
Guidelines for Avoiding Sexism in Psychological Research

A Report of the Ad Hoc Committee on Nonsexist Research

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This article is intended primarily for psychologists and for students of psychology who are developing skills in research design and methodology. It has become clear that much research on human and animal behavior incorporates a variety of forms of sexism. Such sexism introduces unwanted bias into the research.

The elimination of gender bias in psychological research is an important concern for the discipline of psychology. Researchers should attempt to achieve the highest methodological and ethical standards. To help to enhance the quality of psychological research, the Board of Social and Ethical Responsibility for Psychology formed an Ad Hoc Committee on Nonsexist Research to develop materials to educate psychologists about ways to eliminate gender bias in research. This article was developed under the auspices of that committee, which was composed of representatives from the Board of Scientific Affairs, the Board of Social and Ethical Responsibility for Psychology, and the Committee on Women in Psychology.

Reviews of the literature document the pervasiveness of gender bias at all stages of research: question formulation, research design, data analysis and interpretation, and conclusion formulation. This document identifies some of the ways that gender bias can affect research at each of these stages. The examples given are derived from current literature. The discussion on the following pages is intended to illustrate general problems. It is not exhaustive. Additional sources of information are also listed.

Whenever values and assumptions—whether related to gender, race, ethnicity, disability, sexual orientation, or socioeconomic status—affect the research process, bias can operate. This article focuses on gender, but the principles illustrated here apply to other forms of bias as well.

This article provides examples of common avoidable problems as well as suggestions for eliminating such bias.

1. Question Formulation

a. Problem: Gender stereotypes that are associated with the topic being studied can bias question formulation and research outcomes.

i. Example: Some studies have defined leadership only in terms of dominance, aggression, and other styles that emphasize characteristics congruent with a male stereotype.

ii. Correction: Recognize the existence of a range of leadership styles, including those that emphasize egalitarian relationships, negotiation, conflict resolution, and consideration of others. The limits of any definition that is used should be specified.

b. Problem: Questions derived from or constrained by existing theory or research that has used male samples and has not taken into account women's experiences may not provide meaningful explanations for female behavior.

i. Example: Initial research on battered women that used "masochism" as an explanatory theory was unable to explain battered women's behavior. Until their experiences were reexamined within other theoretical frameworks, there was little advance in our understanding of when and why battered women leave or don't leave abusive situations.

ii. Correction: Be willing to employ new theories to explain phenomena that do not fit existing theories. New theories may be derived from nontheoretical studies of the experiences of the research participants if existing theories are not adequate.

c. Problem: It is assumed that topics relevant to white males are more important and more "basic" to study, whereas topics related to white or ethnic minority females or ethnic minority males are seen as more specialized or applied.

i. Example: A topic such as the effect of television on the modeling of aggression in boys is considered as basic research whereas research on the psychological correlates of pregnancy or menopause is seen as specialized or applied.

ii. Correction: Definitions of problems as basic or specialized should not be made on the basis of relevance to a particular group. When topics are of most interest to a particular group, this should be explicitly noted.

d. Problem: In formulating questions, the review of

previous research is insensitive to biases in the selection of research participants or other methodological problems, leading to biased questions.

i. Example: The hypothesis that aggressive stimuli enhance sexual arousal is based on results that have been found only for male research participants.

ii. Correction: When building on previous research, formulate the question so that findings can be generalized to a heterogeneous sample or clearly state the limitations of generalizations.

2. Research Methods

a. Problem: The selection of research participants is based on stereotypic assumptions and does not allow for generalizations to other groups.

i. Example: On the basis of stereotypes about who should be responsible for contraception, only females are looked at in studies of contraception.

ii. Correction: Both sexes should be studied before conclusions are drawn about the factors that determine use of contraception.

b. Problem: The selection of research participants is limited to one sex on the basis of convenience.

i. Example: Male animals are often preferred as subjects in experiments because the estrous cycle in females disrupts responses in certain types of behavioral and biological tests. Although it may be appropriate to use animals of one sex, generalizations of results to both sexes may not always be justified.

ii. Correction: Use research participants of both sexes wherever feasible so that results can apply to males and females, and any gender differences can be noted. When subjects of only one sex are used, the researcher should indicate why this is appropriate if it is not evident by the nature of the study itself (e.g., maternal behavior, studies of male dominance, endangered species when only one sex is accessible, etc.).

c. Problem: When unanticipated gender differences emerge in research, researchers drop the female research participants from the analysis, rather than examining the reasons underlying the sex difference and redesigning the study.

i. Example: For years, studies of achievement behavior did not include females because in the early studies validating the theory of achievement motivation, females did not act in the expected ways.

ii. Correction: Report the gender differences as a finding and develop hypotheses and research designs to explain such differences within the theory.

d. Problem: The sex and race of research participants, experimenters, confederates, and persons in direct contact with the participants are not specified. Potential interactions of sex and race or other variables may create unexplained variance.

i. Example: More helping behavior by males rather than females is found in studies that use a young female confederate that needs help. Such results may be a function of the sex of the confederate or an interaction of participant and confederate rather than a difference due to the gender of the research participants.

ii. Correction: Control for or vary sex and race of persons involved in the research. Try to include experimenters and participants who are members of racial minorities. At a minimum, specify the sex and race of everyone involved in the research.

e. Problem: Gender is confounded with other participant variables such as job status, age, or race.

i. Example: In studies of job turnover, women are found to have higher rates of turnover than men (supposedly because of less commitment to their jobs). Other research has found that turnover is correlated with job status such that those with lower status jobs quit more. When job status is controlled, there is no gender difference in job turnover.

ii. Correction: Select an appropriate comparison sample. For example, before asserting that differences in groups of males and females are due to gender, control for other major explanatory factors.

f. Problem: Selection of gender-stereotyped measures differentially affects performance.

i. Example: In studies of mathematical ability, the content of the mathematics problems (e.g., computation of baseball scores versus cooking ingredients) produced gender differences that were not found when the content was unassociated with gender-related interests.

ii. Correction: Select measures that are controlled for gender-related content or include this as a design variable.

g. Problem: Labeling of variables or response measures has connotations that suggest negative evaluations of nontraditional behaviors or life situations.

i. Example: Negatively toned labels are sometimes based on the fact that the individual does not exhibit traditional gender or sex role behavior (e.g., "fatherless homes" vs. "one-parent families," "aggressive" vs. "assertive," etc.).

ii. Correction: Consider both connotations and denotations when choosing labels for variables. Avoid using labels with negative connotations to describe behaviors that do not fit traditional gender or sex roles.

h. Problem: The development of operational definitions is influenced by stereotypes.

i. Example: Females have been found to be more conforming than males; however, this may be a function of the way "conformity" was measured.

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As used throughout this document, the word *sex* refers to classification based on external sex characteristics; the word *gender* communicates the sociocultural definition of male and female.

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ii. Correction: Conformity should be explicitly defined. One form of conformity should not be generalized to other forms. (For example, conformity in a group setting may be a function of the type of task being done by the group.)

3. Data Analysis and Interpretation

a. Problem: Serendipitous gender differences are reported, but no report is made when differences are not found. Care must be taken to avoid giving a skewed image of the actual data.

i. Example: "In analyzing data, we found that males and females differed significantly on"

ii. Correction: Any nonhypothesized sex or gender differences should be reported and the need for replication indicated to assure that the difference is not artifactual. When gender differences are not found and where such an observation is relevant, this too should be reported so that future research could confirm or disconfirm the lack of any nonhypothesized gender differences.

b. Problem: Gender differences are inaccurately magnified.

i. Example: Although only 24% of women were found to . . . fully 28% of men

ii. Correction: The results should include multiple descriptions of the data, such as means, standard deviations, and the amount of variance explained.

c. Problem: Gender differences are asserted incorrectly.

i. Example: Gender differences are purported to be present when a significant correlation is found between two variables for one sex and an insignificant correlation is found for the other sex; no test of the difference between the two correlations has been performed. Because the conclusions fit stereotypes, it is assumed that the correlations differ.

ii. Correction: Report only gender differences that are supported by appropriate statistical tests.

d. Problem: Research conclusions may be arbitrarily formulated in terms of innate biological sex differences. Although some differences may be innately biologically determined, others may be more accurately described as socialized gender differences or as interactions of social and biological variables.

i. Example: Differences in male and female nurturing behavior are assumed to be biologically based because women give birth and breast-feed, even though research has determined that nurturing behavior is strongly influenced by culture and previous experience.

ii. Correction: Use caution in assuming there are innate differences when the biological mechanisms have not been determined.

e. Problem: Misleading implications of findings of gender differences are not addressed. Statistical significance is not clearly distinguished from the substantive significance.

i. Example: "The spatial ability scores of women in our sample are significantly lower than those of the

men, at the .01 level." The reader is left to assume that perhaps women should not become architects or engineers.

ii. Correction: "The spatial ability scores of the women are significantly lower than those of the men, at the .01 level. Successful architects score above 32 on our spatial ability test . . . ; engineers score above 31 Twelve percent of the women and 16% of the men in our sample score above 31; 11% of the women and 15% of the men score above 32."

4. Conclusions

a. Problem: Results based on one sex are generalized to both.

i. Example: Threshold measurements in shock sensitivity for rats have been standardized for males, but are often generalized to both sexes.

ii. Correction: There should be empirically determined norms for male and female study participants that reflect differences in weight, body fat, and so on.

b. Problem: Gender differences in performance on a specific task or behavior are interpreted as reflecting gender differences in a global ability or characteristic.

i. Example: It is concluded that male subjects are more field independent than females, even though this is found only for embedded figures tests and rod and frame tests and not for tactile and auditory measures.

ii. Correction: Specify that males score higher on embedded figures tests or rod and frame tests, rather than making general statements about cognitive styles.

c. Problem: Differential opportunities for males and females are advocated on the basis of statistically significant sex difference findings.

i. Example: Gender differences in group means for mathematics ability tests are used to justify denying women opportunities for training in advanced mathematics.

ii. Correction: Equality of opportunity is a basic tenet of our society. Group scores should not be used to justify discrimination against individuals who may or may not score well.

d. Problem: Evaluative labeling is used for results.

i. Example: Male aggressiveness is used as the standard of acceptability. Females are described as unaggressive or submissive.

ii. Correction: Use neutral, objective descriptions such as "the mean score for the aggression measure was higher for males than females."

e. Problem: The title or abstract of an article makes no reference to the limitations of the study participants and implies a broader scope of the study than is warranted.

i. Example: A study purporting to be about "perceptions of the disabled" uses only blind, white men.

ii. Correction: Use more precise titles and clearly delineate sample selection criteria in the abstract.

SUGGESTIONS FOR ADDITIONAL READING

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