

DATA COLLECTION

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DATA

The term data refers to any kind of information researchers obtain on the subjects, respondents or participants of the study. In research, data are collected and used to answer the research questions or objectives of the study.



Types

Based on research approach

- Quantitative
- Qualitative



Quantitative Data

- The information which can be counted or expressed in numerical values.
- Ex: age, grades, income, test score, number of children, level of satisfaction, amount of sales, length of service, etc.



Qualitative Data

- These are descriptive information which has no numerical values.
- Ex: attitude or perception towards something, process used in accomplishing an activity, a person's experiences, one's idea about certain concepts, situation

Based on sources

- Primary
- secondary

Primary Data

- These are information collected directly from the subjects being studied, such as people, areas, or objects

Secondary Data

- These are information collected from other available sources
- Ex. recent censuses, or data collected by large scale national or world wide surveys, demographic and health surveys, data of completed studies.

Need for data collection

- Testing hypothesis
- Describe the sample
- Controlling confounding variables
- Analyzing potential biases
- Subgroup effects
- Interpreting results

Cont...

- Assessing treatment fidelity
- Assessing costs
- Obtaining administrative information

Criteria for Selection of instruments

- Resources
- Availability and familiarity
- Population appropriateness
- Norms and comparisons
- Administrative issues
- Reputation

METHODS OF DATA COLLECTION

Quantitative research

Methods for data collection

Data collection technique

- Interview



Tools

- Self administer questionnaire

Data collection technique

- Questioning



Tools

- Questionnaire
- Attitude scales (e.g. Likert scale & semantic differential scale)
- Visual analogue scale

Types of tools used for data collection

Data collection technique

- Observation



Tools

- Rating scales
- Checklists
- Anecdotes
- Videotapes / films
- Closed circuit TV

Types of tools used for data collection

Data collection technique

- Bio-physiological method

Tools

- In vivo biophysiological measurements
- In vitro biophysiological measurements



Types of tools used for data collection

Data collection technique

- Other methods



Tools

- Projective technique
- Q-sorts
- vignettes
- Psychological test
- Achievement test
- Aptitude test
- Intelligence test
- Interest test
- Personal measures

INTERVIEW METHOD IN RESEARCH

Interview is the verbal conversation between two people with the objective of collecting relevant information for the purpose of research.

According to McNamara, 1999

- Interviews are particularly useful for getting the story behind a participant's experiences.
- The interviewer can pursue in-depth information around the topic.
- Interviews may be useful as follow-up to certain respondents.

Interview schedules

- **Structured interview-**
- questions are listed in order
- formalized limited set of questions



Interview schedule

- Usually applied to a set of questions which are asked and filled in by interviewer in a face to face situation with another person.

-Goods and Halt



Interview schedules

Unstructured interview-

- question can be changed to meet the respondent's intelligence, understanding and beliefs,
- encourage respondent talk freely about given topic,
- no pre-planned schedule



Interview schedules

- **Unstructured interview.....**
- open ended questions,
- where there is opportunity to ask questions which are not planned before,
- used to gather information on sensitive topics like drug addiction, divorce, social discrimination

Interview schedules

- **Semi-structured interview-**
- interview guide, allows new questions, interviewer can ask in different ways from different participants
- In-depth interview- intensive, investigate interview question



Personal Interview

- Personal Interview is a face to face two way communication between the interviewer and the respondents.
- Generally the personal interview is carried out in a planned manner and is referred to as 'structured interview'.
- This can be done in many forms e.g. door to door or as a planned formal executive meeting

Interview schedules

Focused group interview-

- unstructured group interview
- **8-12 homogeneous** members brought together under the guidance of a trained interviewer to focused attention on **specific topic** on written set of questions,
- duration of data collection **1 1/2 -2 hrs**,
- **recorded all information** included facial expression, body language, member lead the discussion

Interview schedules

Telephone interview-

- more flexible,
- used in industrial survey,
- collect information through telephone



Phases of interview

- Rapport building
- Introduction
- Probing
- Recording
- closing

CRITERIA FOR THE INTERVIEWER


- Knowledgeable -being familiar with the topic.
- Structuring -outline the procedure of the interview.
- Clear -simple, easy and short questions which are spoken distinctly and understandably.
- Gentle -being tolerant, sensitive and patient to provocative and unconventional opinions.
- Interpreting -provide interpretation of what is said by the interviewee.

- Steering -to control the course of the interview to avoid digressions from the topic.
- Critical -to test the reliability and validity of what the interviewee tells.
- Remembering -retaining the subject information from the interviewee.

ADVANTAGES OF INTERVIEW METHOD

1. Opportunity for Feedback – Interviewer can provide direct feedback to the respondent, give clarifications .
2. Probing Complex Answers – Interviewers can investigate if the respondent's answer is too brief or unclear. This gives interviewers some flexibility in dealing with unstructured questions is especially suited for handling complex questions.
3. Length of Interview – If the questionnaire is very lengthy, the personal interview is the best technique for getting respondents to cooperate, without overtaxing theirpatience

4. Complete Questionnaires – Respondent will answer all questions asked, unlike in telephone interview where the respondent may hang up or in mail questionnaire where some questions may go unanswered.

5. Props & Visual Aids – Interviewers have the opportunity of showing respondents items such as sample products, graphs and sketches, which can aid in their answers.  Respondents can show the encyclopedia, indexing periodical while asking questions on them.

6. High Participation – Interviewing respondents personally can increase the likelihood of their participation, many people participated directly.

DISADVANTAGES OF INTERVIEW METHOD

1. Cost
2. Lack of Anonymity
3. Necessity for Callbacks
4. Variance Effects

5. Dishonesty – Interviewers cheat to make their life easier and save time and effort

6. Personal Style – The interviewers individual questioning style, techniques, approach and demeanor may influence the respondents' answers.

7. Global Considerations – Cultural aspects may influence peoples' willingness to participate in an interview (e.g. Brutal Middle Eastern cultures discourage females from being questioned by male interviewers)

Types of Topics in Questions

- Behaviors –what a person has done or is doing.
- Opinions/values -what a person thinks about the topic.
- Feelings -what a person feels rather than what a person thinks.
- Knowledge -toget factsabout the topic.
- Sensory -what people have seen, touched, heard, tasted orsmelled.
- Background/demographics -standard background questions, such as age, education, etc.

After the Interview

- Verify if the tape recorder, if used, worked throughout the interview.
- Make any notes on your written notes.
- Write down any observations made during the interview.

Questioning

- Is a process of administering structured instrument consisting of a series of **questions prepared by researcher** to obtain information related to the topic of issues.

Questionnaire

- Is a structured instrument consisting of a series of **questions prepared by researcher** that a research subjects is asked to complete, to gather data from individuals about **knowledge, attitude, beliefs and feeling.**



Guidelines for designing a good questionnaire

- Must be developed **based on study objectives**.
- Should **begin with the instructions**
- Should be **clear, simple, concise and complete directions**
- **Avoid too lengthy** questionnaires
- Should be to the **level of the respondents'** knowledge and their language

Guidelines for designing a good questionnaire...

- **Avoid professional jargons.**
- As far as possible **open ended questions** should be avoided.
- **Cross check the respondent**
- Logical sequence of questions **from simple to complex.**
- Should flow **from least to most sensitive**
- **Should not ask out** of the respondents experience.

Guidelines for designing a good questionnaire....

- Should be **start from demographic** profile
- **Avoid double-barrelled questions**. E.g. are you satisfied with pay & fringe benefits?
- **Avoid negative** and double negative questions.
- **Use positive statement**.
- **Do not make assumptions** about respondent.
- **Use clear and comprehensible** wording.
- Use **correct spelling, grammar and punctuation**.



Questionnaire

Open-format questions-

- no predetermined questions,
- state your opinion about the quality of health care service in Puducherry.



Closed – format questions

- **Dichotomous questions** –
- require the respondents to make a choice between two responses such as yes/ no

E.g. Have you ever been hospitalized?

Yes / no

Cafeteria question

- Ask respondents to select a response that most closely corresponds to their views
- E.g. **What do you think about hormone replacement therapy?**
- It is dangerous, should be avoided
- One should be cautious while using it
- I am uncertain about my views
- It is beneficial should be promoted

Rank-order question

- Ask respondents to rank their responses from most favourable to least favourable
- E.g. **According to you which is most important for your life?** Rank from most favourable to least favourable.
 - A . Money
 - B. Education
 - C. Family
 - D. Health



Contingency questions

- A question that is asked that is asked further only if the respondent gives a particular response to previous question.
- E.g. Are you smoking?
- A. no
- B. yes,
- if yes, How many cigarettes per day?

Multiple – choice item

- It can measure a variety of more complex outcomes in the knowledge, understanding and application areas



Characteristics of MCQ

- May be stated as a direct question or an incomplete statement that is stem of the item
- List of suggestions may include words, numbers, symbols or phrases is called alternatives or choices or options
- E.g – **stem** ---1-Insulin is secreted by
- **alternatives**--a. thyroid, b. pancreas, c. hypothalamus,
- d. adrenal cortex

Direct – question form

- Which one of the following glands produce growth hormone?
- A. thyroid
- B. anterior pituitary
- C. adrenal cortex
- D. pancreas



Incomplete statement form

- Growth hormone is produced by-----
- A. thyroid
- B. anterior pituitary
- C. adrenal cortex
- D. pancreas



Best answer type

- Which one of the following factors contributed most to the selection of mannitol for reducing cerebral edema?
- A. osmotic diuretic
- B. site of action
- C. easy to administer
- D. quick action

Suggestions for constructing MCQ

- **Stem should be meaningful** and free of irrelevant material
- Place **most of the words** in the question stem
- All of the wrong answer **choices should be completely reasonable.**
- Keep all answer **choices the same length**

Suggestions for constructing MCQ....

- Keep the number of **options consistent** (3 or 4 or 5).
- Negatively stated items only **when significant learning outcomes**
- **Only one** correct answer
- Alternatives **should not provide a clue** to the answer
- Correct answer should be in **random order**

Suggestions for constructing MCQ...

- Use special **alternatives with caution** such as none of the above or all of the above
- **Avoid double negatives** e.g. 'Which of the following comments would NOT be unwelcome in a work situation?'
- Positive form: 'Which of the following comments are acceptable in a work situation?'

Suggestions for constructing MCQ.....

- **Keep the reading easy** by using vocabulary
- **Be sure the item has a best answer** on which experts can agree.
- Each item in the question **should be independent**
- If a negative statement appears in the stem of the question, **underline it to draw the student's attention**

Suggestions for constructing MCQ.....

- **Logical distractors**
- Unrelated distractors appear silly to a thoughtful examinee
- **Should be avoid verbal association** between the stem & the correct answer
- The relative **length of the alternative** should not provide a clue to the answer.

Rating questions

- Ask respondents to judge something along an ordered dimension.
- Respondents is asked to rate a particular issue on a scale that range from poor to good.

- | 1 | 2 | 3 | 4 |
|------|------|------|-----------|
| Good | Fair | Poor | Very poor |

Importance question

- Ask respondents to rate the importance of a particular issue.
- E.g. exercising every day is.....for the health.

1	2	3	4	5
Extremely important	Very important	Somewhat important	Not very important	Not at all important

Bipolar questions

- Questions have two extreme answers.
- E.g. **what is your balance of preference here?**
- I like going for walking () () () () () I like watching movies

How would you describe the services of XYZ Corporation?

Efficient	.....	.....	.....x.....	.....	.....	Inefficient
Fast	.....	.....	.....x.....	.....	.....	Slow
Reliable	.....	.....x.....	.....	.....	.....	Unreliable

Matrix questions

- Questions are placed one under another, forming a matrix. Response categories are placed along the top and a list of questions down the side.

	Mon	Tue	Wed	Thurs	Fri	Sat	Sun
Gym (weight training)							
Aerobic							
Eating (dinner/Lunch)							
Drink (Alcoholic beverages)							

Likert scale

- **Used to measure attitude, values and feelings** of the people that involve summation of scores on the set of positive and negative declarative statement
- Positive statement get high score; negative statement get low score

Likert scale

Statement	Strongly agree	Agree	Unce rtain	Dis agree	Strongly disagree
Person with multiple sex partners is at high risk of AIDS.					
You can get AIDS by sharing utensils.					
You may get HIV by sharing needles with others.					
Only gay men can get AIDS.					
One way of the getting AIDS is infected blood transfusion.					

Semantic differential scale

Type of rating scale designed to measure the connotative meaning of objects, events and concepts.

- Commonly used for survey.
- Patient satisfaction survey
- Customer satisfaction survey

- Employee survey
- Marketing survey
- Operational research
- Personality measurements
- Clinical psychology

Preparation of semantic differential scale

- The bio-polar adjective pairs can be selected according to the objectives of the survey.
- The adjective pairs can be grouped into three large categories, and each survey question usually includes a few points from each category.
- These categories evaluation, potency and activity.

Sematic differential scale

Evaluation	Potency	Activity
Good -----bad	Hard-----soft	Active -----passive
Kind -----cruel	Strong -----weak	Fast-----slow
Wise -----foolish	Heavy -----light	Motivated -----aimless
Beautiful-----ugly	Deep-----shallow	Moving-----still
Happy-----sad	Potent -----important	Hot -----cold
Sociable -----unsociable	Large-----small	Excitable -----calm
Willing -----unwilling	Difficulty-----easy	Alive -----dead

Semantic differential scale to assess the belief about HIV/AIDS

Cure	1	2	3	4	5	6	7	Death
No punishment	1	2	3	4	5	6	7	Punishment
Social acceptance	1	2	3	4	5	6	7	Social rejection
Affordable treatment	1	2	3	4	5	6	7	Expensive treatment
Normal life	1	2	3	4	5	6	7	Miserable life

Visual analogous scale

- Used to help a person rate the intensity of certain sensations, feeling e.g. pain, sleep, anxiety, mood



- -----

- No pain

Worst pain ever

- No shortness of breath

shortness of breath as bad as can

be

Task 5

What are the characteristics of a good question?



Observation

- A systematic and deliberate study through the eye of spontaneous occurrences at the time they occur.

-Dr. P.V. Young

Definition

As a means of gathering information for research, may be defined as perceiving data through the senses: sight, hearing, tastes, touch and smell.

Purposes of Observation

1.To enable the researcher to gather empirical data which are difficult to obtain by other means.

2.To enable the researcher to gather sufficient data to supplement or verify information gathered by other means.

3. To enable the researcher to gather information or data needed to describe the aspect of a variable being studied which cannot be described accurately without observation.

4. To enable the researcher to gather directly primary data or first-hand information for his study for a more accurate description and interpretation.

5. To enable the researcher to gather data from the laboratory or elsewhere through experimentation.

Types of Observation

Participant and Nonparticipant observation

- Participant :

The observer takes active part in the activities of the group being observed.

- Nonparticipant

The observer is merely by- stander observing the group he is studying about.

Types of Observation

Structured and Unstructured Observation

- Structured :

Concentrate on a particular aspect or aspects of the variable being observed, be it a thing, behavior, condition or situation.

- Unstructured :

The observer does not hold any list of items to be observed.

Types of Observation

Controlled and Uncontrolled Observation

Controlled :

Usually utilized in experimental studies in which the experimental as well as the non-experimental variables are controlled by the researcher

Uncontrolled :

Usually utilized in natural settings. No control whatsoever is placed upon any variable within the observation area

Advantages of Observation

- The investigator is able to gather directly, first-hand information about the subject of his study.
- The researcher can observe his subjects for as long as he needs the time and as many times as he can for greater accuracy and validity in description and interpretation.

Advantages of Observation

- The subjects of inquiry can be observed in their natural settings and this will exclude artificiality in description and interpretation.
- It is a superior technique of collecting information from non- verbal behavior and inanimate objects.

Disadvantages of Observation

- There is lack of control upon extraneous variables which may adversely affect the validity of attributing certain causes upon certain effect
- There is a smaller size of sample if the universe covers a very wide area and the researcher cannot afford to observe a substantial area.

Disadvantages of Observation

- It is difficult to quantify data for standard tabulation especially in unstructured observation and when recording is done in the essay form.
- It hard to gain entry into the area to be observed
- Lack of anonymity makes the observed subjects withdraw or keep secret some vital but sensitive and controversial information.

Characteristics of Observation for Research Purposes

- Specific
 - Systematic
 - Quantitative
 - Recorded immediately
 - Done by an expert
- Results can be checked and verified

Observation

- **Structured observation**
- Check List
- Rating scale
- Category system
- **Unstructured**
- Log and field note
- Video recording



Structured observation

- Standardized
- Used to assess skill
- Pre-test questions and response
- Observe one respondent at a time
- Observer should be trained how to observe, what to observe, and how to record the observed behaviour
- written or tape recorder

Observation guide

- list the interaction, process, behaviour to be observed with space to record open-ended narrative data.
- Field note: least standardized, n



Check list

- Used to identify the tasks needed **to perform the skill**
- Place the tasks in the **correct sequence**.
- Identify the standards or minimum level of performance for each of the key steps or tasks to be measured.

Guideline to design Check list

- **should be direct, to learning objectives**
- Express each item in clear, simple language
- Check list may be continuous or divided into groups of related items.
- Identify and describe clearly each action that are desired.



Guideline to design Check list

- **Arrange the desired actions** in a sequence.
- **Avoid negative statements**
- Check lists need to be **confined to performance areas**
- Assessed sufficiently by examining positive & negative criteria only

E.g. check list

s.no	Behaviours	Yes	No	Remarks
1	Explains procedure			
2	Collects necessary equipment			
3	Arranges equipment for convenient use			
4	Prepares patient			
5	Wash hands			
6	Follows aseptic technique			
7	Removes previous dressing			

Rating scale

- A scale with a set of points, which describe varying degree of the dimension of an attitude being observed.



Characteristics of rating scales

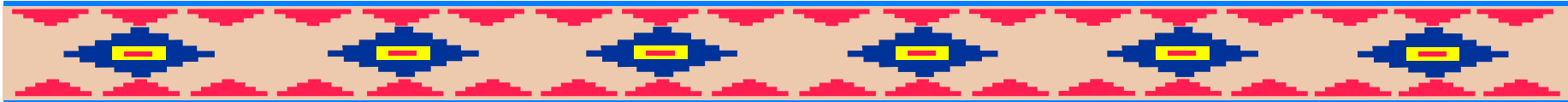
- Rating scale is interpretation **based on observation**
 - Judgement of one person to another
 - **Validity of judgement depends on the person**
- Characteristics** to be rated should be clearly defined
- Most rating scales composed of **behavioural descriptions**

Construction of a rating scale

- Should be describe univocally, objectively and specifically
- Each trait should refer to a single type of activity

Rating scale

- One person simply check off another person's level of performance
- Numerical rating scale
- Graphic rating scale
- Descriptive rating scale



Numerical rating scale

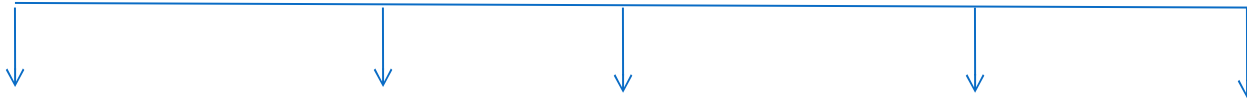
- Rater put a check or circles a number to indicate the degree to which a characteristics is present
- Each number is given a verbal description
- E.g: 5 – outstanding; 4- above average; 3- average; 2- below average; 1 – unsatisfactory
- **To what extent does the student participate in discussion.**



- 1 2 3 4 5

Graphic rating scale

- Each characteristic is followed by a horizontal line
- E.g: **to what extent does the student participate in discussion**



- Never seldom occasion frequent always

Descriptive graphic rating scale

- ▶ Identify the points on a graphic scale
- ▶ E.g: **to what extent does the student participate in discussion?**



- ▶ Never participate
- ▶ Quite, passive
- ▶ participate as much as other gp members
- ▶ participate more than any other gp members

Rating scale

Nursing person in the ward	Level of clinical performance			
	Very active	Active	Moderately active	Passive
X				
Y				
Z				

Bio-physiological methods

- **Vivo measuring instrument system:** directly performed over study subject
- Using the specialized equipment to determine physical and biological status of subjects.
- E.g . Sphygmomanometer, ECG, thermometer



Bio-physiological methods

- **Vitro measurement** are carried out outside the study subject by using specialized equipment
- E.g. radiological – x-ray, CT scan, MRI
- **Biochemical** – blood test, hormonal level, liver function test
- **Microbiological** – bacterial count , culture and sensitivity test
- **Cytological** – tissue biopsies.



Project Technique

- To measure psychological attributes (value, attitude and personality) by providing respondents with unstructured stimuli to which they respond.
- **Associate technique-** respondent asked to mention the first word that comes in mind.
- E.g. **Interviewer says cold and the respondent may say hot.**
- Mostly used in marketing research to find the quality that is mostly associated with brand of a product.

Project technique

- **Sentence Completion technique-**
- e.g. working with others all the time is-----
- (response such as good, happy, mad, nervous, sick, tired)
- **Story completion test-**
- asks the informants to complete them.



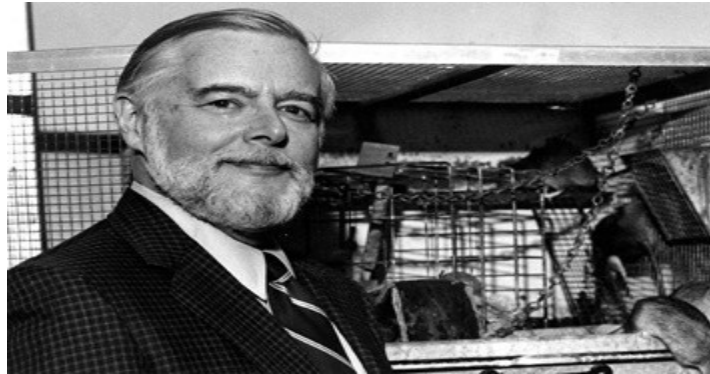
Construction technique

- **Pictorial technique** used in construction technique.
- Thematic apperception test- consists of a **set of pictures of a normal every day event and the respondents are asked to describe** what they think the pictures represent.



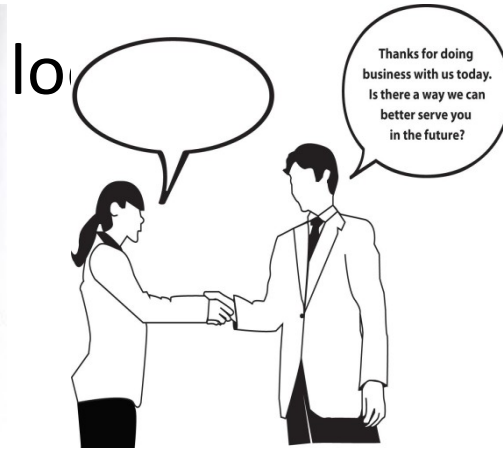
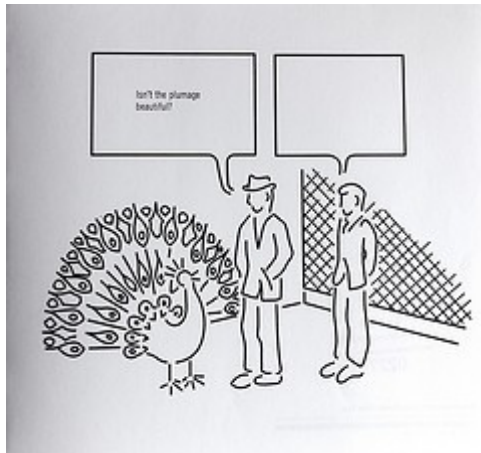
Rosenzweig test

- Mark Richard Rosenzweig (September 12, 1922 – July 20, 2009) was an American research psychologist



Rosenzweig test

- Used a cartoon format where in we have series of **cartoons with no words inserted in 'balloons'**. The respondents are asked to put their own words in an



Rorschach test

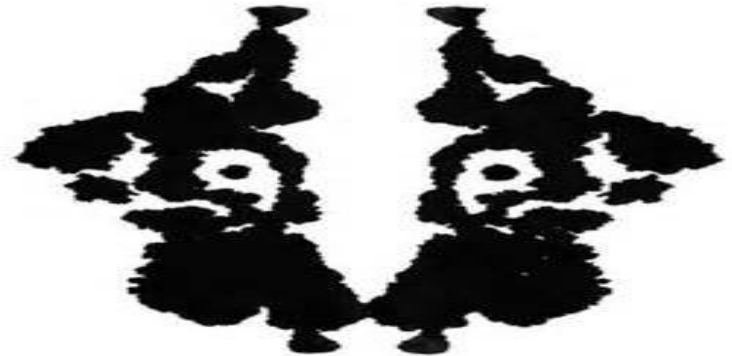
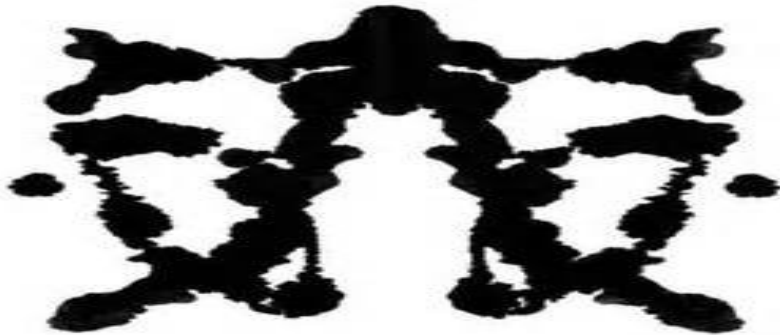
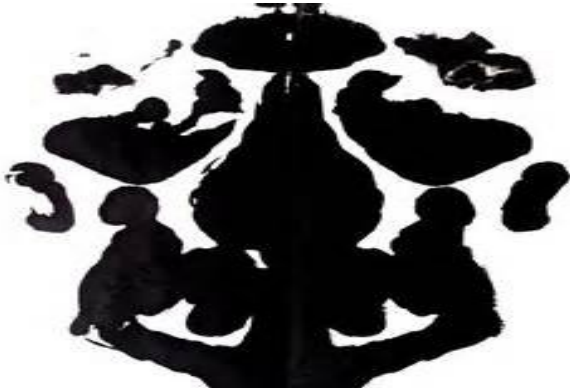
- Test consists of **10 cards having prints of inkblots**, wherein the design happens to be symmetrical but meaningless.
- Respondents are asked to describe what they perceive in them.



Rorschach test



Rorschach test



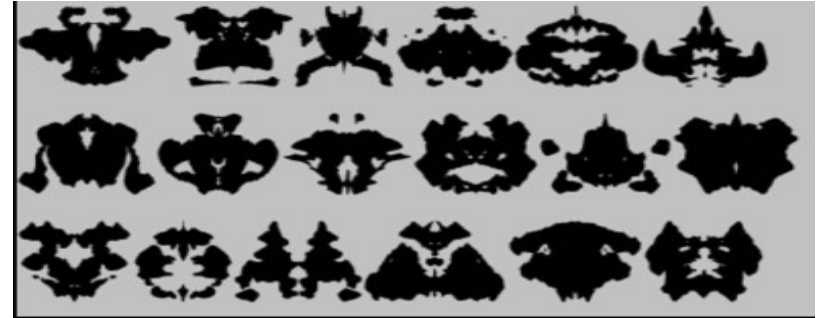
Rorschach test

- Rorschach listed the following guidelines for scoring the subjects' responses to the 10 inkblots:
- How many responses were made?
- What was the reaction time; that is, how long did the subject look at the figure before responding?
- How often did the subject refuse to interpret a figure?
- Was the subject's interpretation only determined by the shape of the figure, or were colour or movement included in the perception?
- Was the figure seen as a whole or in separate parts?
- Which parts were separated, and how were they interpreted?
- What did the subject see?

Holtzman inkblot test

- Modification of Rorschach test and consists of 45 cards, which are based on colour, movement, shading and other factors.
- **One response per card is interpreted at three levels of appropriateness.**
- Used to **assess the personality** structure of a test subject.
- Used as a **diagnostic tool in assessing schizophrenia, depression, addiction, and character disorders.**
- It involves the **administration of a series of 45 inkblots, the subject being permitted to make only one response per card.**

Holtzman inkblot test



Tomkins-Horn picture arrangement test

- Designed for group administrations with five plates, each containing three sketches that may be arranged in different ways to portray sequences which participants considers reasonable.
- **The Picture Arrangement Test is a psychological test performed by giving the subject pictures of a person with various facial expressions.**
- The subject is asked to tell a story with by putting a card in sequence and writing a sentence about it. The test was created by Silvan Tomkins who **used it to practice reading facial expressions by watching a recording of the story being told with no sound.**

Expressive technique

- A subject is **asked to role-play, act, draw or paint a specific concept or situation.**
- Expressive techniques focus on the manner in which the subject constructs something rather than on what it represents.



Choice ordering

- Informally used in qualitative research when **the subjects have to explain why certain things are ‘most important’ or ‘least important’** or to ‘rank’ or ‘order’ or categorize’ certain factors associated with topics under research.

Miscellaneous type

- **Drawing a picture-** each participants is given a **blank piece of paper and a pencil and is asked to draw a picture** that might offer some insights on behaviour and attitudes
- **Using fantasy and day dreams-** participants are provided **asked to describe topic-related fantasies and daydreams** in order to surface characteristics or features that are important to the study.
- **Clay modelling-** participants are provided with different coloured clays and are requested to give shape to them to reflect their feeling and thoughts.

Q-sorts

- Participants are provided **prewritten cards with words, phrases, or statements, and asked to arrange** these cards in an order along with a specific bipolar dimension.
- **Approximately 60 to 100 such cards that can be sorted out in 9 to 11 piles with few numbers of cards placed in each pile**
- E.g. evaluate whether attitudes or perceptions of nurses change following implementation of a course on nurse-patient relationship.

Vignettes

- Short stories about hypothetical characters in **specified circumstances, to whose situation the interviewee is invited to respond**'.
- Used to explore the ethical frameworks informing children's thinking about issues such as the family
- Used to elicit cultural norms derived from respondents' attitudes and beliefs about specific situation

BIOPHYSIOLOGICAL MEASURES

- **Basic physiology with relevance for nursing care**
- **Ways that nursing actions or medical interventions affect patient health outcomes**
- **Evaluation of specific nursing procedures or interventions testing a hypothesis**
- **Improving measurement and recording of biophysiologic data collected by RN**
- **Correlation of physiologic function in patient with health problems**

- **In vivo**
- **Measurements performed directly with in or on living organisms themselves**
- **May use complex instrumentation system with computers**
- **May be simple – thermometer, pulse oximeter, stethoscope**

- **In vitro**
- **Measurements performed outside the organism's body**
- **Specimens collected and tested outside body**
- **Blood chemistries, microbiologic, cytologic specimens**

DEVELOPING A DATA COLLECTION PROCEDURE

Identify types of data needed for the study

Select the types of measures to measure each variable

Select and/or develop instruments

Secure written permission to use each instrument

Pilot test researcher-developed instrument & revise prn

Develop data collection forms and procedures

Implement data collection plan

Qualitative research

- Ethnographic studies
- Phenomenological studies
- Grounded theory
- Historical research

Issues

- Field issues
- Gaining trust
- Pace of data collection
- Emotional involvement
- Reflexivity
- Recording and storing data

Techniques

Self reports

- Unstructured interviews
- Semi structured interviews
- Focus group interviews
- Joint interviews
- Diaries and journals
- Narratives on the internet.

others

- Life history interviews
- Oral histories
- Critical incident techniques
- Think aloud techniques

- Brain storming
- Sequencing
- Phrasing
- Estimate the time
- Obtain feedback
- Revise and test the questions

- Participant observation
- Role
- Primarily observation and active listening
- Primarily observation with limited participation
- Primarily participation with continued observation
- Primary reflection and reconfirmation of findings with informants

- Getting started –gaining entry/rapport
- Wind shield survey

considerations

- Setting
- Participants
- Activities and interactions
- Frequency and duration
- Precipitating factors
- Organizations
- Intangible factors

- Descriptive observations
- Focussed
- Selective

- Single position
- Multiple position
- Mobile positions

Records

- Activity log/Field diary
- Field notes

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