

**Exploring Survey Data on Health Care**  
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**Lecture - 01**  
**Problem Statement and Research Questions**

Welcome, dear students of this NPTEL module on handling health care survey data. We are on the very first lecture, the name of this week is Introduction to Health Care Data. In the very 1st lecture, we are trying to explain the Problem Statement, and Research Questions. It is part of the research design framework and how to define the research problem and how to address research questions within it.

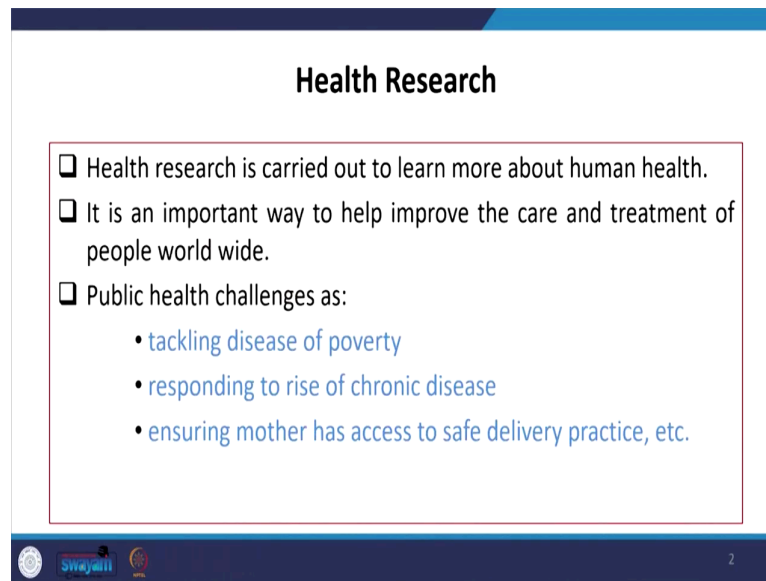
It is very pertinent in research, especially in health care research. Health care research is very emerging and very necessary, especially during covid and in the post-covid period when developing and in the entire world and especially in developing countries. So, without delay, let me introduce you to this particular topic that how problem statements are defined and what are the different types of problems we generally face.

So, myself, Dr. Pratap Chandra Mohanty, I am teaching at the Department of Humanities and Social Sciences, IIT Roorkee. I have been teaching for over 14 plus years in different organizations. And regarding research methodology, I have been teaching this for around 5-6 years and also to masters and PhD students.

Therefore I can able to address all your queries related to this module. Now regarding health research, how to define, health research is carried out to learn more about human health; this helps in improving the health care and any sort of treatment in the world wide. One of the dimensions of health care research is public health; this is poised with some of the challenges.

Though challenges are like tackling the disease of poverty, responding to the rise of various chronic diseases, ensuring mother has access to safe delivery practice etc., the common discussion of public health care challenges.

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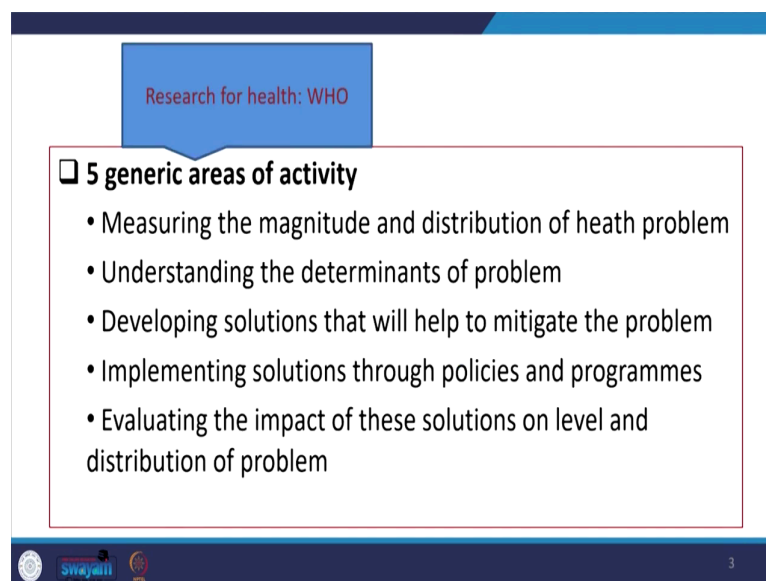


**Health Research**

- ❑ Health research is carried out to learn more about human health.
- ❑ It is an important way to help improve the care and treatment of people world wide.
- ❑ Public health challenges as:
  - tackling disease of poverty
  - responding to rise of chronic disease
  - ensuring mother has access to safe delivery practice, etc.

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**Research for health: WHO**

- ❑ **5 generic areas of activity**
  - Measuring the magnitude and distribution of heath problem
  - Understanding the determinants of problem
  - Developing solutions that will help to mitigate the problem
  - Implementing solutions through policies and programmes
  - Evaluating the impact of these solutions on level and distribution of problem

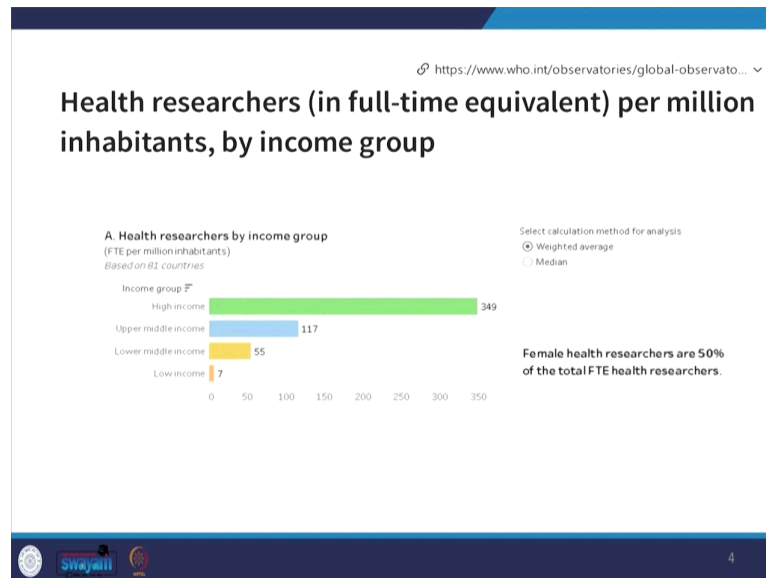
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Regarding the most generic areas of health care research, there are five identified by WHO; one is measuring the magnitude and distribution of health problems. The second one is understanding the determinants of those problems and especially identifying some solutions for the developing countries that could help in mitigating their pertinent problems, then implementing some solutions. So, through some policy review and program evaluation and within the program evaluation we are supposed to understand or evaluate the impact of these

solutions these proposed solutions on the level and distribution of the problems. These five aspects have been prescribed by WHO for generic areas of health care research.

Coming to the background understanding of health care research across the globe by income group countries. WHO has mentioned that the study based on 81 countries.

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Regarding how many health researchers in each country are contributing to their health care directly or indirectly, nearly 50 percent of the total full-time equivalent researchers in the healthcare research are female. So, it is a good sign that across the globe, about 50 percents of researchers are female.

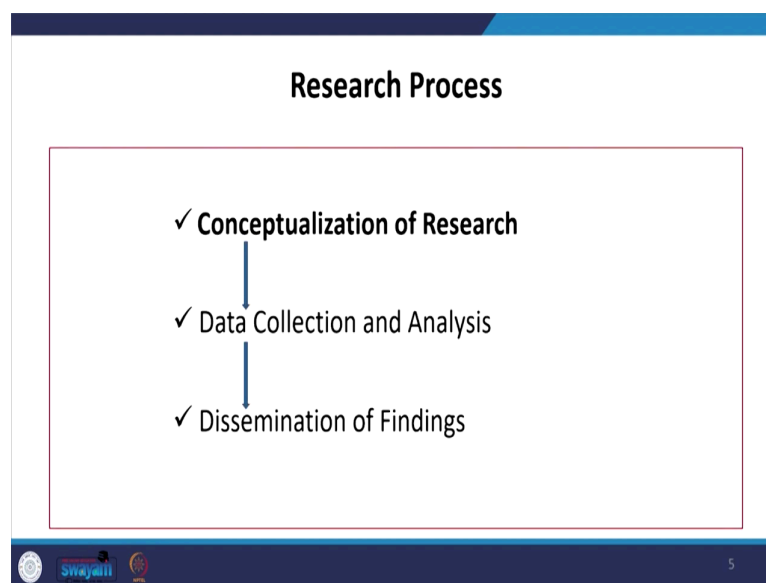
The index which has been pointed out through WHO about health care research which says that the countries which have spent huge research in health care and development are usually the developed ones.

So, more research on this diagram shows that high-income countries, around 349 different research researchers are working on health care. Whereas 117 researchers, those who are full time and equivalent, are from upper-middle-income countries. And the lower-middle-income countries where India comes, i.e. lower and medium middle-income countries, only 55 researchers are working.

Then those researchers are full time or equivalent. So, this has a bottom line that it demands for it calls for higher health care researchers calls for more research and development in health care.

And this is how these are in metric 4 million habitants. It is not the absolute number its the number 349 per million, then 117 per million and 55 per million in lower middle-income countries. So, now you can easily find out one of the facts which is relevant for the development of health sector is the health care researchers.

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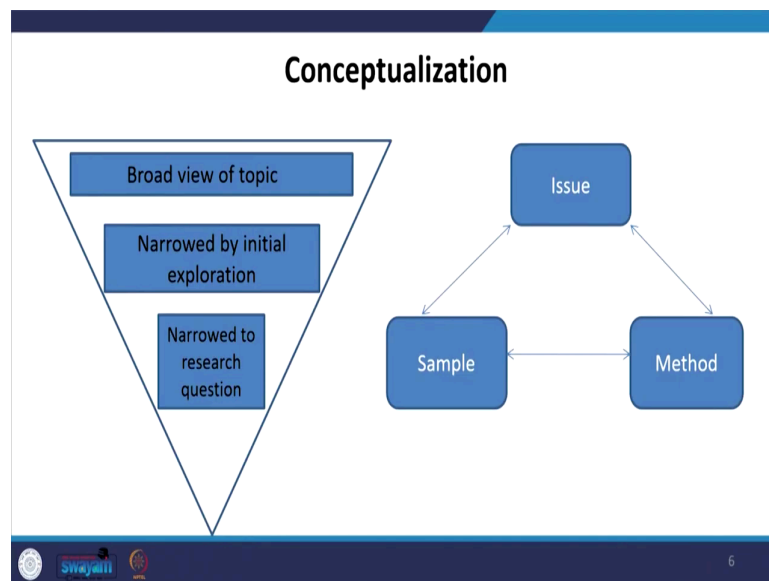


Now, I am coming to the topic. The topic is on understanding research problems and questionnaires designing. The first important aspect of the research problem is research process. In the research process, we generally come across three important pillars those are of conceptualization of research, then data collection and their analysis then dissemination with their findings.

So, regarding conceptualization of the research, we need to take the clarifications in all concepts that are used in our research proposal in our proposed research and in the conceptualization stage. We are supposed to find out or narrow down our entire concept into very specific one then we first need to understand the broader view regarding the topic then you need to narrow by initial exploration.

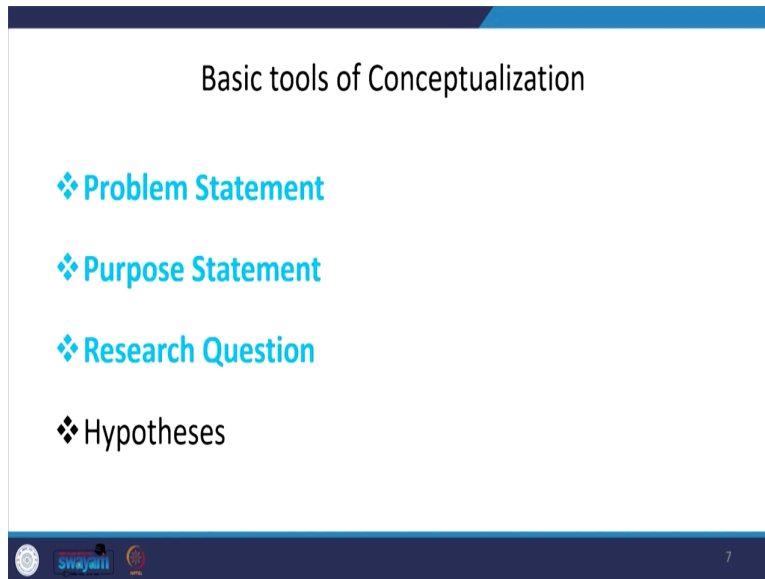
Then we can further narrow to research question, since we all know it those are at the very amateur level probably you need to understand this concept very carefully. But many researchers who are at the advanced level need not require further understanding on this particular slide. Only my suggestion here is that in the conceptualization stage, we require lots of readings; we require lots of study.

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Which could help us in narrowing down the topic and that could further clarify the right direction of the context. So, here we do not just narrow down the topic; rather, we are also clarifying aspect related to its sample, its methods used along with the issues that is targeted.

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So, in the conceptualization stage, we need to address three problems; that is the problem statement, the purpose statement and the research question. And the fourth one is in connection with this problem statement is on hypothesis building.

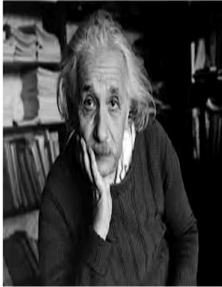
So, then we have to clarify all those things one by one what do you mean by problems statement, what do you mean by purpose statement, what do you mean by research question and how to set the hypothesis.

Let me just talk about what Einstein said: the formulation of problem is often more essential than its solutions which may be merely a matter of mathematical or experimental skills. He said that it is the formulation of the problem is rather more important.




Then reaching at the result or solution now he has also said that if I had an hour to solve a problem, I would spend 55 minutes thinking about the problem and only 5 minutes to resolve the problem through the solutions.

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*"The formulation of problem is often more essential than its solution, which may be merely a matter of mathematical or experimental skills"* **Albert Einstein**






*"If I had an hour to solve a problem, I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions."* **Albert Einstein**

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### Problem Statement

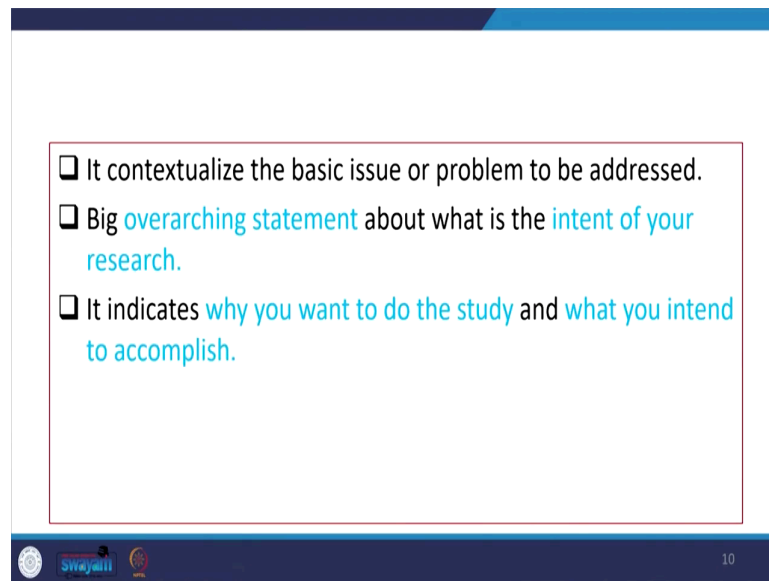
- A problem statement is one that identifies and summarizes a condition or **problem to be addressed**.
- Problem can be about:
  - an area of concern,*
  - a condition to be improved,*
  - a difficulty to be eliminated,*
  - or a troubling question to be that exist in the scholarly literature, in theory or in practice*
- If the problem is too big or too vague, it will be difficult to scope out a purpose that is manageable, given the time to execute and finish the project.

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So, the problem statement is quite important in research, and the problem statement is defined as is the one that identifies and summarize a conditional problem to be addressed. The particular problem to be addressed is the part of the problem statement. So, the problem could be of area concerned, a condition to be improved, a difficulty to be eliminated, or a troubling question to be that exist in the scholarly literature, in theory, or in practice.

So, those aspects are important if a problem statement itself is very big or too vague; it is, in fact, very difficult to scope out a purpose that is manageable with the limited, defined time. Therefore, it is difficult to execute or finish the purpose of the project.

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So, problem statement we defined also there are some other aspects of problem statement that is this problem statement contextualizes the basic issue or problem to be addressed. Big overarching statement about what is the intent of our research.

And it indicates why you want to do the study and what you intend to complete or accomplish. So, what you wanted to do and what you intend to accomplish is also important and part of this problem statement.

Now, there are probably five important questions we ask or pose in the problem statement. So, we start with those Ws that is what where when and to what extent and how do I know. These five important questions are always used while defining our problem statement.

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☐ Five aspects of every problem statement

- **What?** *What object have the problem? What is the problem?*
- **Where?** *Where the effect observed geographically?*
- **When?** *When was the problem first observed? Is there a pattern?*
- **To what extent?** *How many people are facing the problem? Is there a trend?*
- **How do I know?** *What is the standard that we fail to meet?*

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Let us take one example here. In the present time, we are going through covid pandemic covid crisis that has posed lots of challenges across the globe, especially the developing countries. Here one researcher, a novice researcher, may start with dealing with the health care aspects of covid 19 where some of the researchers might think that the covid has aggravated the health care infrastructure problems.

One may think about the number of diseases that are now multifold, and one may think of relating covid with morbidities or multi-morbidities or comorbidities.

If one single purpose we need to understand is there, any relationship with health care may be health care monitoring during covid and its connection with health consultations, health consultations in public hospitals.

So, if we want to understand number of health consultations in public hospitals, may be PHC or CHC or district hospitals in all those cases, how consultations have been increased have been improved due to monitoring. And so, the questions that are really important to ask is what object have the problem and what is that problem.

Problem is that in this particular constant, whether the consultations or health consultations with the doctor through physical meet have increased or decreased or the quality of health consultations have been changed.

So, this is the first question we can easily ask the second one is where the effect is observed geographically. So, some of the problems are really identified in some geographical locations.

The problems lie in metro cities is different than that of the problems lies in rural areas in covid context why it is relevant because in rural area the spread is very very less.

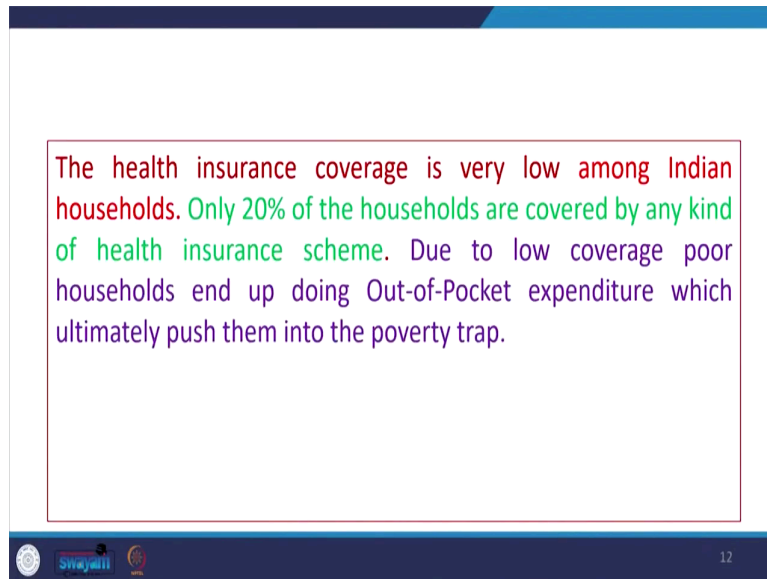
Where in urban areas, the spread is very high. So, the geographical location indicators matter because the geographical location is important because the concentration of population is very huge, and there are many other related factors like activities they do. The exposure to sun, their nutrition, their diet, their stress there are so many indicators where geographical positioning is important to understand.

Then second aspect and the third aspect is when was the problem first observed. Is there a pattern observed when means certain time period we can stick. Is it the problem of health care aggravated pre-pandemic or during lockdowns strict lockdown or there are certain time where this has been controlled after lockdown the health care problems have been to some action minimized those questions could be asked.

Now, another one that is important while setting the problem statement is to what extent or how many people are facing the problem. Is there is a trend observed? And last question to be asked is how do I know what is the standard that will fail to meet. [FL] which kind of standards that should have been followed.

So, that we can able to meet the minimum requirement of health care, where did we miss. So, the question is, how do I know? How do I know the standards and which practices are there in the globes? So, these questions are relevant while setting problem statements or problem questions.

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One of the background information I wanted to share with you all to just to have an interest in health care research is that the health insurance coverage is very low among Indian households where only 20 percent of the households are covered by any kind of health insurance scheme.

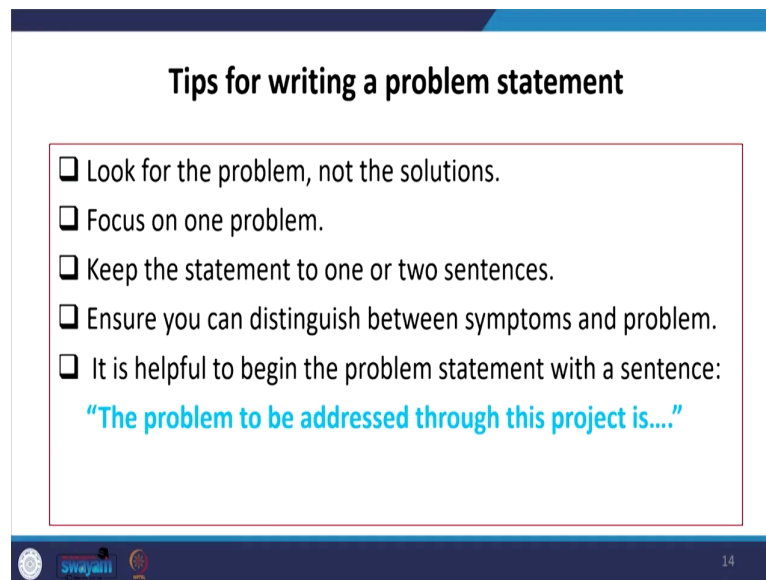
In fact, this is very low coverage. The coverage is much higher in developed countries. Due to low coverage, poor households are really ended off with very high out of pocket expenditure which eventually put them into the poverty trap.

So, the now context is highlighted in three parts in this particular example. The first aspect is the coverage of health insurance is low; this itself poses a research question; the second one is that 20 percent of the households are covered by health insurance schemes that are related to certain facts. And the third one is that this has certain linkages with household expenditure and on the poverty level. How are families pushed below the poverty line? So, three important challenges we can specify. So, here are another four other aspects we can think of that is like in the problem start treatments should do four things as per the statement. First, we specify and describe the problem, and then we provide evidence of the problem in existence.

The third one is to explain the consequence of not solving those kinds of problems that were present and in front of our understanding. The fifth one is to identify what is not known about the problem and what should be known to the people. So, four important things should be noted while setting the problem statement.

There are some tips suggested; one is looking at the problem, not the solution from the starting point, then to focus on one problem only at a go; if we are targeting with only a single problem to solve then the solution will be better.

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**Tips for writing a problem statement**

- Look for the problem, not the solutions.
- Focus on one problem.
- Keep the statement to one or two sentences.
- Ensure you can distinguish between symptoms and problem.
- It is helpful to begin the problem statement with a sentence:  
"The problem to be addressed through this project is..."

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Then we need to keep those problem statements within one or two sentences, not in a paragraph. The problem statements have to be confined to one or two sentences only. We also need to ensure that we should have distinguished between the symptoms and problems, not carrying both together or mixing together symptoms and problems are different. It is helpful to begin the statement problem with a state with a sentence first.


So, we need to write down a sentence, one or two sentences at maximum. The problem to be addressed through this project is like this is defined; we will write it down; we will also let you know here.

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## Location of the problem statement

Research Paper and Theses

It can be of several paragraphs and serve as the basis for your research, **or** it can be condensed into a few sentences in the introduction.



Second aspect is here to note is the location of the problem statement ok. It can be of several paragraphs while to understand the location of the problem statement, and this serves as the basis for your research and or it can be condensed into a few sentences in the introduction.

In the introduction of your paper research paper or thesis, the location of the research problem or the problem statement should have also been identified that could be of several paragraphs which will serve as the basis of your research.

Now the problem statement is defined also explained through this purpose statement. The purpose statement sets the right objective and or the intent or the major idea of a proposal for the study; this indeed builds on the exact problem and is defined into specific questions, or those are called research questions.

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## Purpose Statement

- ❑ The purpose statement sets the objectives, the intent, or the major idea of a proposal or a study.
- ❑ This idea builds on a need (the problem) and is refined into specific questions (the research questions).

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- ❑ A purpose statement should be:
  - Concise
  - Specific
  - Informative
- ❑ It is the most important statement in the entire study.
- ❑ Therefore, it's necessary to draft it carefully.

So, the problem statement should be very concise, specific and informative. It has to be very well defined within one or two sentences, but the purpose statement should be very precise. And so, target the objective the requirement and has to have proper information or it should be informative.

It is the most important statement in the entire study; the objective statement is, in fact, the most important aspect in the entire study; therefore, it is necessary to draft the purpose statement very carefully ok.

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- ❖ There are three components to the purpose statement
  - ❑ The purpose of the study is...
  - ❑ Verb (what are you going to do)
    - identify, describe
    - compare, evaluate
    - Determine
  - ❑ Key words
    - who are you going to research
    - what are you going to research


There are indeed three components regarding the purpose statement. The first one we will write like the purpose of the study is like if you are studying the implications of covid 19 on health care, we will write down that the purpose of the study is to identify the implications of covid 19 on our health care sector that could be written.

Similarly, if you are studying for education, first of all, we need to understand the purpose of the study is to explore the important challenges the education sector has faced in the time of covid. So, like we need to also carefully note down the verb like what you are going to do some of the words, we need to be very careful like identify or describe it should be written compare or evaluate or determine. These words are often used in the purpose statement; these are the components always necessary. There are some keywords that should also be written should also be understood, like who are you going to do the research and what are you going to research. These keywords have to be kept in mind while setting the purpose statement.

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### Sample Purpose Statement 1

- The aim of this study is to find out the status and determine the factor associated with health insurance in India.
- Describe, determine
- Health Insurance, Households, India

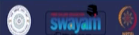
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First sample purpose statement is here the aim of the study is to find the status and determine the factors associated with health insurance in India as per our example; find the exact status and determine the factors associated with health insurance in India. Then similarly, we can also talk about describing or determining the factors; the keywords are health insurance, households, India etc.

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### Sample Purpose Statement 2

- The purpose of the study is to find whether increase in health insurance coverage provide financial protection to vulnerable Indian households.
- Evaluate
- Health Insurance, financial protection, Vulnerable Indian Households

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Second purpose statement based on this information is that whether the increase in health insurance coverage provides financial protection to vulnerable Indian households.

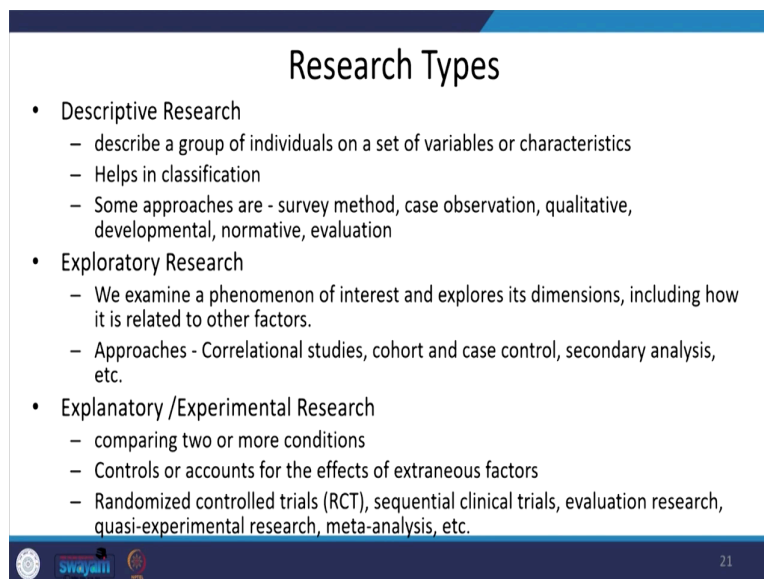


We have mentioned in our statement that certain sections of our society are dragged below poverty line and the health expenditure really matters. So, the study here is to whether the increase in health insurance coverage provides financial protection to those vulnerable Indian households.

Here we can use the word evaluate and some keywords that are relevant for the understanding is health insurance, financial protection, vulnerable Indian households etc. So, after saying all those things about health care research defining research problems in health care.

We should have understood different types of research. It is not like all the research types are the same. So, any type of question you can say it is, I think, going to be erroneous. So, there is broadly three types of research we deal with often.

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**Research Types**

- Descriptive Research
  - describe a group of individuals on a set of variables or characteristics
  - Helps in classification
  - Some approaches are - survey method, case observation, qualitative, developmental, normative, evaluation
- Exploratory Research
  - We examine a phenomenon of interest and explores its dimensions, including how it is related to other factors.
  - Approaches - Correlational studies, cohort and case control, secondary analysis, etc.
- Explanatory /Experimental Research
  - comparing two or more conditions
  - Controls or accounts for the effects of extraneous factors
  - Randomized controlled trials (RCT), sequential clinical trials, evaluation research, quasi-experimental research, meta-analysis, etc.

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The first one is called descriptive research, the second is called exploratory research and the third one is called explanatory or experimental research. So, far as descriptive is concerned, the word itself clarifies that we are supposed to describe the context. The context which we have pointed out in our case is health insurance. So, we need to describe a group of individuals on a set of variables or their characteristics.

This helps in further classification; while you know we deal with descriptive research, this helps in the classification of the ideas of the characteristics. And though some approaches we

usually employ is called survey method case observation qualitative research developmental or normative evaluation.

Normative or evaluation based methods in descriptive research methods. Whereas, in the case of the exploratory one, we need to explore something with the word we use called we examine a phenomenon a context of interest and explores its dimensions, including how it is related to other factors. On the first context we will only talk about its frequencies its own characteristics features. But on the second one, how it is relevant to other context other factors.

Now approaches we apply since it is related to another one in the exploratory research. We employ certain techniques called correlation studies, cohort studies, code within the groups we find certain results, some case-control studies, secondary analysis, etc. alright.

Whereas, in case of experimental studies or explanatory studies, we are comparing two or more conditions we need to control and find out the implication on another group controls or accounts for the effect of extraneous factors. Some of the techniques famously used under this approach under this type of research are called RCT that is randomized control trials, sequential clinical trials, evaluation research, quasi-experimental research and meta-analysis etc.

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**RESEARCH APPROACHES**

- Quantitative/Qualitative
  - measuring the scale, range, frequency etc. of phenomena in quantitative studies. More on subjective studies (values, attitudes, perceptions) in qualitative studies.
- Applied/Basic
- Deductive/Inductive
  - general to Particular or reverse.

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So, these are broad research types, some of the approaches we follow; which are under these research types, are called qualitative or quantitative research, applied or basic research, deductive or inductive research. We all know that quantitative research where we are supposed to measure through certain scale range frequencies etc.

Whereas, in case of the qualitative one, we are supposed to do some subjective studies, some values attitudes perceptions mapping etc. are made in subjective evaluation are part of qualitative studies.

In case of you know applied and basic one the basic one where very fundamental aspects of any study are required. Whereas applied, we are supposed to link the realities to the practical sense of any particular study; the last approach is called deductive and inductive format.

Deductive, where we are supposed to deduct from the general context to deduce it or to narrow down or to a particular context whereas, in case of inductive one from a specific context we will generalize we will propose for a larger segment of the population.

So, that inductive logic inductive methods are useful for policymaking. Like you conduct some study in certain pockets and with certain statistical tools, you can able to mention that my study is going to be very representative to a larger segment.

Because the similar kind of results may be derived within maybe 5 percent error and your study could be generalized. So, those are called inductive studies or approaches. So, what do you mean by research design? Which is important while addressing research problems.

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**What is Research Design**

- Purpose
- Strategies
- Time
- Research environment
- Unit of analysis
- Sampling design
- Methods of data collection
- Measurement techniques
- Data analysis
- Interpretation
- Report writing

**Concepts in research Design**

Dependent and independent variables

Extraneous Variables: (Independent variables that are not related to the purpose of the study but may affect the dependent variable are terms as extraneous variables).

Control: (The technical term is used when we design the study minimizing the effects of extraneous independent variables).

Confounded Relationships: When the dependent variable is not free from the influence of extraneous variables.

Research Hypotheses: The research hypothesis is a predictive statement that relates an independent variable to a dependent variable.

Experimental and non-experimental hypothesis testing research:

Experimental and control groups:

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Research design, which I have already talked about some strategies it says time frame, research environment, the unit of the particular analysis, sampling design, methods of data collection, measurement techniques, data analysis, interpretation and report writing. So, those are all part of research design. Now similarly, some concepts within the research design have to be clarified while defining the unit of analysis or research environment.

The strategies we need to understand the variables which are your dependent variable which are your independent variable which are your extraneous variable which is independent variable that are not related to the purpose of your study. But they may affect the dependent variable are, in fact, defined as an extraneous variable. Not directly linked to your purpose of the study, but indirectly that may affect your dependent variable.

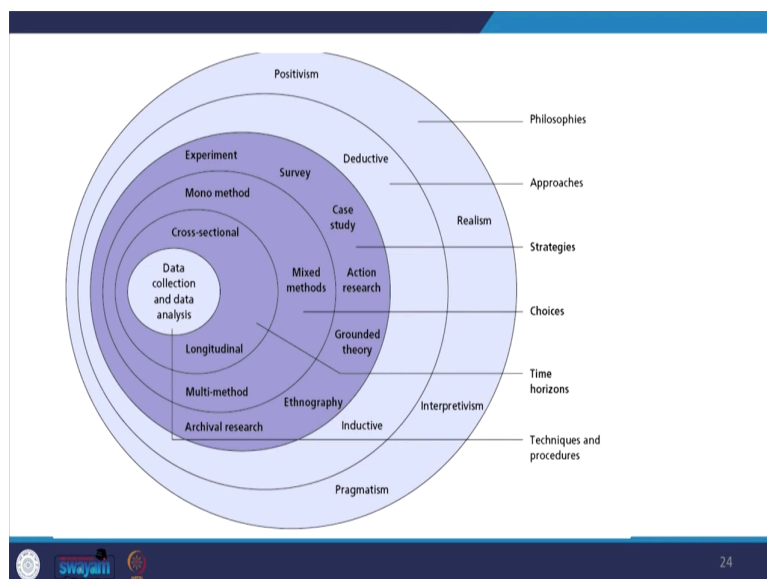
The control variables are like the term used when we design the study minimizing the effects of extraneous independent variables. So, those are called controls. While we narrow down all the independent variables and specify certain particular variables and all other extraneous variables have been removed, and the specific variables are mentioned which have direct or having a certain relationship with the dependent variable are called control variables.

There is some confounded relationship also exist that is when the dependent variable is not free from the influence of extraneous variable is called confounded relationship or sometimes that extraneous variable is also called confounding factors.

Some concepts we use like called research hypothesis, where a statement has to be defined like a predictive statement which relates the independent to the dependent variables. Then another is called experimental or non-experimental hypothesis testing of research; we may follow some evaluation techniques. In the experimental design where the particular unit with certain treatment could be figured with its results.

Similarly, we should also discuss experimental and its control groups which are really the control where the impact can be compared in the treatment groups. So, this is called research design; we have a structure here that is taken from the online source, which is called data collection and data analysis as part of the research process.

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We have already mentioned this in the research process. So, the first one is in the data collection we can mention then the next stage of research would be whether your data collection involves certain techniques and procedures. Then we need to mention through the data collection for cross-sectional studies or in longitudinal studies where the role of time is important if time is only the particular context only the same time we are studying.

Observing different variables representations within the given time those are a cross-sectional approach. Whereas if the same observation is being studied repeatedly in different time periods and its implications have been observed, they are called longitudinal studies. In our health care research, we will be discussing IHDS data (India's Human Development Survey data) that is an example of longitudinal data.

Then after the data and its collection, the type of data, then will go to the choices of methods that involve for the analysis. Maybe a single method, maybe a multi-method or some mixed methods are used we will discuss those things.

Then some of the strategies that have to be mentioned for the analysis in the design that is called experimental design may be survey design, maybe case study, maybe action research, maybe grounded theory, maybe ethnographic studies, maybe archival research.

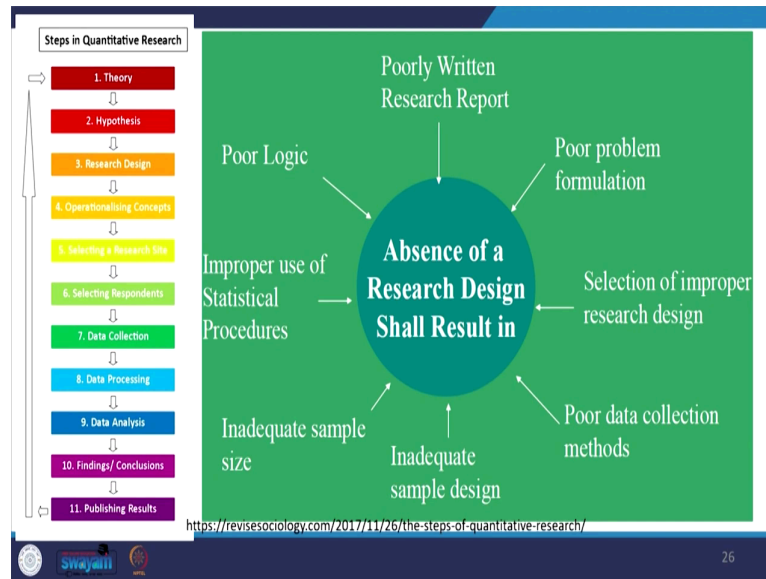
By all those approaches, we can collect our information, and now all those could help us follow our methods called deductive or inductive which we have already said. So, those methods will help finally, to have certain conclusion those might be of positivism might be of the philosophy here is through positivism approach, the realism approach, the pragmatism approach. So, these are all about the research design. We could discuss and in our framework in our entire sessions.

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Research Design	Type of Study	
	Exploratory/ Formulative	Descriptive / Diagnostic
Overall Design	Flexible (for considering different parts of the problem)	Rigid Design
Sampling Design	Non-probability (purposive or Judgment)	Probability (Random Sampling)
Statistical Design	No Pre-planned design for analysis	Pre-planned design for analysis
Observational Design	Unstructured instruments for collection of data	Structured or well thought out instruments for collection of data.
Operational Design	No fixed decisions about the operational procedures	Advanced decisions about operational procedures.

So, the type of studies can be defined here. I have kept it for your reference, exploratory or formulative research as compared to the descriptive or diagnostic research. Overall design-wise, we can compare by sampling wise sampling design, you can compare by statistical design, you can compare similarly observational design and operational design. So, the type of research can also be defined through these ways, broadly categorized into formulative or exploratory to that of descriptive one.

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So, there are lots of steps involved in quantitative research. On the left panel, we are saying that starting with the theory, the existing pattern to that of hypothesis building, then research design, then operationalizing the concepts in between we have already discussed and selecting a research site.

Then talking about the respondents who are going to give the information, then the systematic approach for data collection. And then its processing, data analysis, findings and then publishing results or writing, findings or conclusion, then publishing. One problem could lie; I got it from the source. So, I have sited here the absence of a research design shall result in these problems.

The result in the report would be very poor if any of the particular research designs were missing. Then the report might be erroneous, poor problems formal formulation, selection of improper research design, poor data collection methods, then inadequate sample design, inadequate sample size, improper use of statistical procedures and poor logic so, that these all will lead to the problems in the research design and the results.

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## Location of Purpose Statement

### Journal Article

- Researchers write the purpose statement into introduction as the final statement.

### Theses or Dissertations

- It often stands as a separate section.

So, similarly, the location of the purpose statement has to be defined I think I have correctly spelt here the researcher write the purpose statement into introduction in the final statement in the journal article.

Whereas, in the thesis or dissertation, we often write the location of the purpose statement in a separate paragraph separate section. But in an article, in research papers, in journal papers, we usually write it in the introduction and the final statement as part of the introduction. So, what are the research questions then?

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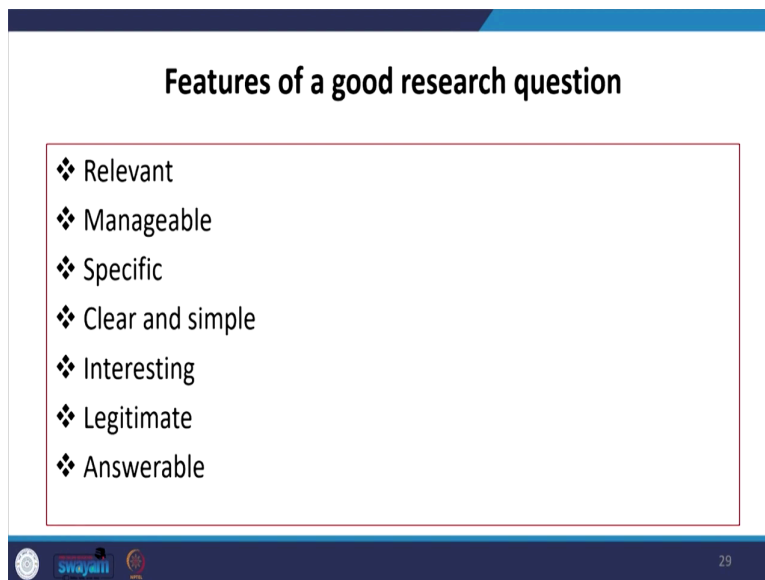
## Research Questions

- Research question **narrows the purpose statement** to predictions about questions to be answered in the study.
- It divides the problem statement by issues or topics.
- The research question should neither be too broad or too narrow.



The research question narrows the purpose statement to predictions about questions to be answered in the study. These divide the problem statement by issues or by its specific topic. The research question should never be too broad or narrow and should be very clear.

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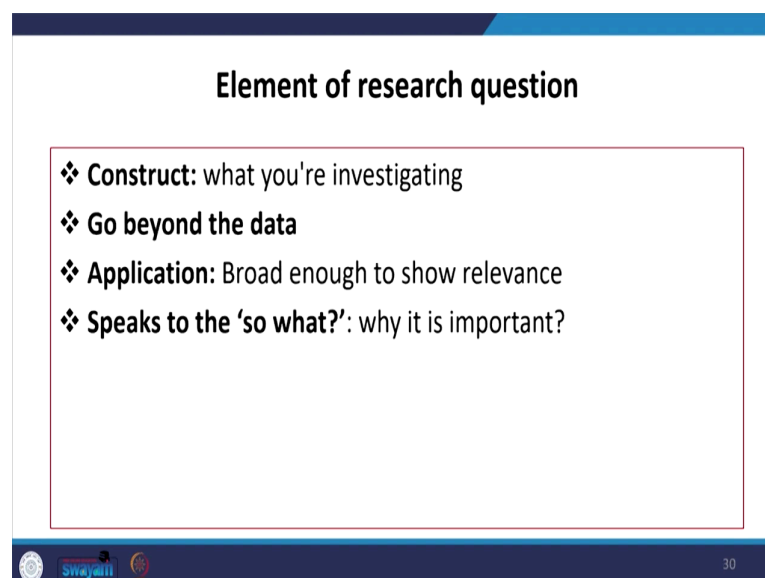
**Features of a good research question**

- ❖ Relevant
- ❖ Manageable
- ❖ Specific
- ❖ Clear and simple
- ❖ Interesting
- ❖ Legitimate
- ❖ Answerable

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There are some features of a good research question. The research question should be relevant, manageable, specific, clear and simple, interesting, legitimate and answerable.

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**Element of research question**

- ❖ **Construct:** what you're investigating
- ❖ **Go beyond the data**
- ❖ **Application:** Broad enough to show relevance
- ❖ **Speaks to the 'so what?':** why it is important?

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The element of research questions are the construct of the research; what we are investigating is called the construct. We need to go beyond the data to relate the research question; also, it must be application based, it should be broad enough to show relevance in the present context or in the context in general. The research question speak to the so what and what is important, why it is important it should have clarified.

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**Draft Research Question**

- What is the relationship between....?
- What factors affect....?
- How do the effects of ...influence ....?
- How does ....relates to ....?
- What is the impact of.....on.....?

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Some draft research questions I have mentioned here for your reference like, what is the relationship between this variable with that variable, what factors it affects, how do the effects influence, this type of sentences questions mark are usually followed. Sample research questions are here.

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### Sample research question

- What is the relationship between health insurance and Out-of-Pocket spending?
- What factors affect the health insurance choice?
- What is the impact of health insurance awareness programme on coverage of health insurance?
- How does health insurance assure financial protection?

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What is the relationship between health insurance and out of pocket expenditure as per our data as per our context? And what factors affect the health insurance choice? What is the impact of health insurance awareness on coverage of health insurance? How does it health insurance assures financial protection as per our statement?

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Step 1: Identity	Step2: Dissect	Step3: Select	Step4: Problem Statement	Step5: Purpose Statement	Step5: Research Question
Health	<ul style="list-style-type: none"> <li>• Child nutrition</li> <li>• Health services provided to community</li> <li>• Health Insurance status in country</li> <li>• Financing of health sector</li> <li>• Health infrastructure</li> </ul>	Health Insurance (HI) status in country	<ul style="list-style-type: none"> <li>• HI coverage is low among Indian HHs.</li> <li>• Only 20 % HHs are covered with any kind of HI.</li> <li>• High OOPE push household into poverty.</li> </ul>	The purpose of this study is to find out the status and determine the factor associated with health insurance in India.	<ul style="list-style-type: none"> <li>• <sup>1</sup>Does the health insurance is distributed equally among households <i>form</i> various socioeconomic background?</li> <li>• What are the factors that determine the health insurance coverage?</li> </ul>

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So, in health care research, what step we must follow? We must dissect the information the entire out of all health issues we can jolt it down with the specific requirement.

It may be child nutrition, it may be health services provided to community, health insurance status in the country, it may be of financing of health sector health infrastructure etc. In the

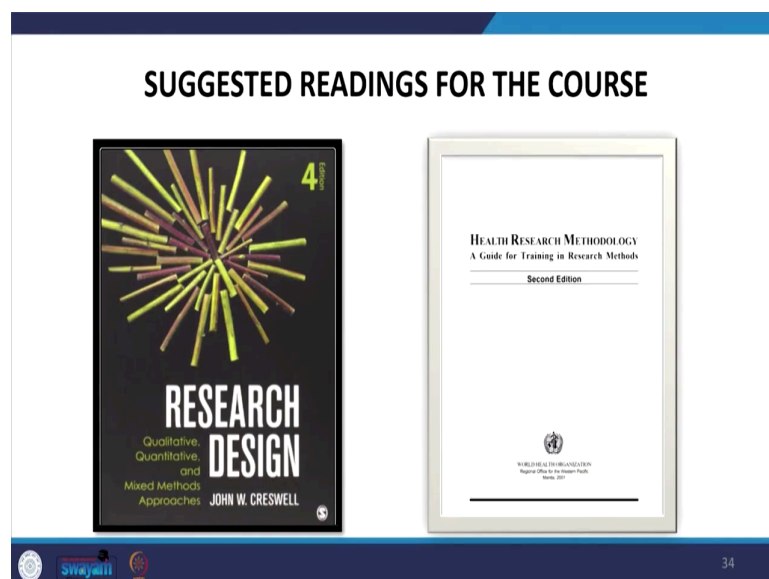
step two, we need to point out with health insurance status within the country as per our context, we have started with health insurance and its implications with financial impoverishment.

In the fourth step, we need to define the problem statement. The problem statement is that the coverage is low among Indian households, and only 20 percent of households are covered with any kind of health insurance, here HI stands for health insurance. And high out of pocket expenditure pushes the households into poverty. These are called the three important problem statements that I have already mentioned.

Then comes the purpose statement; the purpose of a study is to find out the status and determine the factors associated with health insurance in India. The last one to be mentioned here is called the research question now, and this is the important steps that should be followed. Is health insurance distributed equally among households from the various socioeconomic background?

And what are the factors that determine the health insurance coverage? So, two important questions could be asked in this context to understand the research to study the problem correctly.

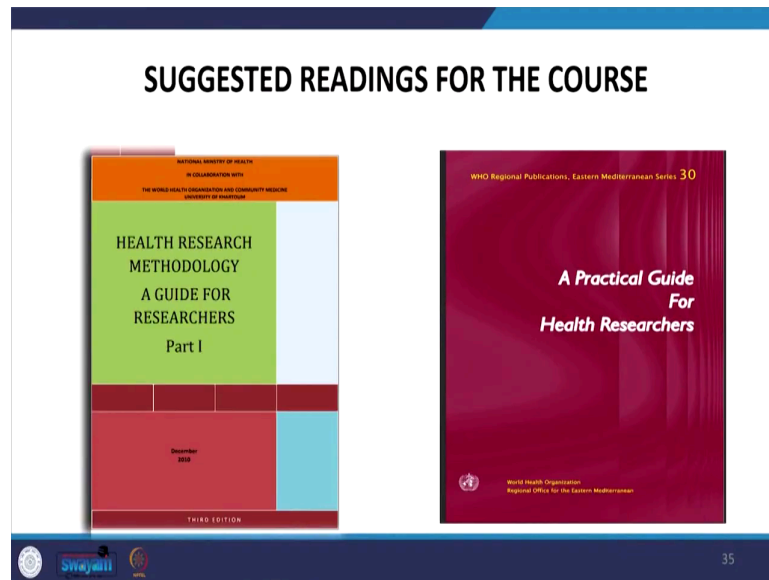
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Now, these are some of the readings; since it is the very first lecture, I suggest you to read Creswell book that is on research design; this gives very good information about different

research designs. Then another one we also refer called WHO World Health Organizations prescribed and report is on Health Research Methodology, WHO published health research methods are guides for training and research methods.

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Others are like Health Research Methodology: A Guide for Researchers from the National Ministry of Health in collaboration with the World Health Organizations. And another WHO's regional publication is a practical guide for health researchers, another book you should follow. So, these are all guidance in the very first lecture, and on the next one, we will discuss about data scaling measurement etc.

With this, I think I should stop here; if you have any questions, please feel free to ask in our live sessions. You will get the window, and I will be responding there only.

Thank you.