

EVALUATION OF THE IMPACT OF JOURNAL CLUB AS A TEACHING-LEARNING TOOL AMONG MEDICAL POSTGRADUATE STUDENTS

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ABSTRACT

BACKGROUND

Journal club is an example of small group method of teaching-learning technique, being an important ingredient in medical education. Journal club has been advocated as a bridge between research and evidence based medical care in practice. It has been recognized as a means of keeping update with the literature; promoting the research activities; promoting evidence based medical care and teaching critical appraisal skills.

METHODOLOGY

This study assess the role of journal club as a teaching-learning tool by recording the perception of post graduates on journal club through a questionnaire based survey.

RESULTS

The scores for most of the items of fifteen point questionnaire were above three indicating that learning through journal club method is satisfactory.

DISCUSSION

The use of journal club should help the post graduate students see the connections between theory, research and practice aspects. The value of journal club is that it can promote better understanding of research process and improved ability to critically appraise research.

CONCLUSION

Many of the post graduate medical students perceived that journal club enhances the skills, promote evidence based medical care and update the knowledge on recent advances and felt that journal club must be scheduled regularly as a part of teaching-learning method in post graduate curriculum.

KEYWORDS

Journal club, Teaching-learning technique, Critical appraisal skills, Post graduate medical students.

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INTRODUCTION: There are three important ingredients for medical education objectives, teaching-learning activities and evaluation. In teaching-learning activities, class room didactic lecture and demonstration are examples of teaching-centered teaching-learning method. Free group discussion, project work and self-study are learner controlled teaching-learning methods. Seminar, workshop, case study, role play presentation and journal club are examples of small group methods in teacher-learner co-operative activities. Journal club is a group of individuals who congregate in order to discuss the merits and application aspects of articles

in medical journals relevant to further research or evidence based medical care.^[1] Journal club helps to promote a face to face interaction between the members of the group and help to develop certain skills in them. It has been advocated as a bridge between research and evidence based medical care in practice.^[2] Journal club has been suggested as a teaching-learning method that promotes the understanding, attitudes, motivation and competences essential for producing better research out-put or evidence based medical care.^[3]

Though the earliest mention of journal club occurred in first half of nineteenth century as simple reading of journals at a place, evidence of the first formal journal club happened in the later half of that century.^[4] Presently, many academic training programmes include a journal club. It has been recognized as a means of keeping update with the literature; promoting the research activities; promoting evidence based medical care and teaching critical appraisal skills. Keeping

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these facts in mind, the present study is designed to evaluate the effectiveness of journal club as a teaching-learning method, by assessing its perception among post graduate medical students. For this a questionnaire was given to the post graduate medical students to grade journal club method of activity as a teaching-learning method.

AIMS AND OBJECTIVES OF STUDY: The aim of the present study was to explore the perceptions and experiences of post graduate medical students towards journal club as a teaching-learning tool for collaborative learning in their studies. It is also to bring out the advantages and limitations of journal club, along with identifying the extent of coverage of cognitive, affective and psychomotor domains of teaching-learning through this tool, i.e. journal club.

MATERIALS AND METHODS: The study involved the post graduate medical students of preclinical, para-clinical and clinical departments. The inclusion criterion to participate in the study is the post graduate students who had attended or delivered a journal topic at the journal club meeting. The potential respondents were informed about the purpose of the study and consent was priority taken before the 'questionnaire.' Development of a 15-point questionnaire was done to validate the effectiveness of journal club as a teaching method for post graduate medical students. The questionnaire did not include sensitive questions and no personal identification was collected. Each item of the questionnaire was scored on a 5 point scale with scores of 5, 4, 3, 2 and 1 assigned for strong accepting (or agreeing), accepting, uncertain, not accepting and strongly not accepting respectively. Means scores and their standard deviations based on responses for each item of the questionnaire were calculated.

RESULTS: A total of fifty two post graduate students had participated in the present study. Any missing data is replaced by a score of 3 as a neutral response, from the study population. Table 1 represents the mean scores with \pm SD of the perception or experience level of assessment by the respondent post graduate trainee students, for each item of the questionnaire. As most of the scores are above 3, it indicates that learning by journal club method is a satisfactory one. There were two items (No. 4 and 5) where the scores are below 3. These are the aspects of journal club that could be corrected or intervention can possibly be made. One item (No. 9) has shown a good score as 4.28 ± 0.6 indicating that journal club could foster the development of ideas for future research.

Item	Score Mean \pm SD (n=52)
1. Journal club was regularly conducted by the department as scheduled.	3.66(\pm 0.58)
2. Journal club is helpful in enhancing the knowledge in the subject.	3.46(\pm 0.71)
3. Journal club on the study of article had impact on theoretical knowledge, research skill or clinical skill.	3.28(\pm 0.74)
4. In the journal club, there is a formal teaching of critical appraisal of skills.	2.28(\pm 0.66)
5. Journal club is useful to learn from the experience and thought process of colleagues.	2.36(\pm 0.48)
6. Conducting journal club once in a week is useful.	3.85(\pm 0.94)
7. Journal club is felt as a tool to enhance the research skills or practice of evidence based medical care.	3.96(\pm 0.76)
8. The advantage of journal club is promoting awareness of current literature.	3.81(\pm 0.83)
9. The journal club is useful in development of ideas for future research.	4.28(\pm 0.60)
10. Journal club stimulates debate and improved understanding of current topic.	3.94(\pm 0.56)
11. The disadvantage of this is: one sided with no direct contact with the author or researcher.	4.00(\pm 1.12)
12. Journal club is useful in developing and sharpening the teaching skills.	3.65(\pm 0.90)
13. Time table of conducting journal clubs should be given 6 months in advance.	3.77(\pm 0.78)
14. The articles discussed in journal club are often current edge topics.	4.18(\pm 0.62)
15. Initial evaluation of the presenting article in the journal club is to be assigned to an experienced person in the faculty.	3.82(\pm 0.64)

Table 1: Mean Scores of perception of the Journal Club by Post Graduate Medical Students

DISCUSSION: In this study, the results tend to support the use of journal club as a formal educational strategy. Many of the participants felt that journal club promotes competences required for increasing knowledge and through discussions regarding scientific research, implementation in future research activities or towards better medical care with evidence base. As most of the items scored more than 3, indicates that most of the items had been agreeable to the participants. Some of the positive perceptions and challenges viewed by the respondents are summed up in Table 2.

Positive perceptions:	<ul style="list-style-type: none"> - Developed competence to search and report scientific knowledge. - Application of knowledge to some study module. - Supported theoretical knowledge. - Motivated discussion about implementation of research into applied aspects of better medical care. - Brought new knowledge and perspectives that could be utilized in the post graduate students' work. - Good collaboration between post graduate students and faculty members.
Challenges:	<ul style="list-style-type: none"> - More questions from colleagues. - Time consumed for the journal club meetings. - Motivating topics or articles for the journal clubs. - Practical matters indicated.
<p align="center">Table 2: The perceptions and challenges towards journal club in the view point of post graduate medical students</p>	

The formation of journal club, as a strategy used by professional organizations, is to raise research awareness and strengthen research skills. The use of journal club should help the students see the connections between theory, research and practice aspects. The post graduate students should develop analytical, critical, evaluative, reflective and presentation skills to make a journal club effective. The value of journal club is that it can promote better understanding of research process and improved ability to critically appraise research.^[5]

The effective journal club should possess experienced program director and there should be a mandatory attendance to the members involved. The leader or an experienced senior faculty member should help in the selection of the article for the journal club. A suitable pre-reading time is to be given. At the start of the article presentation in the journal club, brief explanation of the article relevant to the problem could be made.^[6] This helps listeners more fully to engage with the presentation and to make more of a story. The type of study method, whether it is a randomized controlled trial or retrospective cohort or case control or cross sectional or descriptive.^[7] or decision analytic or of cost effectiveness should be discussed. Following this methodology of the research procedures are to be briefly described by comparison and outcome related to the research in question. Then, the appropriate critical appraisal questions are to be validated. Then the utility of the article studied. Finally, one page summary of the outline of presentation as a handout helps guide the group's attention and provides a storable record of the article.^[8]

When choosing an article either a cutting edge topic or a review article, the article must have been published in the last two years and must not contain flaws of methodology. The reasonable way of programming the time for the article

presentation in the journal club is: presentation of article in 20 minutes; providing 10 minutes for one page summary at the end; and a 20 minute discussion on the statistical and methodological issues.^[3] As a result, the post graduate students will improve both their presentation and critical appraisal skills.

The main advantage of journal club is promoting awareness towards the current medical research literature. The article to be presented is to be read with two objectives: first, to acquaint oneself with the current knowledge on the subject and the steps by which it has been reached; and secondly, to understand and analyse the contents of the article. Also, discussing the avenues and barriers to the implementation and identifying the tools to achieve the target. Thus, cognitive and affective domains of teaching-learning methods are covered.^[8] The goal of journal club to introduce it as a teaching-learning method to medical post graduate trainee students is to improve knowledge; teaching how to critically appraise the article; to teach the statistical portion; to teach how do a journal research; to build a database of reviewed material; to discuss controversies; to learn from the experience and thought process of colleagues; to develop and sharpen teaching skills thus promoting psychomotor skills; to identify ideas for future research and to provide evidence based medical care.^[9] The disadvantage or limitation of the journal club is that it is one sided with no direct contact with author or researcher, but in present times internet linking alleviates these obstacles.

CONCLUSION: The medical post graduate students expressed positive experiences about developing their skills in searching, evaluating and reporting the scientific data and perceived the subject of journal club as a teaching-learning method to be a positive feature. It was also perceived that journal club enhances the skills, promote evidence based medical care and update the knowledge on recent advances among the medical post graduate students and was felt that journal club must be scheduled regularly as a part of teaching-learning method in post graduate medical curriculum.

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