

REVIEW ARTICLE



Journal club: A tool to update skills

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Abstract

The way of learning and upgrading knowledge, skills has been changed. Nowadays, efforts have been shifted from single handed learning process to group learning process with an advantage that one can critically analyze, discuss, and upgrade with the knowledge and advancements in their fields. “Journal Club” word itself explains that a group of people gather regularly to discuss, and critically evaluate the recent advancements and researches in medical and dental education. Periodic evaluation of the conference and the institution of appropriate changes ensure that the journal club remains a valuable and successful part of the training program. Goal of almost all journal clubs in training programs is to keep residents up to date on the literature; the importance of this goal varies between programs. A clinician describes a clinical problem at the end of one journal club meeting. At the next journal club, some systematic reviews are presented on that subject and the evidence is evaluated.

Introduction

“Journal Club” word itself explains that a group of people gather regularly to discuss, educate and critically evaluate the recent advancements and researches in their field. From the past so many years, it is emerging as an effective and valuable tool in medical and dental education [Figure 1]. It serves as a forum for educating and updating postgraduates about various advanced techniques, current literatures, clinical demonstrations of new medicines and therapy, and transfer of clinical information. It is a combined effort of all the participants, both participants and presenter present in the forum to critically analyze and discuss the newly introduced article to upgrade skill and knowledge. There have been an increasing number of publications discussing the prevalence, format, and (occasionally) effectiveness of journal clubs in various medical specialties.^[1-5]

History and Evolution of Journal Club

Sir James Paget during the period 1835 to 1854, with a group of students met over a baker’s shop near St Bartholomew’s hospital to read journals and play cards. By the year 1900, journal clubs were routinely practiced in medical schools and evolved as a firm of continuing medical education during the year 1917 to 1975.

The early 1980’s produced a number of reports concerning individual experiences with different journal club formats^[6].

Key Dates in Evolution of Scientific Publishing

The focus of journal clubs has apparently shifted over the years [Table 1]. What was once a setting in which the current literature of the world was surveyed and became a forum to discuss the clinical subjects addressed by the literature, and most recently,

Table 1: Evolution of scientific publishing

1665	1 st scientific journal
1820	1 st specialist journal
1870’s	References began to add at the end of the articles
1920’s	First summaries appeared at the end of the article
1930’s	First paper on the use of statistics
1950’s	Widespread use of IMRAD format
1960’s	Summaries at the end became abstracts
1970’s	Database introduced
1980’s	First international conference on peer reviews
1990’s	Introduction of electronic journals

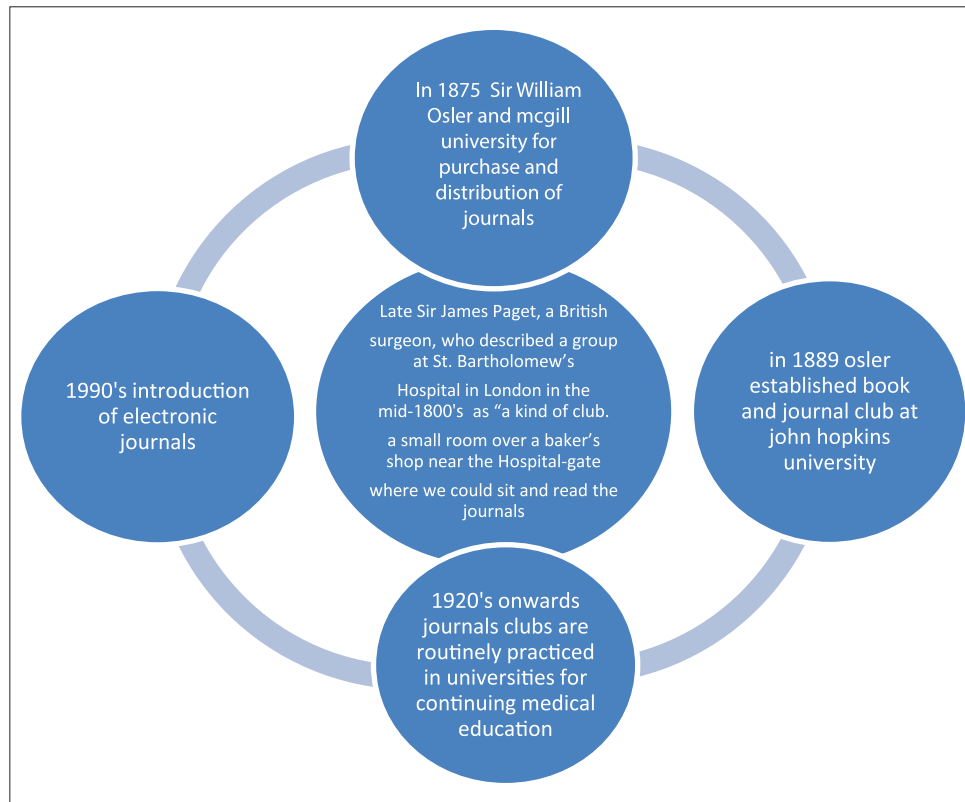


Figure 1: History and evolution of journal club

a format to teach physicians, nurses and social workers about critical reading skills.

Classification of Journal Clubs^[6]

Journal club is classified [Flow Chart 1] into following types.

Person moderated

The person moderated type is commonly practiced in medical and dental colleges till date.

According to methodology it can be differentiated into traditional, problem-based or evidence based, and combined.

Traditional

In traditional type article selected by junior doctor is criticized by senior doctors.^[6]

Problem based/evidence based

In this, there is a systematic search of literature to identify the relevant article followed by critical appraisal is done, which is presented using seminar and conclude with the discussion of finding with the peer and seniors.

Methodology type

In methodology type, the methodology used to analyze the results in studies is critically analyzed.

Combined

Combined Journal Club utilize the dimensions of problems based on methodology teachings.^[6]

Internet type

It uses the multimedia interface to transfer knowledge to the individual.

It can be of two types.

Online

Synchronous: Time is scheduled for all the participants to participate in Journal club at same time.^[6] Asynchronous: Participants participate in journal club at different time.^[6]

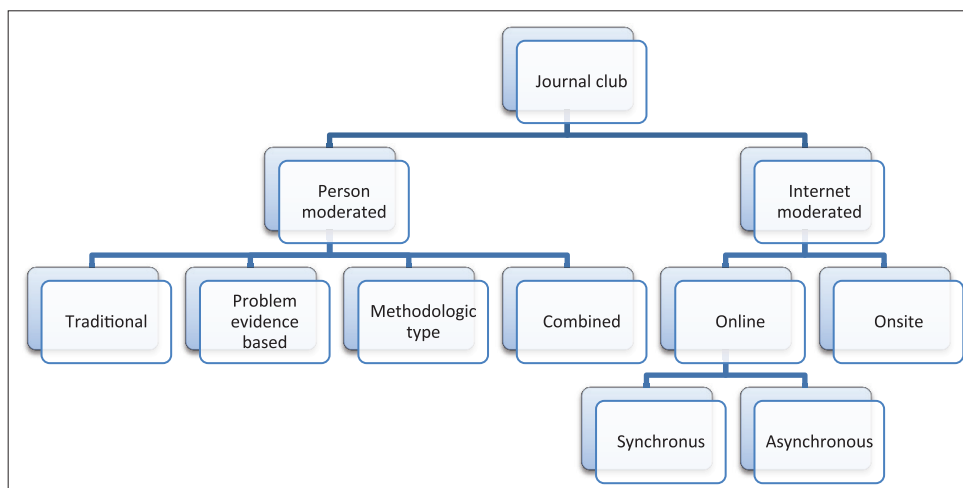
Onsite

Helps the students and faculty to maintain the permanent record.

Goals of a Journal Club^[7]

In a journal club, quality of the article is evaluated depending on finding and whether it can be used in practice or not. Goals of a journal club are:

1. To update participants of the medical literature.
2. To teach the techniques in the critical appraisal of the medical literature.
3. To promote evidence-based medicine.



Flow Chart 1: Classification of journal club

4. To demonstrate continuing medical and dental education.
5. To improve skills specifically for the critical review.
6. To promote social contact.

Journal search

The first step of journal club presentation is to search the valued and relevant articles, which should be from the peer-reviewed indexed journal. The impact factor of the journal should be high, which reflect the frequencies at which the article was cited in the scientific literature. The more the number of times the articles is cited in the past 2 years more will be the impact factor of the journal, which have been cited in the journal citation report.

Journal club should include

1. Title
2. Author and place of work, name of presenter
3. Introduction
4. Review of the literature
5. Problem/hypothesis
6. Methodology and data collection
7. Results
8. Discussion
9. Conclusion
10. Critical appraisal.

Title

The title of the journal club should reflect complete background of the article. It should provide proper idea behind the article.

Author and place of work, and name of the presenter

Name of the author followed by designation and place of work or institution should be provided, which help in further communication in case of any need. Name of all the coworkers should also be present with the name of author. Name of the presenter is also necessary.

Introduction and review of the literature

The content within introduction should clearly orient the audience to background of the problems, explain the purpose of research, list of 3-5 relevant articles mentioned by the author. The background of the study should determine the lacunae in existing literature.

Problem and hypothesis

It should clearly state the aim and objective of the study, research question should be properly designed and it should explain the purpose and hypothesis of study and should have the 4 component (PICO) [Table 2], i.e.

1. Patients and population
2. Intervention
3. Comparison
4. Outcome.

Methodology and data collection

Methodology should explain whole study design such as whether it is descriptive/experimental/observational, randomized control trail, case-control, meta-analysis, and cross-sectional [Flow Chart 2]. Inclusion and exclusion criteria and all the factors associated with the study should be properly explained.

Results

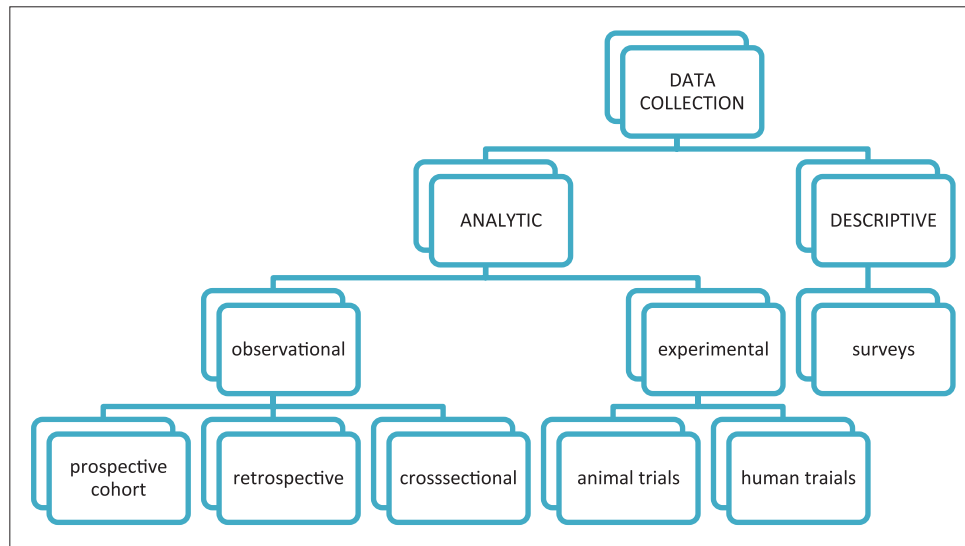
The outcome of the study along with proper statistical data should be explained.

Discussion

The discussion must assess the data reported was consistent with the method described, interpretation of the result, strength and weakness of the study, acknowledgment of the relevant literature, and other approaches.

Conclusion

Conclusion should summarize what author concluded in the study like:



Flow Chart 2: Methodology of data collection

Table 2: P.I.C.O. method

P Patients or population	It describe the patient and population included in the study
I Intervention	Orthodontic treatment given to the patients
C Comparison	It tells about the main alternative to compare with the interventions
O Outcome	Outcome measurement

1. Are the conclusion justified from the data?
2. Are they supported by the evidence?
3. Was the hypothesis correct?
4. Is there future research planned?

Critical Appraisal

1. Is the title in line with the objective and conclusion?
2. Where the keyword focusing on major issues raised in the article^[8]?
3. Was the study design and methodology appropriate?
4. Do the results relate to study questions proposed in the study objectives?

Slide Preparation

1. Make sure the font size should be large enough to be clearly seen from the distance. Font size should be 12 and 14 depending on different journals.
2. Bullet points do not need to be complete sentence but it should have complete idea.
3. Simplify table or figure and remove the unnecessary data to focus on salient result.
4. Do not make images too small.
5. Presenter should be confident and coherent and provide a

6. good continuity from slide to slide
6. Presenter should interact with the patients and evoke the questions.

How to begin^[9-12]

1. Copies of the research article and the journal club discussion questions should be distributed to interested persons
2. Plan meeting time and location which must be convenient to the participants
3. Identify a facilitator for the meeting (which could be a clinical educator, clinical nurse specialist, nurse practitioner, nurse manager, senior staff member, with journal club members to lead subsequent journal club sessions)
4. Hold the journal club to encourage active participation of participants
5. Evaluate the journal club and take feedback from participants
6. Plan and Schedule the next meeting.

Evaluation of Journal Club^[13]

1. Peer assessment: Peer assessment is the best way to decide whether any adjustments are necessary, ask whether they are satisfied with the conference. It will give clear feedback about the presentation.
2. Self-assessment: Asking residents to self-evaluate their clinical reading behavior is a way of assessing success of the presentation.
3. Facilitator assessment.
4. Model checklist: A model checklist for evaluation of journal review presentation should be prepared which include name of the trainee, name of the faculty/observer, topic of the presentation including reference journal, and date of presentation. Faculty/observer should evaluate by observing the following points during presentation and grade the

quality of presentation accordingly such as poor, below average, average, good, and very good.

- a. Article chosen
- b. Extent of understanding of scope and objective of paper by candidate
- c. Whether cross-reference has been consulted?
- d. Whether other relevant publications consulted?
- e. Ability to respond to questions on the paper
- f. Audio-visual aids used
- g. Ability to defend the paper
- h. Clarity of the presentation
- i. Any other observation.

Conclusion

Including promoting interest, attendance, and involvement there are several key factors in promoting a successful journal club. Journal club meetings can be made productive by starting and facilitating the discussion by session leader. Time and location of the journal club should be scheduled according to the convenience of staff to attend journal club. The journal club can promote a better understanding of the research process and an improved ability to critically appraise research. Searching, reading, presenting, and criticizing research is very beneficial for all medical personals to facilitate the evaluation of research, which have a great importance in clinical practice.

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