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Research Methodology

- 1. What is research methodology?**
- 2. What constitutes a research topic?**
- 3. How to select a research topic?**
- 4. What are some of the limitations encountered when doing or thinking of doing a research project?**
- 5. What is a literature review?**
- 6. Where do I find sources of information for my literature review?**
- 7. How to select an appropriate methodology?**
- 8. What are some of the common types of qualitative methodology?**
- 9. What are some of the common types of quantitative methodology?**

10. What type of data to collect?
11. How to collect data?
12. How to analyze data?
13. What are some of the tests used on categorical data?
14. What are some of the tests used on continuous data?
15. How to draw conclusions from data?
16. How to present research findings?
17. How to present your paper according to the APA style?

What is Research Methodology?

- Is defined as a highly intellectual human activity used in the investigation of nature and matter and deals specifically with the manner in which data is collected, analyzed and interpreted

What Constitutes a Research Topic?

- Unanswered question
- Unsolved question
- Concern
- Query
- Statement of inquiry

How to Select a Research Topic?

- Personal interest
- Social problem
- Testing theory
- Prior research
- Program evaluation
- Human service practice
- Minorities in research

What are some of the Limitations Encountered when Doing or Thinking of Doing a Research Project?

- Time constraints
- Financial consideration
- Anticipating and avoiding problems
- Equipment limitations
- Human resource limitations
- “Out of the box” thinking
- “In the box” thinking

What is a Literature review?

- Systematic review of available resources
- Theoretical and conceptual concepts
- Identification of independent and dependent variables
- Measurement and operational definitions
- Selection of appropriate research technique
- Sampling strategy
- Statistical technique
- Findings and conclusions of similar studies studied

Where do I find Sources of Information for my Literature Review?

- Books
- Journals
- Internet
- Data bases
- Archives
- Interviews
- Observations
- Reports
- Records

How to Select an Appropriate Methodology?

- What is the nature of the problem being investigated?
- Is the problem being investigated subjective or objective?
- Four types of research methods:
 - Qualitative
 - Quantitative
 - Mixed (qualitative and quantitative)
 - Critical and action oriented

What are some of the Common Types of Qualitative Methodology?

- Surveys
- Longitudinal
- Cross-sectional, correlation
- Experimental
- Quasi-experimental
- Ex-post facto research

What are some of the Common Types of Quantitative Methodology?

- Biographical
- Phenomenological
- Ethnographical
- Case study

What Type of Data to Collect?

- Categorical
 - nominal-observations that can be coded
 - ordinal-observations that can be ranked
- Continuous
 - Observations that can be counted or measured
- Mixed
 - matrix of categorical and continuous data

How to Collect Data?

- Observations
- Interviews
- Reports
- Records

How to Analyze Data?

- Need to consider the type of data collected
 - categorical
 - continuous
 - mixed

What are some of the Tests Used on Categorical Data?

- Chi-squared test-to determine the relationship between variables
- Fisher's test-to compare two unpaired groups
- McNemar's test-to analyze a matched case-control study
- Kappa-to quantify interafter agreement
- Wilcoxon test- to compare one group to a hypothetical value
- Kruskal-Wallis test-to compare three or more groups
- Spearman test-to compare association between variables

What are some of the Tests Used on Continuous Data?

- T test- to compare one or two groups
- ANOVA-to compare three or more groups
- Pearson test-to compare the association between variables

How to Draw Conclusions from Data?

- Use of graphical presentations
- Use of statistical analyses
- Sharing data among colleagues and receiving constructive feedback
- Critically analyzing data and results

How to Present Research Findings?

- Tables-matrix of rows and columns representing variables
- Figures-visual organization of data/observations
 - pictures
 - pie charts
 - line charts
 - bar charts
 - flow charts
 - organizational charts
 - cartogram charts
 - Gantt charts
 - scatter plot charts

How to Present your Paper According to the APA style?

- APA stands for American Psychological Association
- APA is the most commonly used style in the Social Sciences
- APA provides useful guidelines on:
 - style
 - in text citations
 - references

APA Style

- Third person should be used
- Active voice should be used
- Writing should be clear, concise and plain
- General format should be:
 - paper size-8.5 x 11
 - 1" margins on all sides
 - double spaced
 - written in 12 point font using Times New Roman
 - short title and page number on the upper right hand corner of every page

General Format of APA Paper

- Title
- Abstract
- Main Body
 - methodology
 - results
 - discussion
 - conclusions
- References

APA Referencing Style

- Last name of author, followed by initials
- Last names of authors arranged alphabetically in the reference list
- Capitalize the first letter of the first word in titles and subtitles
- Capitalize all major words in journal titles
- Italicize titles of books and journals

APA In-text Citation

- Author's last name and year of publication placed in parenthesis next to where the information is cited
- Three or more authors, use all three when first cited then followed by the first author et al., year for subsequent in-text citations
- Six or more authors, use the last name of the first author followed by et al., year of publication

**Thank
you**