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A SELF-SCORING EXERCISE ON APA STYLE AND RESEARCH LANGUAGE

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Overview

Based on examples provided by 27 graduate psychology faculty, this self-test incorporates many of the more common errors in style and language found in student papers. Taking this self-test helps students to recognize common errors and encourages them to refer the APA Publication Manual on a regular basis. In addition, students begin to think about how to use correctly the language of psychological research.

This self-test should take about 30 minutes to complete and score. It is composed of three parts: (a) a mock Discussion section, where students are asked to act as editors and find the errors, p. 2 (10 mins.); (b) a corrected Discussion section, where students find the errors they missed, p. 3 (5 mins.); and (c) a full description of each error with illustrations of correct usage, pp. 4-7 (15 mins.).

This exercise assumes some knowledge of APA style. Thus, it is best-suited for advanced undergraduates who need to write research reports and all levels of graduate students. It may be taken at home or in class. Although the self-test is designed to be fully self-directed, instructors may wish to use it at the beginning or end of a classroom discussion on APA style. It could also be used in a pretest-posttest fashion to evaluate students' learning over the course of a term.

Bibliography

APA Style Helper. (1998). [On-line]. Available: <http://www.apa.org/apa-style/>.

APA Style Resources (1999). [On-line]. Available: <http://www.psywww.com/resource/apacrib.htm>.

American Psychological Association. (1994). Publication manual of the American Psychological Association (4th ed.). Washington, DC: Author.

Brians, P. (no date). Common errors in English [On-line]. Available: <http://www.wsu.edu/~brians/errors/errors/html>.

Madigan, J., Johnson, S., & Linton, P. (1995). The language of psychology: APA style as epistemology. American Psychologist, 50, 428-436.

Scott, J. M., Koch, R. E., Scott, G. M., & Garrison, S. M. (1999). The psychology student writer's manual. Upper Saddle River, NJ: Prentice-Hall.

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Instructions to the Student

To assess how well you know the language and style of writing like a research psychologist, see how many errors you can find in the following Discussion and Reference sections of a fictional health psychology study. There are 13 different types of errors in APA style, research language, and grammar. Some errors appear more than once; there are 31 errors in total.

Discussion

This study examined the relationship among stress, personality, level of anger and disease. The major hypotheses, outlined previously, were found to be true. Consistent with the work of Garon and Mantel (1994), the data was shown to yield a very significant correlation between stress level and disease ($p < .01$). However, it's worth noting that the predicted affect of personality type was statistically insignificant. These results do not support previous research in this area (Garon et al., 1994; Davis, Wolf and Jones, 1995). The ANOVA that compares high- and low-anger participants yielded the most significant finding ($p < .001$) and confirmed the central hypothesis. Anger effected stress level such that reports of higher anger were associated with significantly less stress. These findings have important implications for health psychologists. Facilitating a person's expression of anger can reduce stress which, in turn, may lower their risk for disease.

One desired criteria for the sample of participants was not met. There were too few female subjects; there were seventy women and two hundred men. Thus, the data could not be used to assess whether gender impacted disease.

This study extends the work of Parlick & Wilson (1997) who, as "the leading scholars in the field", argue that "late 20th century stress research has exceeded expectations in cutting new ground. Our rapidly growing understanding of psychological factors, in the development and treatment of disease, has set the stage for major breakthroughs in health psychology (p. 195)."

Bibliography

Garon, D. and Mantel, J. (1994). Stress and disease. In M. Wilson (Ed.), Psychology of Disease (p. 12-38). Boston: Po Press.

Davis, T., Wolf, M., & Jones, F. (1995). Disease and personality. Psychological Summaries, 45, 45-67.

Parlick, T., and Wilson, M. (1997). Health and Mind. Paris: Dix.

List of Errors

On the page below, each error is designated and numbered in bold type. Use the number to locate each error and check your performance on the exercise. Then, read about each error and how to correct it in the following section, "Description of Errors."

This study examined the relationship among stress, personality, level of anger [1A] and disease. The major hypotheses, outlined previously, were **found to be true**. [2] Consistent with the work of Garon and Mantel (1994), the **data was** [3A] shown to yield a **very significant** [4A] correlation between stress level and disease ($p < .01$). However, **its** [5] worth noting that the predicted **affect** [6A] of personality type was **statistically insignificant**. [4C] These results do not support previous research in this area (**Garon et al., 1994**; [7A] **Davis, Wolf and Jones, 1995**). [7B, C] The ANOVA that **compares** [8] high- and low-anger participants yielded the **most significant** [4A] finding ($p < .001$) and confirmed the central hypothesis. Anger **effected** [6B] stress level such that reports of higher anger were associated with **significantly less stress**. [4B] These findings have important implications for health psychologists. Facilitating a person's expression of anger can reduce stress which, in turn, may lower **their** [9] risk for disease.

One desired **criteria for the sample of participants was** [3B] not met. There were too few female **subjects** [10]; there were **seventy** women and **two hundred** men. [11] Thus, the data could not be used to assess whether gender **impacted** [6C] disease.

This study extends the work of **Parlick & Wilson** (1997) [7B] who, as "the leading scholars in the field", [12] argue that "late 20th century stress research has exceeded expectations in cutting new ground. our rapidly growing understanding of psychological factors, **in the development and treatment of disease**, [1B] has set the stage for major breakthroughs in health psychology (p. 195)." [12]

Bibliography [13A, B, C]

Garon, D. [13C] and [7B] Mantel, J. (1994). Stress and disease. In M. Wilson (Ed.), **Psychology of Disease** [13D] (p. 12-38). [13E] Boston: Po Press.

Davis, T., Wolf, M., & Jones, F. (1995). Disease and personality. Psychological Summaries, 45, 45-67.

Parlick, T., & Wilson, M. (1997). **Health and Mind**. [13D] Paris: Dix.

Description of Errors

Each error is numbered to match the errors on the previous page. Read about each error and how to correct it in the following pages.

1. USING COMMAS (American Psychological Association [APA], 1994, pp. 62-63)*

There are many possible errors when using commas. Following the rules below will help you avoid some of the more common errors:

1A. Commas are used after each item in a list of three or more. This holds when using the terms "and" or "or." The example should read ". . . level of anger, and disease."

1B. Sentences can contain phrases that serve to qualify or refine the main point. Commas are used to set off these phrases if removal of the phrase does not alter the essential meaning or damage the grammatical structure of the sentence. In the second sentence in the Discussion section, the phrase "outlined previously" can be set off by commas because it does not define or delimit the nature of the "hypotheses." Commas are not used if removal of the phrase alters the meaning of the sentence. In the last sentence of the Discussion, the phrase "in the development and treatment of disease" is critical in defining the nature of the "psychological factors" and thus should not be set off by commas.

2. THE TRUTH ABOUT HYPOTHESES (Kazdin, 1998, pp. 5, 7, 359)

Hypotheses are never "found to be true" because statistical tests that support hypotheses are probability statements. Appropriate language indicates that hypotheses are "supported," "adopted," or "accepted."

3. SINGULAR AND PLURAL: PARALLEL STRUCTURE (APA, 1994, pp. 34-35)

Good writing requires that there be parallel structure between subject and verb; plural subjects should have plural verbs and singular subjects should have singular verbs. Several words commonly used in psychological writing have the appearance of being singular when they are plural.

3A. Probably the most common error is the use of "data," a plural noun, with a singular verb ("data was . . ."). In the example, "the data were . . ." is the correct form. (The singular form of "data" is "datum.")

3B. The plural nature of criteria is often missed. "Criterion" is its singular form. Thus, in the exercise, "criteria" should be "criterion." Similarly, "phenomena" and "phenomenon" are often misused. "Number," "none," and "faculty" are other words that require careful thought to use properly. In fact these terms may be used as singular or plural depending on the context.

4. THE SIGNIFICANCE OF "SIGNIFICANCE" (Yazdin, 1998, pp. 357-358, 374, 401-405)

The term "significance" has multiple meanings, so it is important to be careful using the term.

4A. Results are not "very," "almost," or "slightly" significant. A p -value of .01 is not more significant than .05 or less significant than .001. A statistical test is significant or it is not.

4B. For non-scientists, the term "significant" is synonymous with "important," "meaningful," or "noteworthy." However, when scientists use the term "significant," they typically have a quite different meaning in mind—namely that a given result is "statistically significant." It's important for beginning scientific writers to realize that results that are statistically significant may not necessarily be noteworthy findings. Care must be taken that your reader is not confused about the way in which you use the term. In the example, to say that ". . . reports of higher anger were associated with significantly less stress" leaves the reader wondering whether you are referring to the outcome of a statistical test or noteworthiness of the finding (i.e., less stress). Apparently describing statistical significance in the Results section primes some students to use the term in the Discussion section.

* References for this section appear on the last page

4. THE SIGNIFICANCE OF "SIGNIFICANCE" (CONT.)

4C. When speaking of statistical results, it's important to note that "insignificant" does not have the same meaning as "not significant." The term "insignificant" suggests that something is not meaningful or important; however, a result that is "not significant" in the statistical sense shows only a lack of difference (between groups). Failure to find a statistically significant result can be accurately described using words such as "the results were not significant," "the results did not reach the .05 significance level," or "the data do not support the hypothesis."

5. POSSESSIVE OR CONTRACTION: IT'S A RULE BREAKER (Brians, no date)

Despite grammar school drills, "its" (possessive) is often incorrectly written as "it's" (the contraction--as in "It is dark."). The reason for the error is that "its" breaks the rule for making a possessive. To indicate that Sally owns her shoes, you must add an apostrophe followed by an "s" (Sally's shoes). But to indicate that "it" possesses something, you need only to add an "s." Remember that "it's" is the contraction for "it is" (and *does* follow the rule for forming contractions).

6. AFFECT VS. EFFECT (Brians, no date; Flesch, 1977; *Webster's New World Dictionary*, 1991)

The terms "affect" and "effect" are not interchangeable. A large part of the problem is due to the fact that both words are used as both nouns and verbs.

6A. In noun form, "affect" refers to feelings and emotions; "effect" refers to an outcome or consequence. Hence, in the exercise, the word should be "effect."

6B. In verb form, it is often harder to distinguish between the two terms. "A affected B" is not synonymous with "A effected B." "To affect" means "to influence," while "to effect" means "to bring about, produce, create or cause" (in the "billiard ball" sense of the term). In the example, the statement "anger effected stress" suggests that anger produced or caused stress. On the other hand, to say that "anger affected stress" would indicate that anger altered or changed stress in some way. In the sample sentence, neither "affect" nor "effect" should be used because the discussion is about a correlational finding ("... reports of high anger *were associated with* significantly less stress.") Because correlations do not permit inferences about the nature of a relationship—i.e., whether or not there is a causal relationship, it is inappropriate to use a verb that carries "causal" meaning.

6C. If you can't decide whether the verb should be "affect" or "effect," use a synonym. A commonly used synonym is "impacted"; however, there is some debate about the appropriateness of this term outside of dentistry. Because "impacted" is a colloquial way to say "had an effect," it is better used in informal writing rather than in academic papers. More appropriate synonyms for academic use are "influences," "alters," "brings about," or "induces."

7. REFERENCE CITATIONS IN THE BODY OF THE PAPER (APA, 1994, pp. 169-174)

Reference citations are written differently in the body of the paper, depending on how they are used. (They are also written differently in the body versus the Reference section of the paper—see #13 for information about the latter.)

7A. "Et al." (meaning "and others" in Latin) is used only after a reference has been cited fully once in the text and if there are three or more authors in the citation. Because the Garon and Mantel reference has only two authors, it is incorrect to use "et al." here. The one exception to this rule occurs when the initial citation has six or more authors. In this case, you will be happy to know that "et al." can be used on the first citation.

7B. The "and" in "Davis, Wolf, and Jones" should actually be an ampersand (&): "Davis, Wolf, & Jones." As in this example, the ampersand should be used for citations that are placed within parentheses in the body of a paper. (Also note that the ampersand is always used in the Reference section.) When a reference is actually part of a sentence in the body of the paper, "and" should be used. Thus, in the example in the third paragraph, "Parlick & Wilson (1997)" should be "Parlick and Wilson (1997)."

7C. A series of references by different authors should be listed in alphabetical order and not by dates. Each reference is separated by a semicolon. There is one exception to this rule. When there are several works by the same author, these are ordered by date. If the author has published several works in the same year, these are distinguished by the addition of a letter following the dates (Johnson, 1984a, 1984b, 1996).

8. VERB TENSE (APA, 1994, p. 25)

Verb tense should be consistent within a given section. Our hypothetical author has been describing results in the past tense but here has slipped into present tense (i.e., "compares" should read "compared"). Also, remember that you should use the past tense in the Method and Results sections because you are reporting what you have already done and found. When you are discussing the results and their implications (Discussion section), the present tense may be used.

9. HIS/HER AND S/HE (APA 1994, pp. 36-7, 50-1, 54-6)

It was easier to write when everybody was a "he." Now you can launch into a sentence about a person and halfway through find you must make a decision. Should this be a "he," a "she," or a "s/he"? Is this a "his," "her," or "his/her" item? Many avoid this dilemma by resorting to the gender-neutral forms of "they"/"theirs"/"them." This is acceptable as long as the beginning of the sentence refers to more than one person. The sample sentence is incorrect because it begins with reference to a single person and ends with a reference to "*their* risk for disease." It should read "*his/her* risk . . ." The Publication Manual recommends a limited use of such combinations and, whenever possible, a rephrasing to avoid biased or ambiguous language. For example, the sample sentence could be rewritten: "Facilitating an individual's expression of anger can reduce stress which, in turn, may lower that person's risk for disease."

10. PARTICIPANTS ARE SUBJECTS TOO. (APA, 1994, p. 49)

The terms "subject" and "sample" may be used when discussing statistics. In all other cases, "participant" or "respondent" is preferred because such terms convey a sense of active involvement in psychological research. Note, however, that this rule only applies when writing about people. Even though animals are vital for psychological research, it has not become necessary to recognize their active involvement and thus it remains acceptable to describe rats, mice, and cats as "subjects."

11. IS IT TWELVE OR 12? (APA, 1994, pp. 99-104)

The general rule is that all numbers greater than or equal to 10 are presented in their numerical form (25 women and 25 men). Numbers smaller than 10 are written except when they: (a) appear in a sentence which compares that number to one equal to or greater than 10 (e.g., 5 trials out of 20), (b) precede a measurement (e.g., 6 grams), (c) are part of a mathematical function (12:5), or (d) represent age, experimental scores, time, or number of participants. In this example, the statement should read "70 women and 200 men." If there were only nine women in a study, it would be correct to write it as "9 women and 200 men." Of course there are exceptions to these exceptions. Any number that begins a sentence needs to be in word form (e.g., "Nine women . . .").

12. QUOTES (APA, 1994, pp. 65-66, 95-99)

In a quotation, does the punctuation go inside or outside of the quotation marks? Does it go before or after the reference? The general rule is that the period or comma goes inside the quotation marks. Thus, in the case of the quote describing Parlick and Wilson's preeminent position, the comma should go inside the quotation marks. However, this rule does not hold when a quote is followed by the citation for its source. In this case, the quotation mark indicates the end of the quotation and is followed by the citation and a period. Thus, the last line of this sample Discussion section should read as follows " . . . health psychology" (p. 195).

The quote by Paul and Wilson is fairly lengthy (36 words). When 40 or more words are quoted, the quotation should be in block form without quotation marks and should end with a period. The source of the citation (including the page number) would appear in parentheses after the period. As a rule, you should avoid long quotes and, instead, rephrase the ideas in the quotation in your own words. When paraphrasing, you cite the author and date, but not the page number.

13. REFERENCES (APA, 1994, pp. 174-222, especially see p. 182)

Using the correct citation format in the Reference section is a challenge. Hopefully, these rules will help.

13A. This is a reference list and not a bibliography because it only includes sources cited in the manuscript. A bibliography includes cited sources as well as resources for further reading.

13B. The reference list should begin on a separate page.

13C. The citation of the authors' names in the Reference section breaks a rule about commas. Normally, a comma is not used when there are only two items. However, whenever there is more than one author in a reference, a comma is used to separate each name.

13D. Capitalization is probably the greatest source of confusion when listing references. When listing books, use a capital letter for only the first word of a book title (unless the word in a book title is a proper name or appears after a colon in the title). Thus, the Garon and Mantel book should be cited "Psychology of disease" (note the lower-case "d"), and the Parlick and Wilson book should be cited as "Health and mind." Note that although a journal may seem less substantial than a book, the first letters of all the major words in a journal title are capitalized, as in the case of the Davis, Wolf, and Jones article ("Psychological Summaries").

13E. In an edited book (but not in a non-edited book and not in a journal), the page numbers of the chapter are given. A single page is indicated by "p." Multiple pages are indicated by "pp." Thus, the Garon and Mantel citation should read "pp. 12-38," not "p. 12-38". Note that in the Davis, Wolf, and Jones citation, neither "p." nor "pp." is used to cite the pages because this is a journal.)

References for List of Errors

American Psychological Association. (1994). Publication manual of the American Psychological Association (4th ed.). Washington, DC: Author.

Brians, P. (no date). Common errors in English [on-line]. Available: <http://www.wsu.edu/brians/errors>.

Flesch, R. (1977). Look it up: A deskbook of American spelling and style. New York: Harper and Row.

Kazdin, A.E. (1998). Research design in clinical psychology (3rd ed.). Boston: Allyn and Bacon.

Webster's new world dictionary. (1991). Cleveland, OH: Webster New World Press.