent bites
  - Repellent, chemicals, household control
- Existence of health committees or health information in local area
Results

- Household control of breeding sites - Most people familiar with “control of standing water”
  - Varied understandings of “standing water”

- Many *Culex* breeding sites beyond means of household control—related to irrigation and/or sewage canals
Media most frequently cited as source by those who knew of WNV

Spanish speakers in US may not be accessing local news
  - Many report primarily watching satellite channels from Mexico

Imperial County (for example) challenged by lack of local stations
Results—Special Populations

- Needs and risks among agricultural workers (US) could be significant during an outbreak, especially among undocumented workers if unlikely to seek medical care.
- Need approaches for non-English and non-Spanish speakers.
- Migrant laborers unlikely to have access to television, mail, etc.
Sample Survey Questionnaire Critique

While surveys are a strong and popular method, the following are some examples of questions where a closed response may present significant limitations.
Katrina Questionnaire Critique

Tell me all the places you saw or heard information about the hurricane before Katrina.

- Environmental cues (look outside)
- Family or friends
- The Weather Channel
- Internet
- Local radio stations
- Local television stations
- NOAA Weather Radio
- Cell Phone
- Other (please describe)
Katrina Critique, cont.

Did you feel like the urgency of the situation was conveyed strongly enough to help you understand the severity of the situation?

☐ YES ☐ NO
Katrina Critique, cont.

Before Katrina, how much personal risk did you think there would be for you for major flooding, loss, displacement, and disease?

- Great risk
- Some risk
- Little risk
- No risk
Katrina Critique, cont.

Before Katrina, how serious did you think the hurricane and its consequences would be?

- Very serious
- Moderately serious
- A little serious
- Not serious at all
Katrina Critique, cont.

When you left your home before Katrina, where did you go? (Choose One)

- Family/friend house in my city
- Family/Friend house in other city
- Hotel in my city
- Hotel in other city
- Evacuation center in my city
- Evacuation center in other city
- Other
Katrina Critique, cont.

Before Katrina how confident were you in your ability to take the necessary actions to protect you and your family during a disaster?

- Very confidant
- Moderately confidant
- A little confidant
- Not confidant
Katrina Critique, cont.

Do you think that you will stay in this area (shelter community)?

☐ YES ☐ NO
Katrina Critique, cont.

Should this shelter need to close
would you be willing to move
another shelter?

☐ YES ☐ NO
Dengue Questionnaire Critique

Do you travel back and forth between the US and Mexico?

☐ YES  ☐ NO

If so, number of days per year?
Dengue Critique, cont.

Do you have running water 24 hours/day?

☐ YES ☐ NO

If no, do you store water in an open container?

☐ YES ☐ NO
Dengue Critique, cont.

Do you have screens on all windows and doors?

☐ YES  ☐ NO
Winter Storm/Focus Groups
**Winter Storm Scenario**

**DAY 1:** You are visiting CO and decide to take a quick trip to Prairie National Grasslands to see the deer and the antelope roam.

You’ve heard talk of an impending winter storm beginning the following morning, but this is your only opportunity to get out of the city, so you set off for the eastern plains after your conference, arriving at your rented cabin just before dark.
Winter Storm

**Day 2:** The National Weather Service has issued a winter storm warning for northeastern Colorado with an emphasis on the severity of the storm.

At the surface, polar air begins to surge southward on strong north winds across eastern Wyoming and Colorado. This, combined with snowfall rates of at least 1 inch/hour, creates blizzard conditions.
Winter Storm

**Day 3:** As the snow lets up, most areas of Colorado are impassable and all roads and airports are closed. Power has been lost in many areas throughout eastern Colorado due to blizzard conditions (including your cabin).

Emergency vehicles and snowplows are unable to respond effectively as the wind keeps blowing snow back into the streets. Ambient temperatures have now dropped to single digits, and wind chill temperatures are in the -20 to -30°F range.

**Day 3-4:** You are stranded for 48 hours in the cabin before a park service snowplow was able to clear the road enough to let you out.
Winter Storm Focus Groups

- Where did you hear first about the winter storm?
  - Was the seriousness of the situation clear enough?
  - How serious did you think the consequences would be beforehand?
  - What would have been more meaningful to you, as a tourist in terms of instructions, directions?

- When you realized that you could not get out of the cabin, how would you rank your 3 most important needs?

- How prepared were you?
  - Did you have a winter survival kit in your car?
  - Did you have sufficient food with you?
  - What did you need in order to notify people where you were? Did anyone know where you were?
Coding/analyzing qualitative data

- **Multiple theoretical approaches**
- **Pile-sort technique**
  - Researchers literally sort responses into themes, and pile them up on a table to validate emergent themes based on 4 thematic coding factors
- **Software options**
  - Can aid in organizing text
    - Especially critical when there are multiple interviewers
    - Still need interviewers to help interpret the pauses, body language, dominance of particular speakers
Summary

- Qualitative data gathering is a rich and important tool in some settings
- Variety of methods available
- May overcome limitation of closed survey questions and assist in development of better instruments
References

Bernard, HR. (2002) Research Methods in Anthropology: Qualitative and Quantitative Approaches. Walnut Creek: AltaMira Press
