SUGGESTED FORMATS FOR FREQUENTLY-OBSERVED RESEARCH TYPOLOGIES

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1. HYPOTHESIS TESTING
   a. Formulation of the hypothesis
   b. Research design
   c. Operational definitions and data
   d. Statistical methods
   e. Findings
   f. Discussion and conclusions
   g. Significance
   Typical title: “The Effect of Three Different Styles of Packaging on Buyer Behavior”

Hypotheses are formal statements about the relationship of two or more variables, events, or concepts. They are expressed in the form of conditional statements such as: “If X increases, then Y will decrease, other things being equal.” To test hypotheses, the terms (such as X and Y) must be clearly defined and measurable. Data must be systematically collected and analyzed. Statistical analyses are then typically performed to help decide whether expected relationships are supported by the data. The techniques of inferential statistics may be used to draw conclusions about a population on the basis of data from a carefully selected sample. Among the elements of a hypothesis test may be the following:

   a. Formulation of the Hypothesis
      Specification of the research problem and research objectives and development of the one or more hypotheses to be tested. This may include a discussion of how the hypothesis has been derived deductively from theory, generated from previous hypothesis tests, or simply based on observations of social phenomena. The relationship of the hypothesis to the pertinent literature should be specified and analytically examined.

   b. Research Design
      Description of the overall research strategy (cross-sectional, longitudinal, experimental, survey, etc.), and discussion of the strengths and weaknesses of this strategy. This discussion may include a description and defense of the populations chosen for investigation, and the criteria and methods for sample selection.

   c. Operational Definitions and Data
      Translation of concepts in each hypothesis into measurable terms (operationalization). Also, description and defense of the types and sources of data, and the methods and instruments used for data collection (including assessment of measurement reliability and validity).
d. **Statistical Methods**
Description and rationale for the statistical techniques used for data reduction and analysis.

e. **Findings**
Verbal and tabular presentation of results of the data analysis, generally refraining from interpretations.

f. **Discussion and Conclusions**
Reaching of a judgment as to whether the hypothesis is supported or refuted. There may be a discussion of how the findings: (a) are consistent or inconsistent with the findings of previous hypothesis tests; (b) support, extend, specify, or undermine the theory from which the hypothesis was deduced; (c) suggest one or more new theories or explanations that may account for the findings; and/or (d) suggest the need for more research, and if so, of what type.

g. **Significance**
Discussion of the relevance and practical benefits of the findings and conclusions to clinicians, administrators, policymakers, members of the general public, or other possible audiences besides researchers.

2. **COST/BENEFIT OR COST-EFFECTIVENESS STUDY**
   a. Alternatives
   b. Accounting perspective
   c. Identification of benefits and costs, including direct/indirect, tangible/intangible, programmatic, opportunity, etc.
   d. Measurement of the above
   e. Valuation of benefits and costs
   f. Discounting
   g. Consideration of equity
   h. Decision criteria
   i. Choice
   j. Treatment of uncertainty

   Typical title: “A Cost-Effectiveness Study of a New Child Care Facility at the Westinghouse Plant in Maryland”

A formal cost-benefit analysis is the evaluation of a program, project, treatment, or other course of action in terms of the relationship between its costs or the resources it consumes, and the outputs or benefits it produces. These costs and benefits are typically translated into dollar values. This allows for the comparison and ranking of alternatives on the basis of economic efficiency criteria. Such an analysis may be prospective: undertaken before an investment decision is made, based on estimates of anticipated costs and benefits, and thus useful in making future decisions about resource allocation. Or the analysis may be retrospective: undertaken after a program has been implemented, based on empirical data on actual program operations and impacts, and thus useful as a type of impact evaluation.

Cost-effectiveness analysis is used for comparing the productivity of alternative courses of