

LECTURE: CRITICAL APPRAISAL OF JOURNAL ARTICLES (2 hours)

At the end of this session the students should be able to:

1. state why there is a need for scientific journals to be published
2. list types of scientific journals and their publishers
3. state what is meant by impact factors of journals
4. state the various types of journal articles and what is included in them.
5. state the broad outline of articles presenting original research findings
6. describe what is to be included in the various parts of the article
7. describe how an article goes through the peer review process

SGD: JOURNAL ARTICLE APPRAISAL

Objectives:

At the end of this session, students should be able to:

1. state the name of the journal in which the article is published
2. state the type of journal article
3. assess the appropriateness of the title of the article
4. name the main author, corresponding author (if different from main author), co-authors and their institutions .
5. determine the completeness of the abstract
6. state the research problem and objectives of the study
7. state the study design, study population, study sample, sampling method and statistical tests used
8. interpret results of research
9. discuss research findings of the study
10. discuss the ethical issues if any
11. discuss strengths and weaknesses of the study

Activities:

Students will work individually and as a group to achieve the above objectives. Prior to the session, the students are required to download the respective article from [http://www.communityhealthjournal.org/detailarticle.asp?id=126&issue=Vol12\(1\):2006](http://www.communityhealthjournal.org/detailarticle.asp?id=126&issue=Vol12(1):2006). They are required to read the article before coming in for the session.

The following activities will be carried out during the session.

1. Students will be given 15 minutes to reread/ review the article.
2. Students will discuss the contents of the article based on the objectives above and the guide provided.
3. Students will discuss how the skills of critical appraisal will help them in clinical practice.

GUIDE TO CRITIQUE OF JOURNAL ARTICLE

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1. **Name of the Journal:** The name of the journal is given in the cover page of the hardcopy. The full name or abbreviated name of the journal is usually given on the top or bottom of the first page of the article. It is also sometimes given on top or bottom of alternate pages of the article.
2. **Type of journal article/ communication:** The various types of articles/ communications that appear in medical journals include: editorial, review articles, original articles/contributions, short communication, case studies/reports, letters to the editor.
3. **Title:** The title should be short (8-12 words) and be able to explain the contents of the article. The title should state what the study was about and who/what was studied. Depending on the study, some titles would need to include the study design, where the study was conducted and the period it covered.
4. **Authors:** The authors are listed in the order of the amount of contribution to the article. The academic background and the institutions from which they come is also included and reflects the expertise they have on the subject. .
5. **Abstract:** The abstract provides a summary of the study and is structured or unstructured depending on the requirements of the journal. Structured abstracts usually have sections on Introduction, Objectives, Methodology, Results and Conclusion. The abstract should provide enough information on the study so as to guide the reader to decide whether it covers the area of interest of the reader and whether he would go on to read the full text of the article. Abstracts are generally 250-350 words.
6. **Introduction:** The introduction is where the authors describe the background of why the study was conducted and research problem being addressed. A brief review of the literature is usually included. The objectives are usually stated at the end of the introduction section and in some cases the main hypothesis being tested too is stated. .
7. **Methodology:** In this section the author describes the materials and methods used.

In epidemiological studies, the type of study design and whether it is an experimental / observational study. Experimental studies could either be animal studies or human clinical trials. Examples of observational studies are case series, cross-sectional, case control and cohort studies. The study population, study sample, sampling method and sample size need to be stated. The data collection

method and study instruments need to be described in sufficient detail so as to enable researchers who intend to replicate studies may do so. The software used and appropriate statistical methods are also described in this methods section. Any ethical issues and permission from ethical committees need to be mentioned.

8. **Results:** All results relevant to the study are described in this section. The results are usually presented in tables and figures with description of the salient findings described in the text. The tables and figures need to have suitable titles and interpreted independently of the text. It is important that the authors have not made mistakes with numbers, rates and totals in the tables. The statistical tests used and the level of significance in testing the hypothesis need to be mentioned.
9. **Discussion:** The authors discuss the results of the study, comparing them with results from other studies in the literature. Similarities and differences in the results with results of other studies are highlighted. Attempts are made to explain the differences in the findings.
10. **Conclusion:** In this section, the authors make conclusions and recommendations based on findings from the study. It is important to ensure that whatever conclusions and recommendations are based on [proper interpretation of the study findings.
11. **Acknowledgments:** In this section (if present), the authors acknowledge contribution of others to the study and the article. This could include the funding source and institutions from where they come. Others who would have contributed to the study but not included as authors and secretarial support is also included here.
12. **References / Bibliography:** References cited in the article are included in this section. References are usually written in Harvard style and listed in alphabetical order or Vancouver style and listed by numbers in order of appearance in the article. UKM has its own Guideline on Writing Thesis and referencing in this is based on the Harvard style.