



Editorial

Caveats in the proficient preparation of an APA-style research manuscript for publication

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ABSTRACT

Writing a scientific research paper for submission to a peer-reviewed journal requires compositional skill and attention to details. In evaluating submitted manuscripts, journal editors and reviewers often encounter recurrent mistakes in composition and in compliance with the stylistic requirements of the particular publication. This editorial article identifies core tenets of effective scientific writing in the social and behavioral sciences, and it delineates commonly committed errors in violation of the style prescribed by the American Psychological Association (APA). The editor organizes his advice in a user-friendly checklist to assist both authors and reviewers associated with this journal (*Body Image: An International Journal of Research*), as well as other journals that adhere to APA style. This advisory article may also assist research supervisors and instructors in academic training contexts.

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Introduction

Scientists invest exceptional intellect and innumerable hours in the conduct of research for peer-reviewed publication. In turn, journal editors and peer-reviewers devote considerable time, effort, and expertise in carefully reading and evaluating researchers' manuscripts. Evaluators are impressed by well-written papers that are coherently organized, technically and stylistically accurate, and possess prose that flows and informs. On the other hand, they frequently encounter common mistakes in composition, provision of requisite information, and stylistic correctness. These errors of commission and omission can be frustrating to the evaluating reader. Moreover, a poorly prepared paper may lead its reader to question, with or without cognizance, the authors' conscientiousness in the science behind the paper.

Having spent over 35 years as a university professor, scientist, research supervisor, and journal editor/reviewer, I wish to convey constructive advice to authors preparing scientific manuscripts for publication in a peer-reviewed journal. Some of my counsel concerns effective scientific writing. Other specific guidance pertains to compliance with stylistic requirements of the fifth edition of the *Publication Manual of the American Psychological Association* (APA, 2001). I hope to offer something of value beyond the mission and scope of this particular journal. My aim is to give guidelines, in a user-friendly checklist format,

which will aid not only authors, reviewers, and editors, but also students and instructors/supervisors in the social and behavioral sciences. I offer my advice informed by the errors that authors commonly make when submitting papers to journals that require APA style.

The big picture

Researchers who seek to publish their work in a peer-reviewed scientific journal must appreciate some fundamental facts about the process. In most journals, pages are a fixed, economic commodity. Unless the journal is a purely electronic publication or charges authors for journal pages, it can publish only a certain number of pages per volume. This means lengthier papers must "earn their keep" in terms of their quality and empirical contributions to the literature. Of course, some journals specify word-length criteria for various types of submitted papers (e.g., reviews, full-length articles, or brief research reports). Authors should be attentive to these criteria.

A familiar problematic submission is a paper that derives from a very lengthy thesis or dissertation. The author originally wrote it for a different purpose—namely, to impress a committee with the comprehensive detail of the work and earn the degree. Having succeeded, the author reluctantly reduces the beloved 200-page document with 150 references and 15 tables and figures to a submitted paper of 50 pages with 75 references and 7 tables/figures. Because this reduction is still twice the length of most papers published in social and behavioral science journals, the

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regrettable result could be the rejection of a possibly promising piece of research for publication.

A well-written manuscript is the cumulative accomplishment of many “little things.” Always check spelling, grammar, punctuation, clarity of sentence structure, organizational coherence, and compliance with APA style. Poor writing is, of course, poor communication. A wise practice is to ask an experienced writer who is removed from the study to read the paper and give corrective commentary before submission of the paper or its revision. Authors whose primary language is not English should solicit feedback about their manuscript written in English. For a fee, commercial services are available to authors in need of language editing assistance (for example, see <http://www.elsevier.com/wps/find/authorhome.authors/languagepolishing>).

Below is my enumerated list of some key aspects of APA style and effective manuscript preparation. Then I provide specific tips for each section of the paper.

- 1. An APA-style paper must be double spaced throughout, with 1-in. (about 2.5-cm) margins all around. The left margin is flush (justified), and the right margin is ragged (unjustified). Indent all paragraphs. The body of the paper is continuous, and the only section after the Introduction that begins on a new page is the References. Place tables and figures, one per page, at the end of the manuscript. Do not run them into the body of the paper. Make reference to each table or figure in the text of the Results section. There’s no need to say “Insert Table or Figure about here.”
- 2. Headings and subheadings perform a vital organizational function for a manuscript. APA style is precise about the hierarchical distinctions among five heading levels (see APA, 2001, pp. 111–115). Each level has its unique placement (i.e., centered or flush left or indented) and appearance (i.e., whether or not capitalized or italicized). Unlike many authors incorrectly assume, none of the levels uses boldface type in the manuscript itself. Of course, journal publishers may have their own typesetting styles that convert your APA-style manuscript into a different format for the printed page.
- 3. APA style presents some tense challenges (pun intended). Verbs should be consistently in the past tense “to express an action or a condition that occurred at a specific, definite time in the past, as when discussing another researcher’s work and when reporting your results” (APA, 2001, p. 42). On the other hand, the present tense is appropriate for *discussing* the results and the conclusions (e.g., “The group comparisons indicate. . .”).
- 4. APA style prefers active voice over passive voice. For example, say “The researchers conducted the study” rather than “The study was conducted by the researchers.”
- 5. Two very common writing errors are (a) subject-verb disagreement and (b) noun-pronoun disagreement. For examples of errors: “The percentage (singular) of participants who dropped out were (plural). . .” “An individual’s (singular) relationship with their (plural) therapist. . .” Carefully check the paper for these easy-to-miss mistakes.
- 6. Use direct quotations sparingly and only when crucial to making a point. When used however, the cited source must also include the page number(s) of the quoted material. Enclose brief quotations of fewer than 40 words within double quotation marks and run them into the text. Longer quotations are placed in indented, double-spaced blocks, without quotation marks.
- 7. There is efficiency in an abbreviation or acronym for the name of a theory, variable, assessment, etc. For the term’s first use, spell it out entirely and introduce the acronym parenthetically. However, do not construct an acronym for use only a few times in the manuscript.
- 8. APA style entails many rules about the expression of numbers in numerals versus words (see APA, 2001, pp. 122–128). The basic rule is to use numerals for 10 or more and to use words for numbers less than 10. Key exceptions are that numerals should be used when preceding a unit of measurement (e.g., 9 kg) or when referring to percentages (e.g., 6% of the data), time (e.g., 2-week interval), participants (e.g., 9 girls), points on a scale (e.g., a score of 4 on a 7-point scale), or a particular place in a numbered series (e.g., Factor 3, Hypothesis 1, Study 2, Table 5, Trial 6, etc.). Notice the capitalization of the nouns in the final example.
- 9. Authors should list serial elements (words, phrases, or sentences) as fully parenthesized letters instead of numbers—i.e., (a), (b), (c),. . . . Use arabic numerals without parentheses and followed by a period only when the series consists of separate paragraphs.
- 10. Decisions about hyphenation can be tricky. APA style eschews arbitrary hyphens that do not serve to clarify meaning. The *APA Publication Manual* (pp. 89–94) gives excellent guidance. Its Table 3.2 (p. 92) lists 32 prefixes that rarely require a hyphen—*after, anti, bi, co, counter, equi, extra, infra, inter, intra, macro, mega, meta* (unless *meta-analysis*), *micro, mid, mini, multi, non, over, post, pre, pro, pseudo, re, semi, socio, sub, super, supra, ultra, un, under*. Table 3.3 of the *Manual* gives exceptions (p. 93). Moreover, *t* test and *F* test are not hyphenated, unless used as an adjective (e.g., *t*-test results). Write *follow-up* as an adjective or noun and *follow up* as a verb.

Most ultimately accepted papers in respectable journals go through one or more revisions. With each revision, the author must compose a cover letter that speaks to each issue, whether major or minor, raised in the review process. The more specific this letter is the better. How was the manuscript revised in response to each point? If a point was not addressed in the revision, explain this decision. Never simply say: “We revised the paper to reflect the editor’s and reviewers’ comments.” This unwisely makes the editor’s or re-reviewers’ job much more difficult. The best approach is to copy each review point into the letter and follow it with an informative response. Of course, always maintain a professional tone in this letter. It is better to say “We respectfully disagree with the reviewer’s point for these reasons” (with cited sources if possible) than “The reviewer is obviously inept.”

Reputable journals reject more manuscripts for publication than they accept. However, with rejection comes detailed expert feedback about the strengths and weaknesses of the paper and the research it reports. Such feedback is priceless, and authors should thoughtfully incorporate it into any revision submitted to another journal. Sometimes an author makes a few modifications to a rejected manuscript and sends it off to another journal that requires a different style, assuming that style does not really matter. It does. Always carefully comply with a journal’s stylistic requirements.

The abstract

The abstract of a published manuscript “speaks” for the paper. It represents the work to those who search online databases for topical information. Many more people will read the abstract than the complete article. Therefore, it must inform the reader of the basic purpose, methods, and findings of the research. Of course, the challenge is to tell the scientific story accurately but succinctly,

without offering misleading overgeneralizations or getting caught up in extraneous detail.

Consider the following advice for composing an effective abstract:

- 1. According to the *APA Publication Manual*, the abstract should not exceed 120 words, although different journals may prescribe different lengths. For example, *Body Image* permits a maximum of 150 words. Some journals require an explicitly structured abstract. Be sure to check the requirements of the journal to which you submit your paper.
- 2. Begin the abstract by stating the problem or issue under investigation, but do not simply repeat the title.
- 3. Provide the most pertinent information about the participants (e.g., sex, age, ethnicity, etc.) and indicate the total sample size (*N*) and the *n* for relevant groups (e.g., participants in experimental and control groups).
- 4. Give sufficient details about the methodology to convey what was done in the study. Give the capitalized names of the principal standardized tests administered in the research.
- 5. State the key findings, especially those associated with the hypotheses. Do not get sidetracked into minor or exploratory results.
- 6. End the abstract with core conclusions and their implications. Avoid uninformative generic statements, such as “Results and their implications are discussed.”
- 7. Do not load the abstract with statistical details. The statement of a finding may include a *p* level or effect size, but not a lengthy statistical string.
- 8. Do not cite sources in the abstract unless essential. For a crucial source, specify author(s) and publication date, but do not give the entire reference that belongs in the References section.
- 9. For economy, use figures instead of words for all numbers, unless beginning a sentence. The use of acronyms or abbreviations may also conserve length, but you must initially define them (except for measurement units), even if you do so in the body of the paper *per se*. Of course, there is no need to create an acronym in the abstract unless it is used.
- 10. Most journals ask authors to provide a list of key words to describe the study. Actually having these words in the abstract may improve the electronic retrievability of the published article.

The Introduction section

Have you ever ceased reading a book because you found the first chapter un compelling or confusing? First impressions are important, and the Introduction section of a scientific paper should impress the reader of the significance of the subject and reasonableness of the rationale for the study. The Introduction must flow logically and provide the theoretical and empirical justification for the study. Like an inverted triangle, it systematically moves from the broad topic and its importance, narrows to discuss the specifically pertinent literature, and leads to the essential objectives of the study. This endpoint should come as no surprise to the reader, because everything has led plausibly to that point.

Problematic Introduction sections often reflect one or more of the following issues:

- 1. The flow from the foundation to the objectives or hypotheses of the study is not logical or organized. The route contains irrelevant sidelines or too much information. Often these

circuitous compositions are too lengthy as well. Comply with the above “inverted triangle” concept.

- 2. Authors sometimes hold an implicit (or explicit) assumption that the more references they cite the more scholarly and impressive the Introduction is. Use only the most relevant citations. Avoid redundant or peripheral citations. Qualitative and quantitative review articles and book chapters can offer informative conclusions for incorporation in the Introduction. Nevertheless, this section should also critically integrate primary research evidence from specific investigations.
- 3. Editors and reviewers properly pay attention to the dates associated with the cited sources. They become concerned if they see few sources from the past 2 years. Sometimes research sits on the shelf for a year or more before the busy scientist writes it up for publication. Be sure to do a new literature search via pertinent scholarly databases before finalizing the paper for submission. Also be sure to check for recent, pertinent articles published in the journal to which the paper is submitted.
- 4. In APA style, the initial citation of a source is presented either with the text itself or within parentheses in the text. In the body of a sentence, always use “and” before the final author’s name. In parentheses, always use “&” instead.
- 5. Multiple parenthetical citations are in alphabetical order. List all authors of a source (up to six authors) when it first appears. For more than six authors, list the first six followed by et al. Subsequently, for three or more authors, give only the first author’s surname followed by et al. and the date. Of course, a tricky situation occurs if multiple citations with the same first author and date shorten to be identical. Here, simply list as many authors are necessary to make the citations distinctive. See also Point 3 of “The References section” below for guidance on what to do when two or more different references result in identical citations.
- 6. If the same citation occurs multiple times within a given paragraph, omit the date following authors’ names in the second or subsequent citation(s).
- 7. An Introduction concludes with a specification of research hypotheses and any other research questions that the study seeks to answer. As noted above, readers should never wonder “Why are the authors making this prediction?”

The Method section

The Method section is the crucial communication about how the researchers conducted the research. It must precisely describe participants, procedures, and materials. Future researchers who wish to carry out full or partial replications of the study should receive “the recipe.” This section should provide the following information:

- 1. Who were the participants? State the sample size and participants’ geographic location, sex, age, educational attainment, ethnicities, and other study-relevant characteristics. For example, in this journal, information about their body mass index is often essential ($BMI = kg/m^2$). Do not refer to human participants as males or females; instead use the terms *boys* and *girls* for children and *men* and *women* for adults.
- 2. How did the researchers recruit and select participants? Was this a true random sample, a convenience sample, a “snowballed” sample? Were there inclusionary and exclusionary criteria? Were participatory incentives offered?
- 3. Clearly describe the data collection process (e.g., collected individually, in small groups, in classrooms, online, etc.). Give

the specifics of any manipulation of independent variables in an experimental investigation.

- 4. Describe each dependent variable. For example, information about self-report measures (scales) should include the number of items, response format, scoring method, and evidence of validity and reliability, including if applicable the internal consistency of scores (e.g., Cronbach's alphas) in the actual study sample. It is sometimes helpful to provide one or two verbatim items from multi-item measures of a construct, especially if the measures are not well known. This gives readers a clearer sense of the content of the assessment.
- 5. Authors should calculate composite scores (i.e., as means or totals) in the same manner as the measures' originators prescribed. This facilitates the comparison of data with other studies or published norms.
- 6. If the study uses raters' judgments, the interjudge reliability should be stated using the proper statistic (e.g., Cohen's kappa or intraclass correlation coefficient). A simple percentage of agreement is usually inadequate.
- 7. The Method section should include a statement concerning the ethical treatment of participants and an indication that an ethics committee (e.g., Institutional Review Board) reviewed and approved the research.

The Results section

The presentation of data analyses and results is the most technical section of the paper. It requires little creativity yet much mindful attention to detail. The *APA Publication Manual* is very precise about this statistically oriented section. [Morgan, Reichert, and Harrison's \(2002\)](#) book, *From Numbers to Words: Reporting Statistical Results for the Social Sciences*, is a helpful resource for writing this section of the manuscript. Furthermore, [Mertler and Vannatta \(2005\)](#) present excellent examples of translating advanced and multivariate statistical output into the descriptive prose of the Results section. My points below can help authors avoid common shortcomings in this section of the manuscript:

- 1. Begin the Results with statements about any preliminary analyses pertinent to data screening (e.g., outlying values), tests of statistical assumptions, manipulation checks, analyses of potential confounds with the independent variables, data reduction considerations, etc.
- 2. Organize principal analyses and results by explicit hypotheses. Consider using subheadings for a complex Results section.
- 3. The interpretation of results belongs in the Discussion section. The Results section states whether or not each hypothesis is supported, but it should not explain why.
- 4. Provide a full description of the specific analyses. For example, specify the type of correlation (e.g., Pearson, point-biserial, semi-partial). Identify the method of entry for multiple regressions (e.g., hierarchical or forward stepwise). For analyses of variance, denote the model/factors (e.g., 3×2) and name the independent variables and levels and whether they are between-group or within-group factors. Any post hoc tests should be identified (e.g., Tukey's HSD, Sheffe's test, etc.).
- 5. Excessive analyses may constitute "fishing expeditions." Be cognizant of the alpha inflation (or testwise error) that occurs with multiple statistical tests. Consider methods such as a Bonferroni correction for reducing this error rate.
- 6. Use tables for an economical presentation of data (e.g., means and standard deviations, test values, significance levels, and effect sizes). Use figures to depict the results of complex interactions or structural equation modeling.

Avoid needless redundancy of text with tables and figures. See the "Tables and Figures" section below for further tips.

- 7. Do not use excessive decimal places. Typically, two decimals suffice.
- 8. Use a leading 0 when numbers are less than 1, except when the number cannot exceed 1 (e.g., correlations, proportions, and significance levels).
- 9. Italicize all non-Greek abbreviations and symbols for parameters and statistics (e.g., *N*, *n*, *M*, *Mdn*, *SD*, *F*, *t*, *r*, *R*, *p*, *df*, Cohen's *d*, etc.). To pluralize these, simply add an *s* (without italicizing the *s* or using an apostrophe that would convey the possessive case). Thus, the plural of *p* is *ps*, and the plural of *F* is *Fs*. The abbreviation of "nonsignificant" italicizes both letters (*ns*, not *n.s.* or *ns*). Any subscript or superscript with the abbreviation/symbol is not italicized (e.g., F_{\max} and R^2).
- 10. Do not write out a Greek symbol (e.g., alpha, beta, chi, or eta) in a statistical string. Instead, use the actual symbol (e.g., α , β , χ , or η). With Microsoft Word, choose *Insert* and *Symbol* and then select the proper Greek symbol.
- 11. Use the proper format for strings in statistical tests (see [APA, 2001](#), pp. 138–139). Take care to use proper punctuation and spacing in these strings, for example, $F(4, 523) = 6.51, p < .001, \eta^2 = .05$. Avoid parentheses within parentheses or parentheses within brackets. Usually the string material that includes parentheses can be simply set off with a comma or commas.
- 12. Report an index of effect size associated with each statistical result.
- 13. Throughout the paper (including tables and figures), always insert a space before and after arithmetic operators (i.e., $<$, $=$, $>$, $+$, $-$, \times). Specifically, write $p < .05$, or $N = 250$, or $a + b = c$, or 2×2 design.
- 14. Do not report a *p* level from statistical output that is truncated as $.000$. This means zero; the reported value should be $.001$.
- 15. Do not include citations other than those that are pertinent to statistical analyses. However, it is unnecessary to cite a source for major statistical packages (e.g., SPSS, SAS, etc.).
- 16. The word *data* is plural (i.e., *datum* is the singular form). So say "The data were . . .," not "The data was . . ."

The Discussion section

The purposes of a Discussion section in a scientific manuscript are to summarize, interpret, and critically evaluate research findings and their implications. To follow are key guidelines in writing this section:

- 1. Do not merely reiterate the Results section or copy/paste its sentences. The Discussion section is a thoughtful, scholarly, critical exposition and interpretation of the results and the implications of the study.
- 2. If the research entailed multiple studies or complex findings, consider using a few descriptive headings to organize subsections of the Discussion.
- 3. Begin with a *brief* overview of the study's principal aims. If the study's methodology improved upon past research, articulate this strength.
- 4. Next, provide a descriptive summary of the study's primary findings. Indicate whether or not the results confirmed the hypotheses.
- 5. Never report significant group differences or a significant correlation without specifying the nature of the differences or direction of the correlation.

- 6. In turn, interpret each primary finding (conclusion) in the context of the research and/or theories presented in the Introduction. Literally go back to the Introduction and systematically consider whether or not each cited source should be incorporated into the Discussion.
- 7. Summarize and interpret any findings beyond the hypotheses.
- 8. Mention pertinent competing explanations of the findings and whether they can or cannot be ruled out.
- 9. Show consideration of the practical significance of the results by recognition of effect sizes and not just statistical significance.
- 10. Include at least one paragraph (or integrated discussion) to recognize the study's limitations with respect to threats to internal and external validity (e.g., issues related to sampling, statistical power, reliability of measurement, ecological validity, potential confounds or third-variable explanations, etc.).
- 11. Do not gloss over or be defensive about methodological "mistakes" in the study. Weaknesses inform directions for improvements.
- 12. Do not focus on positive (predicted) results and ignore unexpected or negative results. Science is not selectively myopic in the consideration of evidence.
- 13. Discuss the empirical and/or theoretical implications of findings, especially by identifying directions for future research and/or theory development on the topic.
- 14. Discuss the applied, "real world" implications of the findings—for example, their relevance for clinical practice, education, or social change.
- 15. Never use unwarranted causal language (e.g., "influence," "affect," "produce," "lead to," "result in," etc.). Findings from correlational or quasi-experimental designs do not permit causal inferences and should not involve such language.
- 16. Do not assume that self-reports of events are the same as the actual occurrence of events. For example, memories of events do not verify them. Self-reported behaviors are not the same as objectively observed behaviors.
- 17. Nonsignificant "trends" (i.e., p level $>$ set α level) should never be presented as if they were significant—for example, by saying "nearly significant" or "approaching significance" or "means in the right direction" or "would be significant with a larger sample." This is flawed wishful thinking.
- 18. The inverse of this "almost significant" error is the reference to a finding as "highly significant." Avoid adjectival characterization of significance levels. Just provide the p value. On the other hand, adjectives such as small, medium, or large may be used to describe effect sizes if established conventions are followed—for example, using Cohen's (1988, 1992) terminology.
- 19. Never present analyses or statistics for the first time in the Discussion. Statistics belong in the Results section, even as supplementary analyses.
- 20. Avoid using acronyms for variables in the Discussion. Write in prose about the constructs that measures represent. For example, discuss "body dissatisfaction" rather "the EDI-BD scale" unless the paper is about the scale per se.

The References section

The References section compiles the full sources for all citations in the manuscript. This task requires careful adherence to APA style, as indicated in the following checklist of typical mistakes. For details about the myriad imaginable sources that might appear in

this section, consult Chapter 4 of the *APA Publication Manual* (pp. 215–281). Given the expansion of electronic sources that researchers may cite, APA (2007) published the *APA Style Guide to Electronic References* (for purchase and download in PDF format).

- 1. One very common error is the omission of a reference for a citation in the body of the manuscript. Another frequent mistake is to include sources in the References section that are never cited in the paper. Before submitting a manuscript, make a list of all cited sources and systematically check against the References section, adding those that are missing and deleting those that were never cited (unless they should have been).
- 2. Each reference begins flush left for its first line, followed by a hanging indentation of subsequent lines. Order references alphabetically by the first author's surname. If there are references with the same first author but different secondary authors, place them alphabetically according to the secondary authors.
- 3. If references have the same sole author or the same series of authors, place them in sequence from least to most recent. If the authors *and* dates are identical for two or more references, they should be listed in alphabetical order by title. This latter occurrence requires placing a distinctive letter after the date (or the phrase "in press"), both in the References section and in the text citation (e.g., Sarwer, 2007a, 2007b, 2007c; or Thompson & Cash, in press-a, in press-b). This is the *only* occasion for using lettered distinctions. Notice these examples of text citations do not repeat authors' names but present them once followed by the series of dates.
- 4. APA-style rules for capitalization in references pose difficulties for many authors. The major words in a journal title should be capitalized. This is not the case for article titles, book titles, or edited works, which use upper case only for the first word, the word immediately following a colon, a proper noun (e.g., African Americans), or a the name of a formal measure (e.g., Body Shape Questionnaire or Beck Depression Inventory).
- 5. Some manuscript styles (e.g., American Medical Association style) require abbreviation of journal titles. APA style does not. Write out each journal title fully.
- 6. When should italics be used in the reference list? They designate journal titles, authored or edited book titles, journal volume numbers, and the titles of unpublished theses, dissertations, and manuscripts (including papers or posters presented at specified conferences).
- 7. Do not enter a parenthetical issue number after the volume number in a journal reference. The only exception is the rare instance in which each *issue* of the journal begins with page 1. Most journals have continuous pagination across all issues in an entire volume.
- 8. Researchers sometimes cite sources located only on the Internet. After providing the authors' names, the document's date, and its title as usual, specify the retrieval date and full URL that takes the reader to the exact location of the Web page or document. For example: Retrieved September 10, 2008, from <http://www.body-images.com/assessments/mbsrq.html> (Notice that no period appears after the URL and that it is not formatted as hyperlink.) Most of us now access print-journal articles electronically, and my opinion is that it is unnecessary to provide the above retrieval information for such articles. For information on citing and referencing electronic material, see APA (2007) or <http://www.apastyle.org/elecref.html>.

Tables and figures

The construction of a table or graphical figure requires careful planning and attention to detail. As I mentioned previously, the first step is to decide on the need for such material. All too often, authors create numerous tables or figures that are unnecessary and can be incorporated more simply and economically within the text of the paper. Reserve tables and figures for “crucial data that are directly related to the content of your article and for simplifying text that otherwise would be dense with numbers” (APA, 2001, p. 147).

Rather than struggle to reinvent the wheel, for layout rely on a content-relevant model from an article published in APA style or examine the many examples depicted in the *APA Publication Manual*. Nicol and Pexman's (1999) book is a very practical guide for creating tables. Morgan et al. (2002) similarly present helpful advice on the construction of tables and figures. Although I cannot detail all rules and guidelines that APA (2001) delineates and exemplifies (pp. 147–201), here are some recommendations for effective tables and figures.

- 1. A table's title or a figure's caption should accurately describe its content. Titles like “Means and Standard Deviations” or “Correlation Matrix” or “Regression Results” are too general.
- 2. Carefully place all data in tabular rows and columns, with clearly worded headings. Align columns on the decimals. Some single spacing may be acceptable within lengthy tables, so long as material is easily readable. Present tables with many columns in landscape (not portrait) orientation.
- 3. Avoid the excessive use of acronyms or abbreviations in tables. Consider using construct or variable names. When shortening terms, however, always define them in a tabular note.
- 4. Although sophisticated software facilitates the construction of beautiful graphics, figures that rely on color-coded lines or legends are useless if the journal publishes only in black/white or grayscale. Bars or lines within a figure must be distinctive (e.g., different bar fills, line styles, point symbols, etc.).
- 5. Label both axes of a graph. Specify units of measurement in relation to axis tick marks. The graph should not misrepresent the findings by displaying a very restricted portion of the actual measurement scale on the y axis.
- 6. Consult several published examples for an effective graphical representation of results from multivariate modeling analyses (e.g. path analysis, structural equation models, etc.).
- 7. Before submitting a paper, always go back to the original statistical output and verify the accuracy of the information in the tabular and statistical data. Typographical and rounding errors are very easy to make.

Conclusions

Well-written scientific manuscripts greatly benefit researchers and professionals involved in the editorial review process. Authors

should be as conscientious and attentive to detail in their preparation of a manuscript for publication as they are in the methodology and analysis of their research. An unfortunate assumption is that faulty writing and violations of style do not really matter because the science will shine through and “all this little stuff will get fixed” by the journal's editors, reviewers, or typesetters. Actually, these shortcomings are very time-consuming for reviewers and editors to detail to authors before typesetters become involved. Researchers should strive to prepare the best paper possible before submitting it for publication.

Rather than submitting an improperly written paper, researchers accustomed to composing manuscripts for journals with different stylistic requirements should become familiar with APA style. The perfect mastery of APA's 439-page *Publication Manual* is no easy feat. Perhaps for this reason, APA (2005) published its 212-page *Concise Rules of APA Style* and offers some tips at <http://www.apastyle.org>. Prior to submission, authors are wise to consult these manuals or obtain assistance from a colleague who is very experienced with this style.

The primary objective of my editorial article is to provide an informative checklist to authors and to those involved in the review process for this and other journals. Of course, this article is not a comprehensive manual for composing an APA-style paper, but it highlights many common mistakes that authors commit. Before submitting their work, authors can systematically evaluate their manuscript in relation to the checklist. Moreover, rather than having to write lengthy explanations of certain errors, reviewers and editors can simply refer authors to this checklist. For example, they may ask the author to correct the paper in accordance with Big Picture #4, Abstract #9, Introduction #5, Method #2, Results #11, Discussion #10, References #2, and Tables and Figures #2. This article may also assist research supervisors and academic instructors in training students to write effective manuscripts. For open access, the publisher has posted this article on the journal's website at http://www.elsevier.com/wps/find/S05_356.cws_home/tceditorial.

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