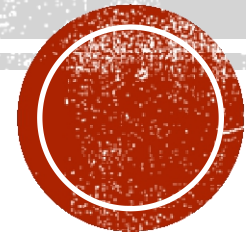


DEPARTMENT OF PUBLIC HEALTH

PURPOSE AND PROCESS OF HEALTH RESEARCH



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1st year MBBS

OBJECTIVES

- Define Research.
- Explain the Importance of research in health.
- Enumerate different types of health research.
- Discuss and explain different types of research.



I have lakes with no water,
mountains with no stone and cities
with no buildings. What am I?



WHAT IS RESEARCH?





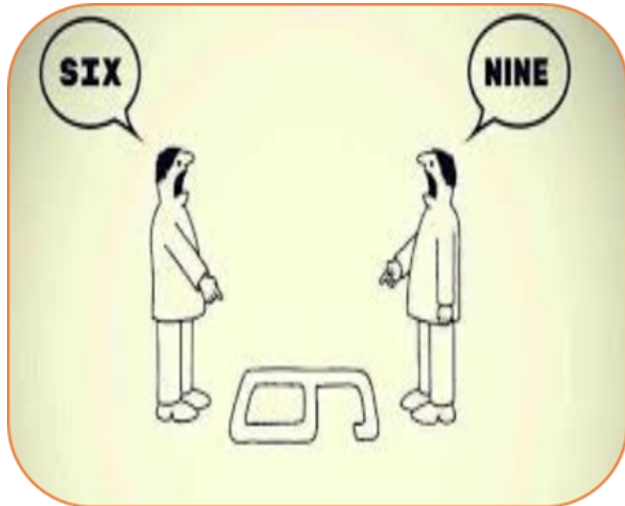
Investigation



Discovery



Additional information



Quest for undiscovered truth



Innovative way of thinking



Way to understand things and solve problems



What is research?



Re



again

Search



find

Process



- ✓ Step by step
- ✓ Phases

WHAT IS RESEARCH ?

“Research includes formal gathering of data, information facts for the advancement of knowledge”.

Research is defined as the creation of new knowledge and/or the use of existing knowledge :

It is a new and creative way to generate



new concepts, methodologies and understandings. ...



WHY CONDUCT RESEARCH ?

Objectives or purpose of Research

- ❖ **To extend knowledge**
- ❖ **To put light on hidden facts or mysteries.**
- ❖ **Generalization of laws**
- ❖ **To verify and tests the existing facts and theories**
- ❖ **Finding solution to problem**

Purpose of Research



- explore
- describe
- explain

TYPES OF HEALTH RESEARCH

- Laboratory studies are typically conducted in the controlled environment of a special research facility with strict conditions:

Biochemistry, Toxicology, Molecular biology, Microbiology, Immunology, Genetics.

- Population-based studies are typically conducted using human subjects



Laboratory studies VS Population-based studies

Examples of Laboratory Research

- Compare tests of air quality in several metropolitan areas
- Analyze the biochemical composition of selected foods
- Identify biological mechanisms for the emergence of drug-resistant strains of bacteria
- Identify genes that might be linked to an increased risk of breast cancer
- Develop a new vaccine

Examples of Population Research

- Compare rates of acute lung diseases in several metropolitan areas and see whether the rates of disease are correlated with local air quality
- Use a food frequency questionnaire to examine dietary behaviors in a selected population group
- Identify the risk factors for acquiring a drug-resistant bacterial infection
- Determine whether survival following a breast cancer diagnosis is linked to the presence of certain genes
- Conduct a vaccine trial



CLASSIFICATION OF RESEARCH

Research can be classified by its purpose, its process and its outcomes.

Purpose

- Exploratory
- Descriptive
- Analytical
- Predictive

Process

- Quantitative
- Qualitative
- Mixed Method Research (quantitative & qualitative)

Outcome

- Applied
- Basic/ Pure/ Fundamental
- Action



DESCRIPTIVE RESEARCH

- It includes fact-finding enquiries of different kinds such as what, why ,when who ,how .
- The main aim is description of a phenomena at present

For example :

Road-traffic-related mortality in Pakistan: a descriptive study



ANALYTICAL RESEARCH

The aim of this research is to understand phenomena by discovering and measuring causal relations among them .

The distinction between descriptive and **analytical research** is based on the question it asks. Descriptive **research** attempts to determine, describe, or identify what is, while **analytical research** attempts to establish why it is that way or how it came to be or how can we reduce or increase it

**Road accident rates:
strategies and programmes
for improving road traffic
safety**



EXPLORATORY RESEARCH

- An exploratory design is conducted about a research problem when there are few or no earlier studies to refer to.
- The focus is on gaining insights for later Investigation or when problem are in Preliminary stage of investigation

An **exploratory study** of positive life changes in women diagnosed with **breast cancer**



Positive
MIND • VIBES • LIFE

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PREDICTIVE RESEARCH

- It studies and determines the frequency with which something occurs or its association with something else.

For example.

Predicting breast cancer survivability

The major area in which it is used includes business, clinical setting, marketing Government agency .



QUALITATIVE RESEARCH

- This research is designed to find h how people feel or what people often think .
- Its aim is to discover the underlying motives of human behavior through detailed description
- The data is in form of words ,pictures or objects

Managing depression through needlecraft creative activities: A qualitative study



QUANTITATIVE RESEARCH

- This is based on the measurement of quantity or amount.
- It can only be expressed in terms of quantity
- Tools such as questionnaire or equipment is used to collect data
- Data is in the form of numbers.

Gender and age differences in depression



APPLIED RESEARCH

- It is used to answer a specific question ,solve a specific problem or to gain better understanding.
- It is also known as action research
- The main goal of applied scientist is to improve the human condition for e.g Treat or cure a specific disease.

Investigating treatment and management options for anxiety and panic attacks.



FUNDAMENTAL / BASIC / PURE RESEARCH

- It is concerned with generalization and formulation of theory.
- It involves collection and analysis of data to develop or enhances theory and have understanding of theoretical relationship between variables.

Lessons from basic research in selenium and cancer prevention



Some other types of researchers are also there

- **ONE TIME RESEARCH/ LONGITUDINAL RESEARCH**

In this research one group have to studied for long time and it studies different stages in an individual's life and all

- **FIELD SETTING RESEARCH/ LABORATORY RESEARCH/ SIMULATION RESEARCH**

This research is depending upon the environment take into consider for research

- **CLINICAL RESEARCH**

There type of research follows case-study method and have an in depth approach in order to study causal relationships

- **HISTORICAL RESEARCH**

In this research researcher utilizes historical sources like documents, events and all in order to understand past, point of time and all

- **CONCEPTUAL RESEARCH**

This research is completely based on some abstract ideas or theory

- **EMPIRICAL RESEARCH**

It is completely based on experiences or observations

EXAMPLES OF HEALTH RESEARCH

- How common is skin cancer among adults living in California?
- Is daily vitamins associated with decreased risk of colon cancer?
- How much does the risk of severe hearing loss increase with age?
- What are the most common sign symptoms associated with multiple sclerosis?



GOAL OF HEALTH RESEARCH



Make discoveries that can benefit society such as :

Identification of emerging health problems that should be addressed.

Testing of new interventions for preventing or treating diseases.

Contribution of information to the scientific literature that researchers and policy makers use when creating new plans and policies

Synthesis of existing knowledge so that it can be applied by others .



RESEARCHERS BENEFIT

Acquisition of
new skills

Satisfaction
of personal
curiosity

Fulfillment of
degree or
work
requirements

Opportunity to
become a
published
author

Possibility that
at some point in
future the
researchers work
will contribute in
at least small
way to making at
least one person
healthier



FEW DEFINITION TO KEEP IN MIND

- ▶ Research: the process of scientifically, thoroughly and systematically investigating a subject in order to learn or discover new information and knowledge.
- ▶ Health: a construct that extends over all aspects of physical, mental, and social well-being
- ▶ Health researchers: Scientists who examine the biological, socioeconomic, and environmental factors that contribute to health and to disease, illness, disability, and ultimately death.



REFERENCES

- Introduction to health research method a practical guide : Kathryn H. Jacobsen.



**THANK
YOU!**

