


Health Research Fundamentals
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Lecture – 09
Qualitative Research Methods: An overview

Welcome to this session of Health Research Fundamentals. Today, I am going to give you a glimpse of another method of research and what we generally call as Qualitative Research Methods.

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	Quantitative	Qualitative
Data	Numbers	Text
View of the world	Social reality - objective, measurable, external to individual ETIC	Social reality – subjectively interpreted and experienced EMIC
Logic of enquiry	Deductive – testing formal hypotheses	Inductive – understanding of social processes derived from data
Research design	Ensures repeatability	Interpretation of responses
Validity	Objective (reliability)	Subjective (credibility)
Cross-cultural generalizations	Application of the same observation method to different cultures	Require conversion in abstract inter-cultural categories



I am going to give you a snap-shot of what these methods are. In the paradigm of health research or any research for that matter, we generally divide methods into quantitative and qualitative. Qualitative methods generally find their origin in the Science of Anthropology, Sociology, and Psychology, wherein which is more about dealing with human beings understanding their behaviors. When we look, sort of try to compare the quantitative with the qualitative methods some of the basic difference is that you would see is that the qualitative is always concerned with words, with text. So the data that we get in qualitative methods is actually text and not necessarily numbers that you usually see in quantitative.

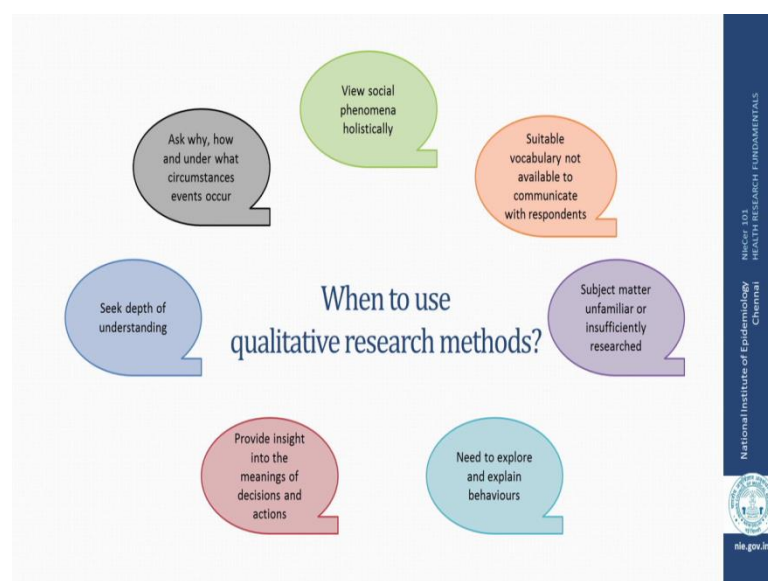
In qualitative research, what we try to do is to interpret the social reality more from the participants' point of view and their experience rather than measuring it objectively from

the investigators' experience. So, this is what is known as the emic perspective. In terms of the logic of inquiry, again, qualitative methods are more inductive and they are used in the way to understand the processes that are derived from the data compared to the quantitative methods, wherein which is more deductive and where we try to test our formal hypothesis using the data.

In terms of the research design, qualitative methods are mostly about interpreting the responses of the participants, rather than trying to see whether what they are saying is what the investigator feels. Whereas, quantitative methods ensure repeatability of the data and the methods are such that if the same studies are done by somebody else we would try to expect similar kind of results.

Qualitative methods, the validity is more in terms of credibility of the responses that we get from the respondents and also the credibility of the investigator, who is doing this. Again, in terms of the generalization of the qualitative data that we get from these methods, it is more abstract and it is something that transits boundaries of cultures and we can understand different cultures in terms of what the participant wants to say. Whereas, in terms of quantitative methods, it is more application of the same methodology to different cultures trying to understand different cultures using the same methods.

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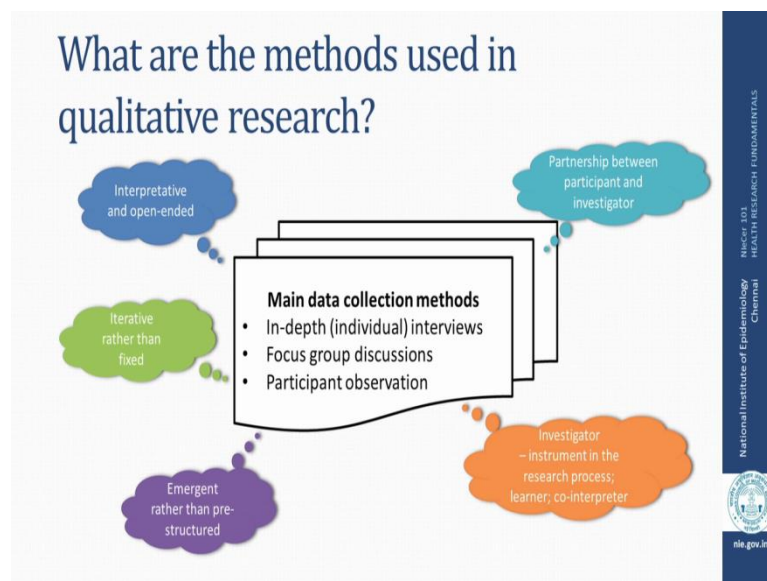


Now, when do you use qualitative research methods? Well, we would want to do when

we really want to understand, why the events happened? How did they happen? And what circumstances made them to happen? We would like to get more understanding of why these health phenomenons are occurring? We want to provide insight into the meanings of the way people behave. We would like to know, why people are behaving in a certain way.

Sometimes the subject matter that we are studying is insufficiently researched and qualitative research methods help us to understand these methods. Many a times, if we get into new areas, may be the subject matter vocabulary is something that we need to understand as an investigator and that is again where qualitative research would help us to do that. In terms of social sciences, qualitative research methods actually help us to view the social phenomenon more holistically in terms of how the participants see it through their eyes.

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Now, What are the various methods that we use in qualitative research? The various methods that we use are little different from the methods that we tried to use in quantitative research. In qualitative research, the methods are more interpretative and open ended, they are more iterative rather than fixed. The methodology emerges as the research goes on rather than using a pre-structured format. In fact, qualitative research methods are done so that it becomes a partnership between the participants and the investigators and the investigator actually becomes himself or herself, an instrument in

the whole research process and it is more like a co-interpreter of what the participant wants to say. The main methods that we use in qualitative research include in-depth interviews, focus group discussions and participant observations. We will go through one by one through each one of them.

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In-depth (Individual) Interviews

- Open-ended interviews
 - Discover the interviewee's own framework of meanings
 - Obtains rich, contextualized, in-depth information
 - Avoid imposing the researcher's structures and assumptions
- Technique
 - Follows interview guide
 - Probes
 - Reflecting on remarks made by the informant
 - Collects respondent's perspective and words
 - Level of structure varies
- When to use?
 - Complex subject matter and knowledgeable respondents
 - Highly sensitive subject matter
 - Geographically dispersed respondents
 - Peer pressure an issue - social desirability a threat

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So, in-depth interviews are basically open ended interviews, which are done one to one between the investigator and the participant and these are done to discover the interviewee's own framework of what they mean in their language. It is useful to obtain rich contextualized information and it also avoids imposing the investigator's assumptions over what the participants wants to say. In terms of the techniques that are used in-depth interviews, although it is open ended and unstructured, we still follow what we call as an interview guide, which is a set of items that we would like to discuss and get information from the participants.

We use probes to get more in-depth understanding of the responses from the participants. In general, we collect the respondents' perspective and the data as I told you before is more of the words and that which are recorded or noted down by the investigator. The level of structure, how we go on with the interview, varies depending on how the response comes from these participants and as I said this is more an emergent kind of methodology rather than a fixed pre-structured method.

When would you like to use in-depth interviews? Well, when the subject matter is

complex and we want to know more about it from the respondents, when the respondents probably are more knowledgeable about the study that we are doing. Many a times for highly sensitive subject matters like sexual behaviors or family planning issues, drug use, alcohol use, things like that, in-depth interviews are a good way to interact more freely and get more in-depth information from research participants. Many a times, the research participants may be geographically dispersed and it is good to talk to them one by one in different time and place and to get more information. Of course, each method has its own advantages and disadvantages.

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In-depth (Individual) Interviews

Advantages	Disadvantages
<ul style="list-style-type: none">• Most in-depth - Why behaviors are practiced?• Data on how people think and talk; conceptualizations of behavior• Exact words & language people use amongst themselves• “Emic” perspective = insider’s perspective	<ul style="list-style-type: none">• Based on a few people, usually not systematic sample, but purposeful or convenience sample• Not generalizable• Interviews very long, lots of data! Time consuming to analyze• Researchers opinions of what the data means

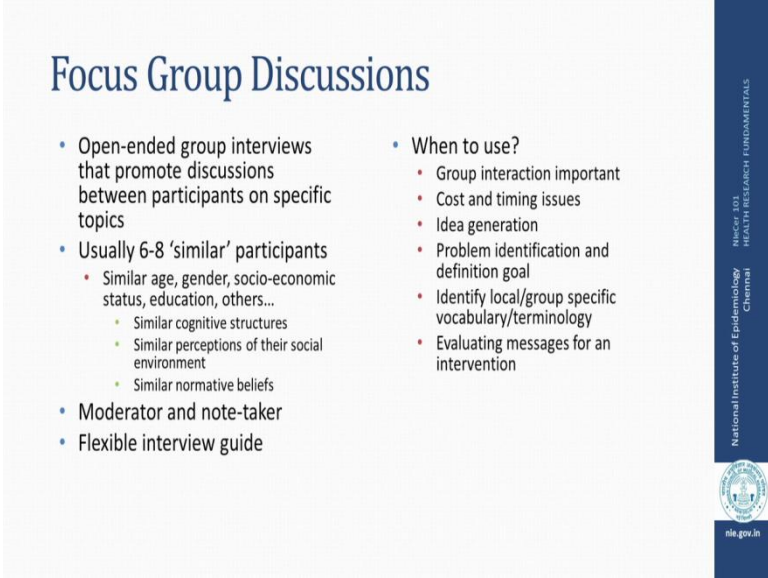
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Advantages, the in-depth interviews as per name are most in-depth. We really get to understand, why certain behaviors are practiced by individuals and why not. It gives us data on how people think. How do they conceptualize their own behavior? What is their context in terms of the way they do or think? We are able to get the exact words and language that people may use about the subject matter that we are trying to understand and it really gives us an insider’s perspective of the subject matter that we are trying to research on.

In terms of the disadvantages, since we do few in-depth interviews and we do not do it on many people, like 100s or as we may do in quantitative methods, so there is no specific sampling. The sampling is more convenient and purposeful and we try to get people who are more knowledgeable and who will be able to give us information. This

makes the findings from these interviews not generalizable in the strict quantitative sense. Many a times, the interviews usually go very long, may be 30 minutes, 40 minutes, even go, sometimes may go to more than an hour or so and you get a lot of data which means a lot of words and it could be time consuming to actually analyze these words. Since, the analysis is more interpretative, sometimes there is a possibility that what the data means the interpretation could depend on how the researcher feels and interprets this data rather than how the participant would may have wanted it to be known. So these are some of the pros and cons of doing in-depth interviews.

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Focus Group Discussions

- Open-ended group interviews that promote discussions between participants on specific topics
- Usually 6-8 'similar' participants
 - Similar age, gender, socio-economic status, education, others...
 - Similar cognitive structures
 - Similar perceptions of their social environment
 - Similar normative beliefs
- Moderator and note-taker
- Flexible interview guide
- When to use?
 - Group interaction important
 - Cost and timing issues
 - Idea generation
 - Problem identification and definition goal
 - Identify local/group specific vocabulary/terminology
 - Evaluating messages for an intervention

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The other method is Focus Group Discussions. Again these are open-ended interviews, but instead of individuals, now we have a small group of people who discuss a certain topic amongst themselves. Usually, we have 6 to 8 participants, who are a homogeneous group, which means they are supposed to be similar in terms of various characteristics, like age or gender or socio economic status or education, occupation, and this helps us so that the discussion goes on in a more cohesive manner.

Usually, in a focus group discussion apart from, you would have a moderator, who moderates the whole discussion and another individual, who works as a note taker in order to take down the notes that are being discussed. We could also have recordings, video or audio recordings of these focus group discussions, which could be used to analyze it later. Again, as in in-depth interviews we use an interview guide, which is

basically a set of items that we would like the participants to discuss and we make sure that all the items are discussed in the way that we want them to be. However, the interview guides are flexible in the sense of, we do not have to follow question one, question two, question three, it basically flows as the discussion flows and the moderator is able to guide the discussion in order to obtain all the information that is there to obtain.

When do we use Focus Group Discussions? These are used in areas where group interactions give us a lot of rich information. Again, cost and timing may be issues if you were to do in-depth individual interviews, we could get information from a lot many more participants in smaller time compared to in-depth interviews. It helps us to generate ideas because we have a group of people, who, more than one person whose able to respond to the various ideas that we are trying to generate. It helps to identify problems and define goals. Many a times, depending on what you want, if you want to understand local terminologies and the vocabularies, then these focus groups are a good way to understand these issues. And if you want to again look at, if there has been an intervention that has been put into place and we would like to evaluate whether it has worked or not worked, then focus group discussions are a neat way of understanding these issues.

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Focus Group Discussions

Advantages	Disadvantages
<ul style="list-style-type: none">• Some people more comfortable and talk more openly in group settings• Natural way for some people to talk about problems and personal issues in some cultures• Collects information on social norms• Can provide lots of data in a limited amount of time	<ul style="list-style-type: none">• Difficult to access practice of very personal or sensitive behaviors in groups• Not GENERALIZABLE<ul style="list-style-type: none">• Subject to dominant personalities• Sensitive to biased analysis• Transcribing time consuming - often 30-40 pages each<ul style="list-style-type: none">• Difficult to identify speakers• Analytic challenge!

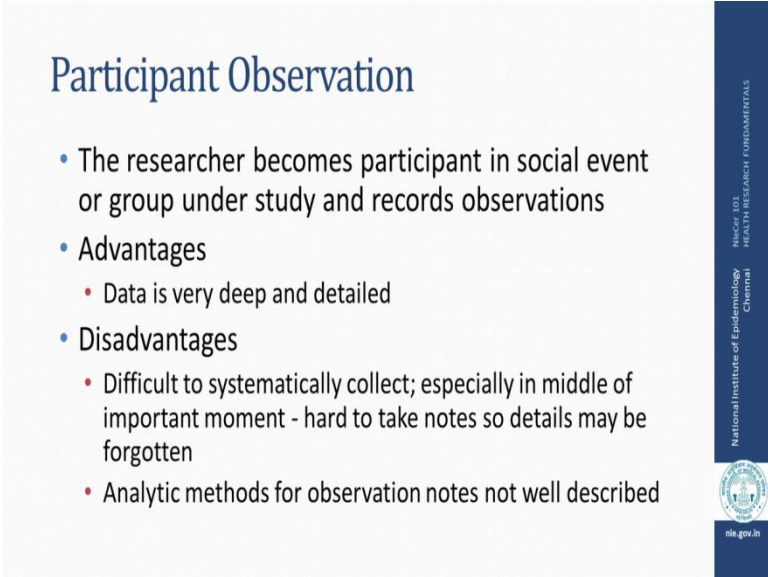
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Of course, the pros and cons. We know that there are some people, who are more comfortable talking openly in group sittings, and it may be a natural way for some

people to talk and so it is a nice way to understand their problems and personal issues. It is good way to collect information on social norms, where people can discuss these issues amongst themselves. And as I said earlier it provides a lot of data in a limited amount of time compared to doing individual in-depth interviews.

However, the disadvantages are that since we are talking to a specific group of people, the data that is generated will depend on the actual make-up of this group and it may be difficult to access the practice of some very personal or sensitive behaviors because people may not like to talk about them in groups. Again, since these are groups of few people, the data may generally not be generalizable to the bigger target population because what we get in the information is more subject to dominant personalities may be people who are more talkative their views may be heard more than people who do not like to talk as much. Of course, as with in-depth interviews there would be a lot of data that is generated, many a times it runs into pages and transcribing this can be time consuming, and of course it gives a challenge in terms of how we are able to analyze this data.

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Participant Observation

- The researcher becomes participant in social event or group under study and records observations
- Advantages
 - Data is very deep and detailed
- Disadvantages
 - Difficult to systematically collect; especially in middle of important moment - hard to take notes so details may be forgotten
 - Analytic methods for observation notes not well described

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The third another common method that is used in qualitative research is what is called Participant Observation. Now, this comes more from ethnographic and anthropological domain, wherein the researcher himself becomes a participant in a social event or group that we are trying to study. The good thing is that we get very deep and detailed data

because you as a researcher, you are part of whatever is happening in that group. However, it sometimes becomes difficult to systematically collect the data because you are right in there and it may be hard to take notes or do recordings and again the analytical methods that are used for participant observation data are still evolving and that can again be a challenge in terms of the analysis.

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The slide is titled "Qualitative data (text) analysis" and is divided into two columns. The left column is titled "Grounded theory" and lists: Transcripts of interviews, Potential analytic categories— themes, Coding text into categories, Relations among categories, Build theoretical models, and Exemplars - quotes from interviews. The right column is titled "Content analysis" and lists: Theoretical framework, Set of codes for variables in the theory, Applying codes systematically to a set of texts, Unit-of-analysis-by-variable matrix from the texts and codes, and Statistical analysis of matrix. At the bottom left, it says "Bernard HR. Research methods in anthropology : qualitative and quantitative approaches. 2006". On the right side, there is a vertical blue bar with the text "National Institute of Epidemiology Chennai" and "NICER 101 HEALTH RESEARCH FUNDAMENTALS". At the bottom right, there is a logo for the National Institute of Epidemiology and the website "nie.gov.in".

Grounded theory	Content analysis
<ul style="list-style-type: none">• Transcripts of interviews• Potential analytic categories— themes• Coding text into categories• Relations among categories• Build theoretical models• Exemplars - quotes from interviews	<ul style="list-style-type: none">• Theoretical framework• Set of codes for variables in the theory• Applying codes systematically to a set of texts• Unit-of-analysis-by-variable matrix from the texts and codes• Statistical analysis of matrix

Bernard HR. Research methods in anthropology : qualitative and quantitative approaches. 2006

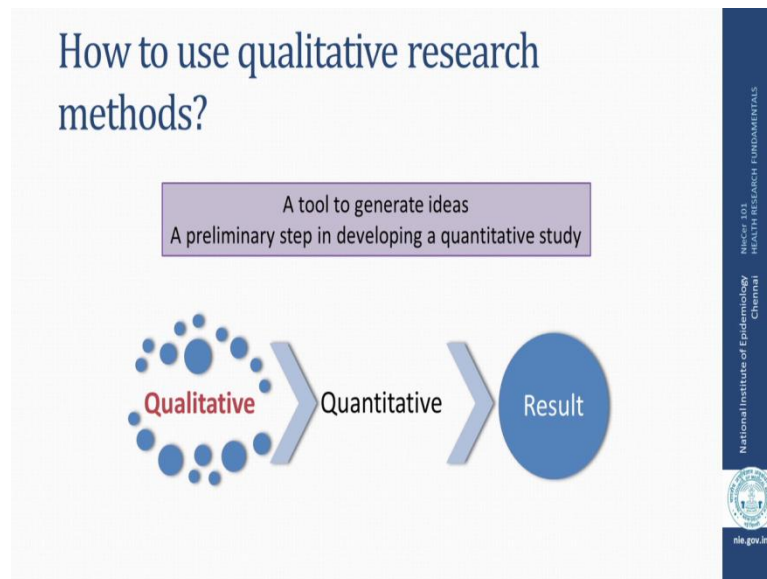
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Now, coming to analysis. there are various ways in which qualitative data can be analyzed and as I told you earlier, qualitative data means text. The basically there are two ways in two methodologies that have been known to be used in terms of the analysis, one is called a Grounded theory approach and then there is a Content analysis approach. The grounded theory approach goes from understanding the data and then developing theories based on that. Whereas, content analysis is when you start of with the theoretical framework and then you try to analyze the data to understand the theory.

What is common in both of these methods is that, first of all you need to transcribe the interviews into text, maybe from local language into English or whatever is the language of the investigator. There is a coding of themes and categories and then relationships are built based on these themes and categories and these are used to understand the perspective of the participants. And then codes are used, just as we have tables with data in quantitative research, in qualitative research, if you may have seen certain papers from that, you would usually see codes from the interviews which are used as examples to

illustrate the main theme that is generated from this data.

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How do we use qualitative research methods? We could use qualitative research methods in different ways, it could just be used as a tool to generate ideas and basically we try as a preliminary step in developing a quantitative study. For example, if say you are trying to understand why people go, for say, open defecation, you could, you may be developing a survey to understand this process. But in order to understand the various categories of questions, we may do a small qualitative study to understand what could be the probable reasons and then use it to modify the questionnaire for the quantitative survey on this subject.

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How to use qualitative research methods?

To help understand the results of a quantitative study

The diagram illustrates a process where 'Quantitative' research leads to a 'Result'. Below this, 'Qualitative' research is shown as a cluster of blue circles, with an arrow pointing upwards towards the 'Result' circle, indicating its role in understanding the quantitative results.

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It could be used to help understand the results of quantitative studies. So you have done a **quantitative** study first and then you get results, which you need to get an in-depth understanding of why you are getting these kinds of results. And again qualitative methods could help you to do that. Or you could use qualitative research methods as the primary data collection method and this would be where, what the objective of the study is to actually understand behaviors, get an in-depth understanding of why people do or not do certain things, why certain behaviors are practiced or not practiced. And you get a lot of rich data in terms of using qualitative data itself.

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How to use qualitative research methods?

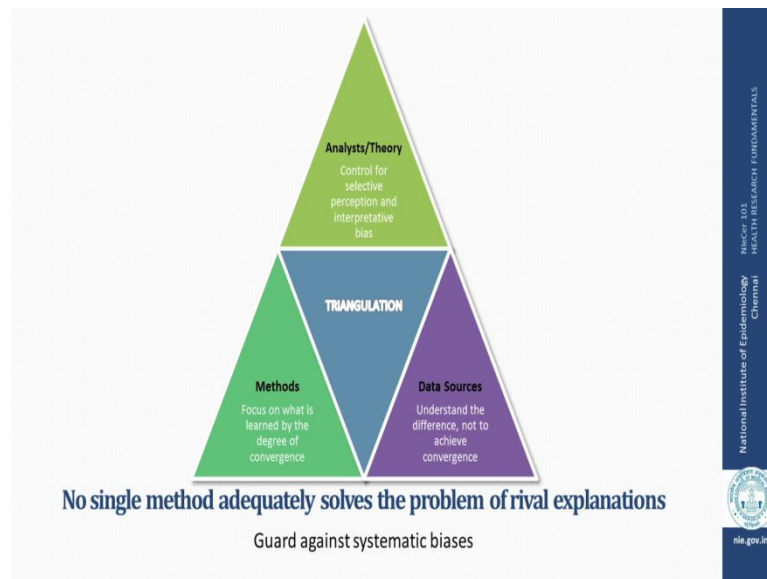
The primary data collection method
– sometimes but not necessarily along with a quantitative study like a survey

The diagram shows 'Qualitative' research (represented by a cluster of blue circles) and 'Quantitative' research (represented by a blue circle) both leading to a central 'Result' circle. This indicates that both methods can be used as primary data collection methods.

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Sometimes, but not necessarily, it can be done along with the quantitative study also.

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Now, what is more important is that, no single method, whether it is quantitative or qualitative, would be able to give you all the explanations. They could, even you may get different explanations or different results when you use different methods. Plus, as an investigator, and as is important in any research study, we need to guard ourselves against systematic biases in terms of data collection and in terms of actually interpreting that data. So, it is a good thing to what we call as what we do as triangulation, which is basically trying to understand the same topic from different angles through different methods using different theories and using different data sources.

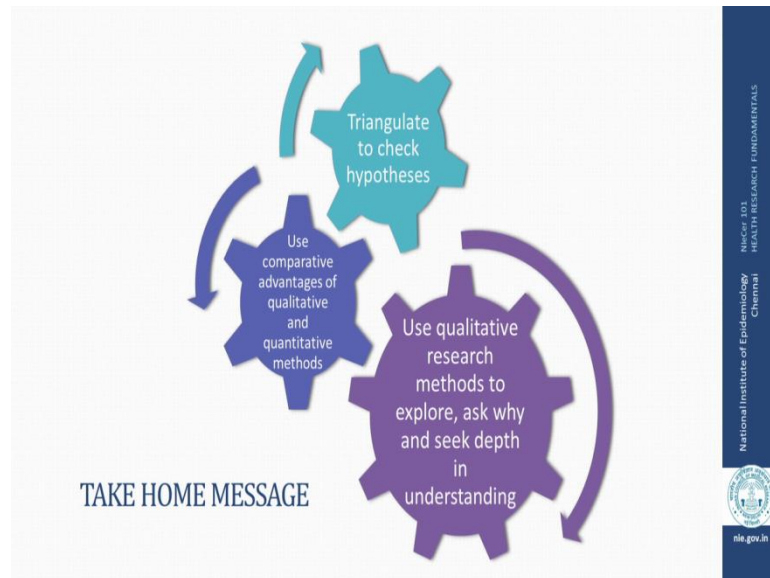
There could be a triangulation of analysts or theory, which helps us to control for any selective interpretative biases. We could use multiple methods and then focus on what information that, what is the same kind of information that we get from these methods or we could use different data sources for the same study and then try to understand the differences is that emerge to these data sources and then put all of these together to actually get comprehensive understanding of the research topic that we are trying to do.

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How are these methods useful? In general, qualitative research methods are very good to actually identify the determinants of health, why do people behave in a certain way? What are their attitudes? What do they perceive in terms of what they are doing or not doing? If there have been certain interventions already done qualitative research methods are a good way to understand, why these interventions have been successful or not successful. Qualitative research methods are again a good tool to explain may be various problems that may have arisen in terms of, why people make certain choices? Or why people use certain services or not use certain services? And in general overall again they are a good way to understand the context in which certain decisions are made whether at the policy level or a social or a legal level.

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So, just to sum up, we have the 2 paradigms of research, qualitative research and quantitative research. Qualitative research is a very good way to explore, to understand why and to seek a more depth in understanding of the topic that we are trying to study. While we are doing that it is always good to use the advantages of both qualitative and quantitative methods to enrich our research process. And of course, triangulate the various methods to check whether the analysis that we are getting is something that can be enriching and fruitful.

Thank you.