NURSING RESEARCH 2

NCMB315

Methodology and Presentation, Analysis & Interpretation

RESEARCH DESIGNS

- The plans or research design form the structure and the researcher's method of answering his questions and conducting studies
- It is the blue print of your study
- Research design is categorized according to the procedure the collects and analyze data based on the way information is collected
- Two basic research designs:
  - Qualitative
  - Quantitative

COMMON RESEARCH DESIGNS IN NURSING

- HISTORICAL RESEARCH
  - a systematic and critical inquiry of the whole truth of past events using the critical method in understanding and the interpretation of facts which are applicable to current issues and problems.
- DESCRIPTIVE RESEARCH
  - the study focuses at the present condition and the purpose is to describe and find new truth which includes case studies and survey research.
- COMPARATIVE RESEARCH
  - the researcher examines carefully the relationships (similarities or difference) among several variables.
- EXPERIMENTAL RESEARCH
  - seeks to answer question about causation; researchers attribute the change in one variable to the effect of one or more variable.
- PHENOMENOLOGICAL DESIGN
  - under the Qualitative research that focus on the commonality of a lived experience within a particular group.

RESEARCH LOCALE

- A brief description of the place where participants or respondents are to be obtained.
- Anonymized the place of the study

SAMPLE

- The study will be conducted in a Higher Educational Institution in Valenzuela City, from January to March 2025.
- The study will be conducted in 2 private and 2 Government hospitals in Metro Manila, from February to April 2025.

DESCRIPTION OF THE RESPONDENTS

- The researcher(s) must explain how and where the subjects are taken and the bring description of the respondents. §
- The agency and frequency of subjects must be mentioned
- Subjects must be adequate
- Add inclusion criteria: *Age, gender, civil status, year of experience, religion, year level. Must be a Filipino citizen, etc.
- Add exclusion criteria:*with comorbidities, Mentally disabled,

SAMPLE

- The respondents of the study were the ninety (120) students currently enrolled in BSN. The respondents already passed the prerequisite subjects specificallyNCMB312. 30 each year level.....

ADEQUATE SAMPLING

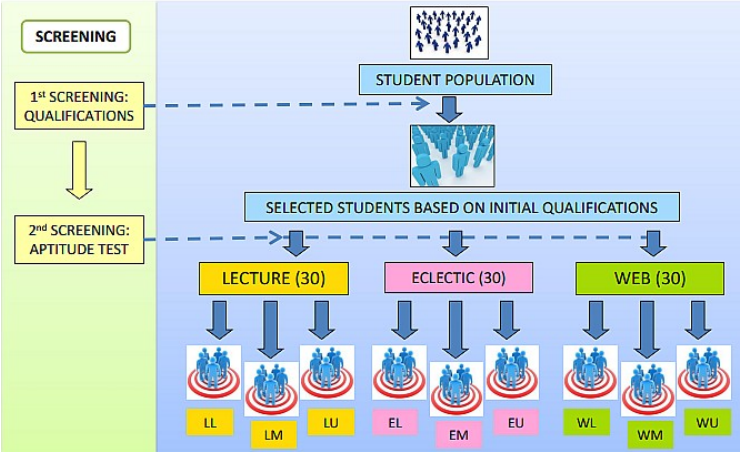
- The size of sample must be determined before the conduct of the study.
- There are no fixed rules but there are recommendations:
  - When the population is homogenous, a smaller sample is enough; if heterogeneous, a larger sample is recommended
  - The size of sample varies inversely as the size of the population
  - For greater accuracy, a larger sample is recommended

SAMPLING DESIGNS

PROBABILITY SAMPLING	NON PROBABILITY SAMPLING
Each of the units in the target population has the same chance of being included in the sample	No way that each of the units in the target population has the same chance of being included in the sample
Greater possibility of representative sample of the population	No assurance that every unit has some chance of being included
Conclusion derived from data gathered can be generalized for the whole population	Conclusion derived from data gathered is limited only to the sample itself

• **Simple Random Sampling**
  ○ Can be done through the lottery method or table of random numbers
• **Systematic Sampling**
  ○ Uses the sampling interval formula
  ○ Sampling interval = total population/desired sample size
• **Stratified Sampling**
  ○ Used to ensure that different groups of the population are adequately included in the sample.
• **Cluster Sampling**
  ○ Used in large scale surveys; sampling larger groupings then smaller groupings
• **Multi-stage Sampling**
  ○ The selection of the sample is accomplished in more than 2 steps
	• **Accidental or Convenience Sampling**
	  ○ Obtained when the researcher selects whatever sampling units are conveniently available
	• **Purposive Sampling**
	  ○ The sample depends upon the subjective judgment of the researcher. §
	• **Quota Sampling**
	  ○ Researcher(s) have an assignment of a "quota" or a certain number that must be covered by the research including several criterias
	• **Snowball Sampling**
	  ○ Starts with known sources of information who or which will in turn give other sources of information.
	• **Networking Sampling**
	  ○ This is used to find socially devalued urban populations such as addicts, alcoholics, child abusers and criminals because they are usually hidden from outsiders.

SAMPLE DIAGRAM FOR SAMPLING



RESEARCH ETHICS SECTION

- To avoid ethical dilemmas, the study proposal underwent ethics reviewed and gained the approval of Our Lady of Fatima University Valenzuela, IERC. The researchers provided a consent form, asking for permission and consent from the parents or guardian of the participants to partake in our intended research.
- An ethical problem that the researchers expected to arise is ascertaining whether the children themselves were aware and understood the extent of their participation in the research. The researchers reminded the parents and guardians that their child has a right to refuse to answer questions or participate in the activity, and to opt out from participating at any point during the study without any consequence.

RESEARCH INSTRUMENT

- The researchers prepared a DSM-IV: ADHD Symptom Checklist—Child and Adolescent Version # 6177 to be answered by the parents of the children with ADHD to obtain the data needed for the study. The checklist will be composed of two(2)main parts. The first part consists of the demographic profile of the respondents. The second part is categorized into three (3) subparts which are inattention symptoms with nine(9)items, hyperactivity symptoms with six (6) items, and impulsivity symptoms with three(3) items.

DATA GATHERING, INSTRUMENTATION & PROCEDURES

QUESTIONNAIRES

- Questionnaires are an inexpensive way to gather data from a potentially large number of respondents.
- Often they are the only feasible way to reach a number of reviewers large enough to allow statistically analysis of the results.
- A well-designed questionnaire that is used effectively can gather information on both the overall performance of the test system as well as information on specific components of the system.
- If the questionnaire includes demographic questions on the participants, they can be used to correlate performance and satisfaction with the test system among different groups of users.
- It is important to remember that a questionnaire should be viewed as a multi-stage process beginning with definition of the aspects to be examined and ending with interpretation of the results

WHEN TO USE QUESTIONNAIRES

- WHEN RESOURCES AND MONEY ARE LIMITED.
  - A Questionnaire can be quite inexpensive to administer. Although preparation may be costly, any data collection scheme will have similar preparation expenses.
- WHEN IT IS NECESSARY TO PROTECT THE PRIVACY OF THE PARTICIPANTS.
  - Questionnaires are easy to administer confidentially. Often confidentiality is the necessary to ensure participants will respond honestly if at all. Examples of such cases would include studies that need to ask embarrassing questions about private or personal behavior.
- WHEN CORROBORATING OTHER FINDINGS.
  - In studies that have resources to pursue other data collection strategies, questionnaires can be a useful confirmation tools. More costly schemes may turn up interesting trends, but occasionally there will not be resources to run these other tests on large enough participant groups to make the results statistically significant.

STEPS TO ADMINISTER QUESTIONNAIRE

- Defining the Objectives of the survey
- Determining the Sampling Group
- Writing the Questionnaire
- Administering the Questionnaire
- Interpretation of the Results

WRITING QUESTIONNAIRE

CLARITY

- This is probably the area that causes the greatest source of mistakes in questionnaires. Questions must be clear, succinct, and unambiguous. The goal is to eliminate the chance that the question will mean different things to different people. If the designers fails to do this, then essentially participants will be answering different questions. To this end, it is best to phrase your questions empirically if possible and to avoid the use of necessary adjectives. For example, it asking a question about frequency, rather than supplying choices that are open to interpretation such as:

BETTER	BEST
Very Often Often Sometimes Rarely Never	Every Day or More 2-6 Times a Week About Once a Week About Once a Month Never

- There are other more subtle aspects to consider such as language and culture. Avoid the use of colloquial or ethnic expressions that might not be equally used by all participants. Technical terms that assume a certain background should also be avoided

LEADING AND EMBARRASSMENT

- **Leading question** is one that forces or implies a certain type of answer. It is easy to make this mistake not in the question, but in the choice of answers. A closed format question must supply answers that not only cover the whole range of responses, but that are also equally distributed throughout the range. All answers should be equally likely.

SAMPLE 1	SAMPLE 2
Superb Excellent Great Good Fair Not so Great	Totally Agree Partially Agree Neither Agree or Disagree Partially Disagree Totally Agree

- **Embarrassing questions** dealing with personal or private matters should be avoided. Your data is only as good as the trust and care that your respondents give you. If you make them feel uncomfortable, you will lose their trust. Do not ask embarrassing questions

PHRASING

- Most adjectives, verbs, and nouns in English have either a positive or negative connotation. Two words may have equivalent meaning, yet one may be a compliment and the other an insult. Consider the two words "child-like" and "childish", which have virtually identical meaning. Child-like is an affectionate term that can be applied to both men and women, and young and old, yet no one wishes to be thought of as childish.

NOT OK	OK
Do you agree with the CHED's plan to oppose the implementation of the old curriculum?	Do you agree with the CHED's plan to promote the implementation of the new 5-year curriculum?

DATA COLLECTION PROCESS

- The researchers obtained and submitted letter of approval to the authorities involved in the study. Also, they explained and discussed the significance of the study to the chosen subjects. Prior to the data collection, the researchers obtained consent from the parents/ guardians of children diagnosed with ADHD. The intervention was conducted for two weeks. Before the intervention, the parents were provided instructions and were given DSM-IV: ADHD Symptom Checklist—Child and Adolescent Version # 6177 to assess their children that served as baseline and for comparison. Then, the participants received mandala art therapy and was instructed to color the given material that was provided. After the intervention, the researchers provided the same questionnaire to the parents for the evaluation whether the symptoms were reduced. Then, the researchers asked the parents for their observation and subjective experience pertaining to the child's behavior and response in Mandala Art Therapy

DATA ANALYSIS

- The data collected has undergone analysis and interpretation with the use of paired t-test. A paired t-test is used to compare two population means where you have samples in which observations in one sample can be paired with observations in the other sample. The first set of questionnaires were answered by the parents of the participants/respondents before the intervention, whereas the second set of questionnaires were given after the intervention.
- The researchers utilized Cool and Warm analysis. The cool analysis consisted of identifying significant verbalizations and/or statements of the participants which also served as a basis in formulating the warm analysis stage. In the warm analysis stage, and in accordance with descriptive phenomenology, data categories were formulated, and themes were identified. Furthermore, Colaizzi's method was also utilized. This method will provide assistance in extracting, organizing, and analyzing

STATISTICS

- A branch of applied mathematics concerned with the collection and interpretation of quantitative data and the use of probability theory to estimate several parameters

MEASURES OF CENTRAL TENDENCIES

- MEAN: The sum of the values divided by the number of values —often called the "average." Add all of the values together. Divide by the number of values to obtain the mean.

Example: The mean of 7, 12, 24, 20, 19 is (7 + 12 + 24 + 20 + 19) / 5 = 16.4.

- MEDIAN: The value which divides the values into two equal halves, with half of the values being lower than the median and half higher than the median. Sort the values into ascending order.
  - If you have an odd number of values, the median is the middle value.
  - If you have an even number of values, the median is the arithmetic mean of the two middle values

Example: The median of the same five numbers (7, 12, 24, 20, 19) is 19.

- MODE: The most frequently-occurring value (or values). Calculate the frequencies for all of the values in the data. The mode is the value (or values) with the highest frequency

Example: For individuals having the following ages -- 18, 18, 19, 20, 20, 20, 21, and 23, the mode is 20.

PRESENTATION OF STUDY RESULTS

Presentation of study results must be done chronologically based on the objectives of the study. The results of the study is presented in different ways, such as the following:

NARRATIVE

- Should be presented accurately and objectively
- Contain quotes, findings, meanings and implications
- In past tense
  - Example: Majority of published researches from PJN cover issues from Medical-Surgical (27.58%)followed by topics obtained from Nursing Management (24.13%). Publications utilizing other nursing topics range from 1-4. These results were expected since based on the experiences of the researchers, the leading causes of morbidity in the Philippines affects adults requiring Medical-Surgical care

TABULAR AND GRAPHICAL

- Requires placing of numerical data in cells and compartments
- Tables, charts and diagrams
  - Example: Scope of Nursing Practice
    Miles (1994) stressed that that first stage of formulating a research question is to identify a broad area of interest. Whatever topic decided falls under a major typology based on the scope of clinical practice in nursing. Using the spreadsheet database, the researchers identified common nursing scope utilized in studies published in both journals: Transcultural Nursing, Medical-Surgical Nursing, Geriatrics, Community Health Nursing, Nursing Management, Psychiatric Nursing and Maternal and Child Health Nursing where Pediatrics was integrated.

SPECIAL CONSIDERATIONS

- Place items to be compared next to each other
- Place labels correctly
- Use fonts that are large enough
- Include information needed within the image area
- Keep graphical displays free of extraneous materials

TABLE DISPLAY

- Tables are useful for presenting a large quantity of information clearly and concisely.
- They typically display numerical data in columns and rows for easy classification and comparison.
- Tables do not duplicate text, but rather present new information.
- They should be interpretable without the text

STANDARDS FOR TABLES

- NUMBERING
  - Each table is preceded by the capitalized word "table" followed by an Arabic number (e.g., Table 1, Table 2)
- TITLING
  - Each table has a unique bold title written directly below the table number. Titles should be brief yet descriptive. Capitalize each major word in the title (but not of, on, in, and, etc.). Italicize titles. Don't put a period
- HEADINGS
  - Should be concise but descriptive. Capitalize the first word of each heading. Do not bold or italicize the text, and do not put a period after the heading
- SPACING
  - Tables in the new 6th edition APA format can be double-spaced or single-spaced with readability as the primary consideration
- RULING
  - Put lines in a table only when they are necessary for clarity. Horizontal lines are permissible; vertical lines are not
- NOTES
  - to the table appear underneath the table being supplemented. Notes begin under the first column and are left-justified and single or double spaced

TABLE CHECKLIST

- Is the table necessary?
- Is the table referred to in the text?
- Are all comparable tables in the manuscript consistent in presentation?
- Is the title brief but explanatory?
- Does every column have a column heading?

FIGURE DISPLAY

- Figures intended for mass production should be computer-generated using professional level graphic software.

TYPES OF FIGURES

- GRAPHS
  - Displays relationship between quantitative indices
- CHARTS
  - Displays non-quantitative information
- MAPS
  - Displays spatial information
- DRAWINGS
  - Displays information pictorially
- PHOTO
  - Displays direct representations of information

STANDARDS FOR FIGURES

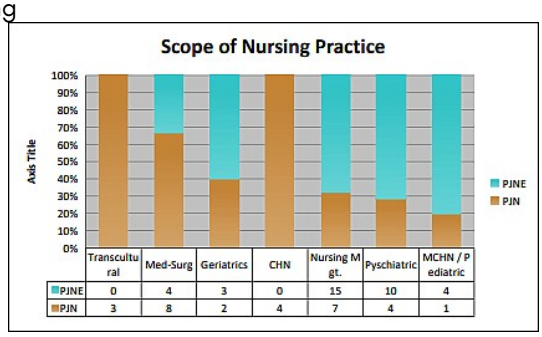
- NUMBERING
  - Each figure is preceded by the capitalized word "Figure" followed by an Arabic number (e.g., Figure 1, Figure 2)
- ELEMENTS
  - Are large and sharp enough to be legible
- LABELS
  - For parts of the figure should be placed as close as possible to the component(s) being identified
- FIGURE LEGEND
  - Should be positioned within the figure border

FIGURE CHECKLIST

- Is the figure necessary?
- Is the figure simple, clear and free of extraneous detail?
- Are all elements in the figure clearly labeled?
- Are all figures labeled consecutively with
- Arabic numerals?
- Are all figures mentioned in the text?
- Has written permission for print and electronic reuse been obtained/ is appropriate credit given?
- Are the figures being submitted in a file format acceptable by UBC?

EXAMPLE: GRAPHICAL (CHART)

Topics under these major categories are presented in Figure 5. Surprisingly, no studies where obtained focusing on Emergency Nursing, and Critical/Intensive Care. Figure 5 shows the frequencies and percentage attributed to the identified scope of nursing



EXAMPLE: TABULAR

The Philippine Journal of Nursing received a total of twenty-nine (29) researches for publication from year 2004-2008, lesser than the number of researchers published in Philippine Journal of Nursing Education (n=36). Table 1 shows the number of studies published from the two nursing journals from 2004-2008.

Table 1: Distribution of research articles per year

YEAR	Philippine Journal of Nursing (PJN)*		Philippine Journal of Nursing Education (PJNE)	
	f	%	*f*	%
2004	5	7.69	8	12.31
2005	6	9.23	6	9.23
2006	9	13.85	5	7.68
2007	8	12.31	8	12.31
2008	1	1.54	9	13.85
TOTAL	29	44.62	36	55.39

*from January 2004 to June 2008 only

There is no definite number of researches accepted for every publication issue of both journals. It is clearly evident in the inconsistencies of the number of entries per year of publication.

EXAMPLE: PIE

In PJNE, majority of the researches uses probability sampling leaving only 5.56% for non-probability sampling usage. Researchers accepted in this journal clearly identified steps in arriving at the desired sample and directives of inclusion criteria were properly defined.

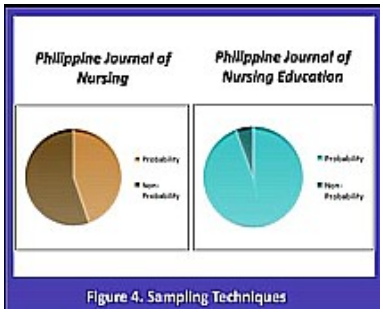


Figure 4. Sampling Techniques

PREPARATION OF TABLES AND GRAPHS

Following are suggested rules (Reyes, 1998) in preparing tables and graphs:

- Tables and graphs should include only qualified items of information
- They should possess clear and unified purposes
- They should precede with introductions that explains them
- They should be placed close to the discussion of facts related to them
- They should be constructed and presented in manners that can be understood even without referring to text
- They should comprehensively present data'
- Tables and graphs should include only qualified items of information
- They should precede with introductions that explains them
- They should be placed close to the discussion of facts related to them
- They should be SELF-EXPLANATORY

SUMMARY AND CONCLUSIONS

- Summary presents important points of the discussed results
- The study conclusions show what knowledge has been obtained by the study
- Conclusions focus on the answers to the study problem
- They should generalize the results to other subjects or groups
- Researchers should remember that findings are not conclusions
- For Qualitative, Conclusion is termed MODERATUM GENERALIZATION

SAMPLE

- RESULT
  - There is a significant decrease in the anxiety level of the 20 patients (subjects) before abdominal surgery who have been entertained by music
- CONCLUSION
  - Music appears to be an effective means of decreasing anxiety levels in the patients

RECOMMENDATIONS

- Every findings provides recommendations for further research
- Suggestions are based on study findings
- Replication studies should be conducted

(From the research: Enhancement of Classroom Learning Experiences of Nursing Students...)

- Based from the facts elicited from this study and in the hope of improving the learning experiences of nursing students, the researcher recommends the following:
  - The school administrators should provide ways to implement course website technology to nursing subjects offered by the university.
  - The school should plan and develop an online course (open university) in nursing to address the needs of immobile students and offer other means of learning not only in other places in the country but in other parts of the globe as well.
  - A replication of this study to other courses offered by the university is warranted to identify the effects of integration of course website technology