

In the name of God



Lesson Plan for Writing Scientific Papers

Audiences: PhD students in midwifery

University: Tabriz University of Medical Sciences- Nursing & Midwifery Faculty- Midwifery Department

Designer & Instructor: Dr. Sakineh Mohammad-Alizadeh, Associate Professor, PhD in Reproductive health

First Session: Students are expected:

1. To get oriented to the lesson plan
2. To explain how to get started effective writing
3. To explain purpose of the introduction
4. To explain importance of a good introduction
5. To explain structure of an introduction
6. To explain importance of using clear, clean, and unemotional language in the introduction writing

References

1. Kotz D, Cals JW. Effective writing and publishing scientific papers--part I: how to get started. *Journal of clinical epidemiology*. 2013;66(4):397. doi: 10.1016/j.jclinepi.2013.01.002. PubMed PMID: 23452726.
2. Cals JW, Kotz D. Effective writing and publishing scientific papers, part III: introduction. *Journal of clinical epidemiology*. 2013;66(7):702. doi: 10.1016/j.jclinepi.2013.01.004. PubMed PMID: 23497856.
3. Hall GM (ed). *How to write a paper*. Fifth ed. London: BMJ Publishing Group, Wiley - Blackwell,; 2013.

Second session: Students are expected:

1. To explain four basic elements of the methods section (study design, setting and subjects, data collection, data analysis, and ethical approval)
2. To explain a common order of elements of the results section (recruitment/response, sample characteristics, primary analyses, secondary analyses, and ancillary analyses).
3. To explain meaningful decimals for reported figures
4. To explain meaning of preparing tables/figures as self-explanatory

5. To explain meaning of deliberate choice early in the writing process on which key findings to present in tables/figures

References

1. Kotz D, Cals JW. Effective writing and publishing scientific papers, part IV: methods. *Journal of clinical epidemiology*. 2013;66(8):817. doi: 10.1016/j.jclinepi.2013.01.003. PubMed PMID: 23434330.
2. Kotz D, Cals JW. Effective writing and publishing scientific papers, part V: results. *Journal of clinical epidemiology*. 2013;66(9):945. doi: 10.1016/j.jclinepi.2013.04.003. PubMed PMID: 23791158.
3. Kotz D, Cals JW. Effective writing and publishing scientific papers, part VII: tables and figures. *Journal of clinical epidemiology*. 2013;66(11):1197. doi: 10.1016/j.jclinepi.2013.04.016. PubMed PMID: 23958377.
4. Hall GM (ed). *How to write a paper*. Fifth ed. London: BMJ Publishing Group, Wiley - Blackwell,; 2013.

Third session: Students are expected:

1. To write text of result section of a scientific article emphasizing the important findings reported in tables/figures
2. To decide which results merit a figure rather than a table
3. To explain general recommendations relate to every figure
4. To explain recommendations relate to Flow Diagram
5. To explain recommendations relate to Kaplan Meier plot
6. To explain recommendations relate to Forest plot
7. To explain recommendations relate to Repeated measures plot

References

Pocock SJ, Trivison TG, Wruck LM. Figures in clinical trial reports: current practice & scope for improvement. *Trials*. 2007;8:36. doi: 10.1186/1745-6215-8-36. PubMed PMID: 18021449; PubMed Central PMCID: PMC2222221.

Articles for discussion of their results parts, emphasizing on the tables and figures

1. Herman-Roloff A, Bailey RC, Agot K. Factors associated with the safety of voluntary medical male circumcision in Nyanza province, Kenya. *Bull World Health Organ*. 2012;90(10):773-81. doi: 10.2471/BLT.12.106112. PubMed PMID: 23109745; PubMed Central PMCID: PMC3471059.
2. W. H. O. study group on female genital mutilation, obstetric o, Banks E, Meirik O, Farley T, Akande O, et al. Female genital mutilation and obstetric outcome: WHO collaborative prospective study in six African countries. *Lancet*. 2006;367(9525):1835-41. doi: 10.1016/S0140-6736(06)68805-3. PubMed PMID: 16753486.

Fourth session: Students are expected:

1. To explain purpose of the discussion section

2. To explain a typical discussion section components (a summary of main findings, Comparisons with other studies, Strengths and limitations, and Implications)
3. To explain various methods of citation
4. To explain important considerations in choosing an appropriate source
5. To explain importance of using original source behind a statement
6. To describe how to use the format that target journal requests (For the citations in the text & For the reference list)
7. To explain importance of using a reference management program for references throughout career.

References

1. Cals JW, Kotz D. Effective writing and publishing scientific papers, part VI: discussion. *Journal of clinical epidemiology*. 2013;66(10):1064. doi: 10.1016/j.jclinepi.2013.04.017. PubMed PMID: 23993311.
2. Brown P, Brunnhuber K, Chalkidou K, Chalmers I, Clarke M, Fenton M, et al. How to formulate research recommendations. *BMJ*. 2006;333(7572):804-6. doi: 10.1136/bmj.38987.492014.94. PubMed PMID: 17038740; PubMed Central PMCID: PMC1602035.
3. Docherty M, Smith R. The case for structuring the discussion of scientific papers. *BMJ*. 1999;318(7193):1224-1225. PMID: 10231230
4. The University of Manchester. Academic Phrasebank: Discussing Findings [cited 2014 20 Sep]. Available from: <http://www.phrasebank.manchester.ac.uk/discussing-findings/>.
5. The University of Manchester. Academic Phrasebank: Writing Conclusions [cited 2014 20 Sep]. Available from: <http://www.phrasebank.manchester.ac.uk/writing-conclusions/>.
6. Cals JW, Kotz D. Effective writing and publishing scientific papers, part VIII: references. *Journal of clinical epidemiology*. 2013;66(11):1198. doi: 10.1016/j.jclinepi.2013.06.015. PubMed PMID: 24079642.
7. Patrias K. Citing medicine: the NLM style guide for authors, editors, and publishers [Internet]. 2nd ed. Wendling DL, technical editor. Bethesda (MD): National Library of Medicine (US); 2007 - [updated 2015 Oct 2; cited *Year Month Day*]. Available from: <http://www.nlm.nih.gov/citingmedicine>
8. Hall GM (ed). *How to write a paper*. Fifth ed. London: BMJ Publishing Group, Wiley - Blackwell; 2013.

Fifth session: Students are expected:

1. To explain general principles for reporting statistical methods
2. To explain principles for reporting risk, rates, and ratios
3. To explain principles for reporting hypothesis tests
4. To explain principles for reporting association analyses
5. To explain principles for reporting Reporting survival (time-to-event) analyses
6. To explain principles for reporting Reporting analyses of variance (ANOVA) or of covariance (ANCOVA)

References

1. Lang TA, Altman DG. Basic statistical reporting for articles published in biomedical journals: the "Statistical Analyses and Methods in the Published Literature" or the SAMPL Guidelines. *Int J Nurs Stud*. 2015;52(1):5-9. doi: 10.1016/j.ijnurstu.2014.09.006. PubMed PMID: 25441757.
2. Lang T. Twenty statistical errors even you can find in biomedical research articles. *Croatian medical journal*. 2004;45(4):361-70. PubMed PMID: 15311405
3. Pocock SJ, McMurray JJ, Collier TJ. Making Sense of Statistics in Clinical Trial Reports: Part 1 of a 4-Part Series on Statistics for Clinical Trials. *Journal of the American College of Cardiology*. 2015;66(22):2536-49. doi: 10.1016/j.jacc.2015.10.014. PubMed PMID: 26653629.

Sixth to ninth sessions:

Presentation and criticism of one selected published article in each session by the students: All students are expected to read the selected article and write a critique to it (at least one page) in advance. In each session, one of the students should direct the session.

Tenth and eleventh sessions: Ethical standards in the conduct and reporting of research and other material published in medical journals

ICMJE criteria for authorship; Role of corresponding author; Non-Author contributors; Disclosure of Conflicts of Interest; Predatory Journals; Helsinki statement; Coercion, Mutual support/admiration; Gift author, Ghostwriter; Duplicate production; Privacy and Confidentiality; Falsification and Fabrication

References

1. Cals JW, Kotz D. Effective writing and publishing scientific papers, part IX: authorship. *Journal of clinical epidemiology*. 2013;66(12):1319. Epub 2013/12/27. doi: 10.1016/j.jclinepi.2013.08.006 S0895-4356(13)00335-1 [pii]. PubMed PMID: 24369122.
2. ICMJE. Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. 2016.
3. World Medical Association Declaration of Helsinki. Ethical Principles for Medical Research Involving Human Subjects. Last amended October 2013.
4. Hall GM (ed). How to write a paper. Fifth ed. London: BMJ Publishing Group, Wiley - Blackwell; 2013. Chapter 20 Ethics of publication.
5. وزارت بهداشت، درمان و آموزش پزشکی، راهنمای کشوری اخلاق در انتشار آثار پژوهشی پزشکی ۱۳۷۸-۱۳۸۸
http://hbi.ir/ethics/aeinameh/publication_guideline.pdf
6. وزارت بهداشت، درمان و آموزش پزشکی، راهنمای اخلاقی پژوهش بر گروه‌های آسیب‌پذیر در جمهوری اسلامی ایران ۱۳۹۲
http://hbi.ir/ethics/aeinameh/publication_guideline.pdf
7. کتاب اخلاق در پژوهش‌های پزشکی (ویرایش دوم) تهران: دانشگاه علوم پزشکی تهران; ۱۳۸۵. قابل دسترسی از:
<http://hbi.ir/NSite/FullStory/Print/?Id=388>
8. شورای بین‌المللی سازمان‌های علوم پزشکی. دستورالعمل‌های اخلاقی بین‌المللی برای پژوهش‌های زیست‌پزشکی بر روی آزمودنی‌های انسانی. تهران: انتشارات دنیای تغذیه; ۱۳۸۸. قابل دسترسی از:
<http://hbi.ir/NSite/FullStory/Print/?Id=1215>

Session twelveth: Plagiarism and self- plagiarism; Paraphrasing; quotation

References:

1. Roig M. Avoiding plagiarism, self-plagiarism, and other questionable writing practices: A guide to ethical writing. 2015.
2. **NorQuest College Library**. <http://libguides.norquest.ca/writing>
3. Bosch X, Ross JS. Ghostwriting: research misconduct, plagiarism, or fool's gold? Am J Med. 2012;125(4):324-6. doi: 10.1016/j.amjmed.2011.07.015.
4. Academic Writing handbook – Guidance for students 2013-14 [Internet]. London School of Hygiene & Tropical Medicine. 2013. Available from: <http://www.lshtm.ac.uk/edu/qualityassurance/academicwritinghandbook.pdf>

Session thirteenth: Writing title and abstract

1. Cals JW, Kotz D. Effective writing and publishing scientific papers, part II: title and abstract. Journal of clinical epidemiology. 2013;66(6):585. doi: 10.1016/j.jclinepi.2013.01.005.
2. Hopewell S, Clarke M, Moher D, Wager E, Middleton P, Altman DG, et al. CONSORT for reporting randomized controlled trials in journal and conference abstracts: explanation and elaboration. PLoS medicine. 2008;5(1):e20. doi: 10.1371/journal.pmed.0050020.

Session fourteenth: Grammatical considerations

1. The University of Melbourn- Academic Skills Unit. Using tenses in scientific writing- Tense considerations for science writing [cited 2014 20 Sep]. Available from: http://services.unimelb.edu.au/_data/assets/pdf_file/0009/471294/Using_tenses_in_scientific_writing_Update_051112.pdf.
2. Overcoming language barriers. <http://www.biomedcentral.com/authors/language>
3. Bailey S. Academic Writing: A Handbook for International Students. 2nd ed. London & New York Routledge; 2006.
4. Wiley-Blackwell House Style Guide. John Wiley & Sons Ltd 2007.

Session fifteenth: Writing Conflict of interest, Acknowledgement, Cover letter, Choice of journal

1. ICMJE. Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. 2016.
2. Cals JW, Kotz D. Effective writing and publishing scientific papers, part X: choice of journal. Journal of clinical epidemiology. 2014;67(1):3. doi: 10.1016/j.jclinepi.2013.09.014. PubMed PMID: 24183607.
3. NLM Catalog: Journals referenced in the NCBI Databases . <http://www.ncbi.nlm.nih.gov/nlmcatalog/journals>

4. JCR-Impact-Factors-List-2015

۵. گزارش سطح بندي نشریات مصوب علوم پزشکی کشور در سال ۱۳۹۲. <http://journalportal.research.ac.ir/>

Session sixteenth: submitting a paper, responding to reviewers, being a reviewer

1. Kotz D, Cals JW. Effective writing and publishing scientific papers, part XI: submitting a paper. *Journal of clinical epidemiology*. 2014;67(2):123. Epub 2014/01/01. doi: 10.1016/j.jclinepi.2013.10.004 S0895-4356(13)00431-9 [pii]. PubMed PMID: 24377385.
2. Kotz D, Cals JW. Effective writing and publishing scientific papers, part XII: responding to reviewers. *Journal of clinical epidemiology*. 2014;67(3):243. doi: 10.1016/j.jclinepi.2013.10.003. PubMed PMID: 24411072.
3. de Vries F. Effective writing and dealing with reviewers. *Journal of clinical epidemiology*. 2014;67(7):830. doi: 10.1016/j.jclinepi.2014.02.013. PubMed PMID: 24751179.
4. Kotsis SV, Chung KC. Manuscript rejection: how to submit a revision and tips on being a good peer reviewer. *Plastic and reconstructive surgery*. 2014;133(4):958-64. doi: 10.1097/PRS.0000000000000002. PubMed PMID: 24675196; PubMed Central PMCID: PMC3970178.
5. Hernandez LV. Becoming a reviewer is good for you--the peer-review process. *Gastrointestinal endoscopy*. 2009;70(6):1159-60. PubMed PMID: 20653108.
6. Hall GM (ed). *How to write a paper*. Fifth ed. London: BMJ Publishing Group, Wiley - Blackwell; 2013.

Session sixteenth: Writing other types of documents

Session seventeenth: Review of the sessions

Scoring:

- Active participation in the sessions: 3 points
- Criticizing published articles: 3 points
- Final Exam: 8 points (about 0.5-1 point per each session)
- Working with one MSc students to write, submit, and get acceptance for an original research article: 6 points (for every extra article: +2 extra points)