

Reproductive health research methodology training
at the Ministry of Public Health, Kabul, Afghanistan
3-12 January 2008

RESEARCH PROBLEM

(Dhirendra Kumar, Ph.D.)

**Research Department APHI, MOPH
Afghanistan**

Contents

- Identification
- Define and Justification
- Hypothesis and Research Question
- Objectives

What is research ?

Research is not

- Collecting information
- Rearranging facts
- Linear
- Selling or persuading
- A neat, grammatically correct paper
- Experimentation
- Surveys, questionnaires

Research is

- Question, problem, hypothesis
- Based on theoretical framework
- Plan, design for conducting a study or experiment
- Data collection and analysis
- A Contribution to a body of knowledge

Identify the Problem

START WITH PROBLEM

NOT

WITH INTERVENTION

Non Programmatic and Programmatic Problem

Non-program

- Why are maternal syphilis rate increasing?
- Why do women prefer Injectable contraceptive?

Program

- How can pregnant women be managed to prevent transmission of syphilis?
- How can injectables be offered to increase its use?

What factors will you like to see before deciding whether a given situation is a programmatic research problem ?

Situation Indicating a Researchable Problem

- A Perceived discrepancy between **what is** and **what should be**
- A question **why** the discrepancy exists (Factors responsible)
- At least **two** possible and plausible answers to the question exist

Non-Researchable and Researchable Problems

Non-research

1. A discrepancy exists between desired and observed situation
2. We know why the discrepancy exists
3. We know the best solution

Research

1. A discrepancy exists between desired and observed situation
2. We do not know why discrepancy exists
3. We do not know the best solution

A Research Problem?

- **Problem Situation:** A recent survey indicates that 1000 women who were continuously using OCP were not using this month.
- What is the discrepancy ?
- What is the problem question?
- Answer : Because of heavy snow fall in the area OCP was not supplied and nothing was available in the clinic stock
- Is this researchable problem?

A Research Problem ?

- **Problem Situation:** Out of the 10 clinics functioning in district A only 3 have good ANC workload. The rest show different degree of underutilization
- What is the discrepancy ?
- What is the problem question?
- What are the possible answers?
- Is this researchable problem?

A Research Problem ?

- **Problem Situation:** Monsoon rain makes it impossible to supply 100 health center with material and supply
- What is the discrepancy ?
- What is the problem question?
- What are the possible answers?
- Is this researchable problem?

A Research Problem ?

- **Problem Situation:** All pregnant women are expected to receive three ANC check up. Available information shows that 30 percent receive 3 ANC checkup, 11 percent 2 and 5 percent only one checkup.
- What is the discrepancy ?
- What is the problem question?
- What are the possible answers?

Sources That Could Give Lead to OR Problems

- Discussion with program managers
- Literature Review
- On going research activities

Problem Definition

- Level of incidence or prevalence
- Geographic areas affected
- Characteristic of the population affected
- Findings of other research studies (Possible reasons for the problem)
- Past experience to address the problem (to understand possible solution)
- Success of earlier initiatives (OR)
- Unanswered questions

Problem Justification

- Is the problem current and existing ?
- How wide spread is the problem ?
- Is this a problem of special group?
- Is the problem relate to an on going program activities?
- Who are concerned with the problem?
- Is the problem under study is in the control of program managers

Objectives

- Ultimate objectives
 - (expected contribution from OR wishful thinking)
- Immediate objectives
 - Relate directly to the research problem
 - It specify
 - Who will do
 - How much of what
 - To whom
 - When, Where, What
- Follow SMART rule

Illustration : Objectives

- To reduce maternal morbidity (**Ultimate**)
 - To improve the coverage of full ANC (three check-ups + 2 TT + 100 IFA) from the current level 14.7 percent to 60 percent by 2010. (**Specific**)
 - Improve antenatal services by increasing the early registration of all the pregnant women to 15 percent by 2007 and 40 percent by 2010. (**immediate**)
 - Increase the proportion of pregnant women receiving IFA tablets from 25 percent to 45 percent by 2007 and 60 percent by 2010. (**immediate**)
 - Increase the administration of two TT injections to 55 percent by 2007 and 75 percent by 2010. (**immediate**)

Research Question Activity

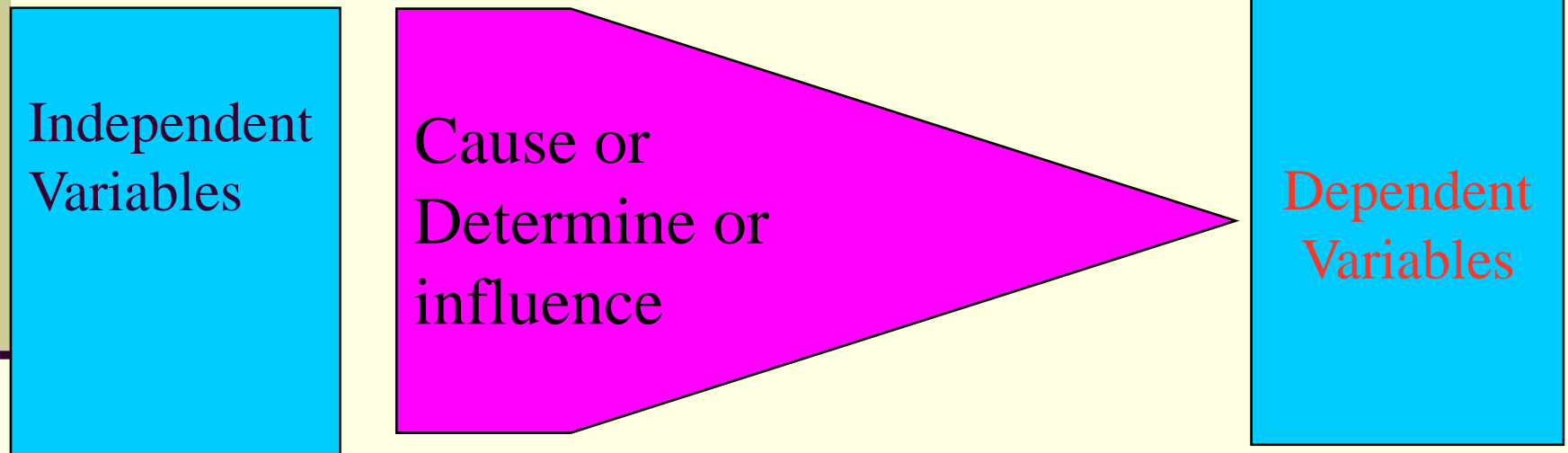
- State your research question
- What are the key variables?
- What are the *Conceptual* definitions of your key variables?
- What are the *Operational* definitions of your key variables?

Hypothesis

- A statement about an expected relationship between two or more variables that permits **empirical testing**
- Direct relationship between dependent and independent variables
- Indirect relationship between dependent and independent variables through intervening variables

Hypothesis

Direct relationship

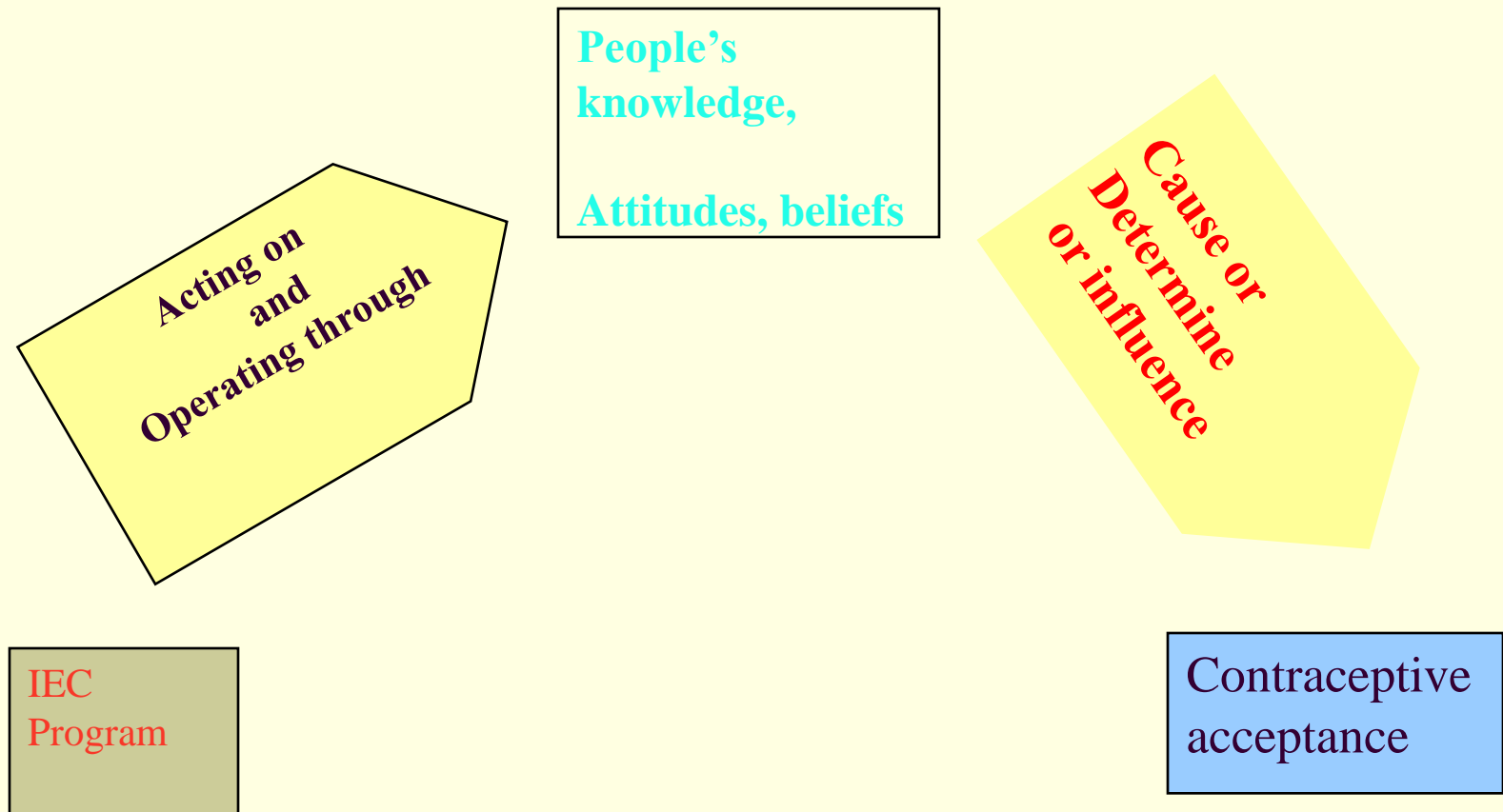


Example of hypothesis

- Women with higher education level have used more health care services (ANC/FP)
- Urban area has low IMR than rural
- Development is the best contraception

Hypothesis

Indirect relationship



Template for research protocol

- Research Problem
 - (Identify, define and justification)
- Research Question/Hypothesis
- Objectives
- Strategy to achieve objectives (methodology)
- Study Design
- Area
- Methods (tools)
- Evaluation
- Outcome
- Time frame
- Budget