



Research Methodology

Design Survey Instrument

Survey Instrument-Questionnaire

- **Questionnaire** – type of paper-and-pencil survey used in descriptive research in which information is obtained by asking participants to respond to questions rather than by observing their behavior
- Limitation is that results are simply what people say they do, believe, like, dislike, etc.

Questionnaire, cont'd

- Determine the objectives
 - What information is wanted?
 - How will the results be analyzed?
 - Will comparisons be made between groups of respondents?

Questionnaire, cont'd

- Your sample must be representative of the population
 - Sampling error
 - Many samples may be drawn from a population
 - Each sample will yield different results
 - The difference between samples is the sampling error (amount of error to expect in a single sample)
 - Sample size
 - Must be adequate to represent population of interest
 - Must be practical from the standpoint of time and cost

Questionnaire, cont'

- Appearance and design
 - Appearance has been shown to affect response rate
 - Provide written instructions for completion
 - First few questions should be easy to answer
 - Short questionnaires have higher response rates

Questionnaire

New Health Care Consumer Questionnaire

Patient Name _____ DOB ____/____/____ Date ____/____/____

*In order to best serve your medical needs, we ask that you complete the following questionnaire as completely as possible. The **Health Care Consumer (HCC) - Health Care Provider (HCP)** relationship is a privileged relationship built on trust and honesty. By completing and signing this form, you acknowledge that you understand that any intentionally false information may seriously and adversely affect your health.*

Patient Name _____ Gender M F
Last First Middle

Date of Birth (MM/DD/YYYY) ____/____/____ Social Security Number ____ - ____ - ____

If the person completing this form is not the patient, please write your name, your relationship to the patient, and why you are completing the form for this patient.

Name _____	Relationship _____	Reason _____
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Reason For Visit _____

Patient's Personal Contact Information (Address and Phone)

_____	Home Phone _____
_____	Work Phone _____

Emergency Contact (Address and Phone)

_____	Home Phone _____
_____	Work Phone _____

Insurance Information (Insurance Company, Policy Number, Contact Number)

_____	Contact # _____
Policy# _____	Fax (if known) _____

Additional, or Secondary Insurance Company

_____	Contact # _____
Policy# _____	Fax (if known) _____

Have you completed a Living Will OR designated a Durable Power of Attorney for Health Care? Yes No
If yes, please provide a copy for your health care provider.

Do you have any religious or cultural beliefs that may impact my health care Yes No
If yes, please describe _____

Methods of learning new material that I like best are:

Verbal Instruction Written Instruction Handouts Visual (Pictures, Videos, etc)

Questionnaire, cont'd

- Construct the questionnaire
 - Open-ended questions
 - Category of question in questionnaires and interviews that allows the respondent considerable latitude to express feelings and to expand on ideas
 - Example: “How do you think things went today?”
 - Drawbacks:
 - Respondents don't like them
 - They are time-consuming to answer
 - Limited control over the types of answers given
 - May be more difficult to analyze

Questionnaire, cont'd

- **Closed questions**
 - Category of question found in questionnaires or interviews that requires a specific response and that often takes the form of rankings, scaled items, or categorical responses
 - **Ranking** – type of closed question that forces the respondent to place responses in a rank order according to some criterion

Questionnaire, cont'd

- Example of Ranking: From what sources has most of your nutrition information come? Rank top 3

Source	Men	Women	Total
Strength and conditioning coach	27.8*	13.6	21.9
Athletic trainer	22.8*	13.7	19.0
University classes	8.9	17.6*	12.5
Individual sport coach	12.5	15.3	10.6
Nutritionist	5.6	16.0*	10.0
Magazines	11.1*	8.4	10.0
Family member	5.6	5.3	5.5
Friend	2.2	6.1	3.9
Television	3.3	0.8	2.3
Team physician	0.6	1.5	1.0
Other	1.7	0.8	1.3

* $p < 0.05$ (men vs. women).

Survey Research Process, cont'd

- **Scaled items** – type of closed question that requires participants to indicate the strength of their agreement or disagreement with some statement or the relative frequency of some behavior. Example of scaled item:
- In a required physical education program, students should be required to take at least one dance class.
 1. Strongly disagree
 2. Disagree
 3. Undecided
 4. Agree
 5. Strongly agree

Questionnaire, cont'd

- **Likert-type** scale – consists of 3 to 9 items
- Equal intervals between responses, i.e., difference between “strongly agree, and “agree is considered equivalent

Very Interested	Somewhat Interested	Neutral	Not Very Interested	Not at All Interested
5	4	3	2	1
Very Much	Somewhat	Undecided	Not Really	Not at All
5	4	3	2	1
Very Much Like Me	Somewhat Like Me	Neutral	Not Much Like Me	Not at All Like Me
5	4	3	2	1
Very Happy	Somewhat Happy	Neutral	Not Very Happy	Not at All Happy
5	4	3	2	1
Almost Always	Sometimes	Every Once In a While	Rarely	Never
5	4	3	2	1

Likert Scaled Question

- **Semantic Scale**
- It given a neutral point to create fair judgement
- It range between the 7 levels, e.g Example
- BORING
- NEUTRAL
- EXCITING

Likert Scaled Question

- **Step Scale**
- It like wise a semantic scale but do not have a middle point/neutral point
- Rate from -5, -4.....-2, -1 +1, +2.....+4, +5

Likert Scaled Question

- **Relevant Importance Scale**
- Features
- Performance
- Seating

Likert Scaled Question

- **Gap Analysis**
- It provide a choice between 1 to 5
- But must provide a reason to be choosen

Questionnaire, cont'd

- Categorical response – type of closed question that offers the participant only two responses, such as yes or no
- Possible responses include yes/no, true/false, female/male, etc.

Table 1 - Questionnaire for risk factors

Age (years)	
Height (cm)	
Body weight (kg)	
Age at menarche (years)	
Number of live births	
Breast feeding time (years)	
Menopausal status	
Use of hormone replacement therapy	
Educational level	Illiterate / reader-writer / primary school / high school / university
Dressing style	Modern / covered
Daily consumption	Milk / yogurt / cheese
Tea / coffee / alcohol	
Smoking	
Exercise habits	Walking > 30 min / day
Chronic diseases	Diabetes mellitus / thyroid disease / hypertension
Low energy fracture history	
Familial history of fracture	
Relatives with kyphosis	
Previous level of knowledge about osteoporosis	

Questionnaire, cont'd

- Conduct a **pilot study**
 - Send questionnaire to colleagues or acquaintances
 - Revise and send to sample of population of interest
 - Analyze results as part of pilot study
 - Revise again and use

Questionnaire, cont'd

- Write the cover letter
 - Be professional and concise
 - Explain purpose and importance
 - Assure respondent of their privacy and anonymity
 - Use institutional letterhead if applicable
 - Rewards and incentives may be used, including money

Questionnaire, cont'd

- Send the questionnaire
 - Include self-addressed, stamped envelope
 - E-mail, fax, and the internet may also be used

Questionnaire, cont'd

- Follow-up
 - Wait at least 10 days for follow-up
 - Wait another 10 days then send another questionnaire
 - Keep in mind that respondents are “self-selected” and this biases your results

Personal Interview

- Essentially the same as the questionnaire except questioning is done orally instead of in writing
- Higher response rate but smaller samples than questionnaire

Advantages:

- More adaptable
- Interviewer can observe the respondent
- Greater rate of return than questionnaire
- Easier to explain questions



Normative Survey

- **Normative** survey – survey method that involves establishing norms for abilities, performances, beliefs, and attitudes
- Similar to questionnaire except that tests are administered
- AAHPERD Youth Fitness Test (1958)
- National Children and Youth Fitness Study (1985, 1987)

Analyze the Results

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"I have the result of your cost-benefit analysis. You should have retired four years ago."