



RESEARCH ARTICLE

The evaluation of clinical journal clubs in educational hospitals of kashan university of medical sciences based on national standards: lecturers versus residents viewpoints

Soheila Yadollahi Farsani¹, Mehrdad Mahdian², *Soleiman Ahmadi³, Mohammad Ali Hosseini⁴

1- Master Science of Medical Education, Faculty of Medical Education, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

2- Assistant Professor of Trauma Research Center, Kashan University of Medical Sciences, Kashan, Iran.

3- Associate Professor, Faculty of Medical Education, Shahid Beheshti University of Medical Sciences, Tehran, Iran
(Corresponding author)

Email: soleiman.ahmady@gmail.com

4- Associate Professor, Rehabilitation Management Department, University of Social Welfare And Rehabilitation Sciences, Tehran, Iran.

Received: 14 January 2018

Accepted: 25 March 2018

Abstract

Introduction: The Journal clubs are used as a standard teaching tool for the post graduates. However, the success of this method is related to how they are run and abilities of the organizers. The aim of this study was to compare the journal clubs of Kashan University of Medical Sciences with standards.

Materials and Methods: During a descriptive cross-sectional study, 117 (42 lecturers and 75 residents) of different specialties of Kashan University of Medical Sciences (KAUMS) were asked about journal clubs in their groups. The tool was a two-part questionnaire : first was included the demographic data of participants, and the second part 34 questions in 5-point Likert scale measuring triple fields of journal club, Preparation, Scheduling, and performance compared to standards. Data analysis was performed using SPSS version 16 software. $P < 0.05$ was considered significant.

Results: In total, the journal clubs are run favorably in clinical wards of KAUMS, based on lecturers and resident viewpoints. Regarding three domains of journal club holding, all participants believed that journal clubs were held regularly and there is no problem in scheduling, but the main problem were seen in performance. In this domain, the most important challenge was absence of methodologist in journal sessions to help for selecting articles and answering possible questions during discussions. No significant difference was found regarding lecturers and residents beliefs about journal clubs ($P = 0.22$).

Conclusion: Despite the favorable running of journal clubs in accordance to standards in the university, appropriate intervention should be performed to reach ideal condition.

Key Words: Journal club, Critical appraisal, Medical education.

Introduction

Generally, the journal clubs are used as an important part of medical education system for the post graduate training programs over the years [1]. Along with expanding the scope of medical sciences, physicians should obtain skills of acquisition, implementation, and evaluation of new knowledge. Journal clubs through familiarizing the post graduate students with research designs; medical statistics, clinical appraisal skills, and translating theory into practice have an important role in residency training programs, especially in lifelong learning [2,3]. Given the importance of this issue, Education Development Center (EDC) of Ministry of Health and Medical Education (MOHME) proceeded to provide of standards for clinical training including journal club standards [4]. To be effective, journal clubs must meet some certain known criteria such as having regular and anticipated meetings, clear objectives, appropriate meeting

timing and incentives, a trained journal club leader to choose papers and lead discussion in right way, mandatory participating, using established critical appraisal processes and finally, summarizing journal club findings [5]. The provided standards by EDC of MOHME have included these mentioned features. However, despite these standards, the extent of implementation of them in academic hospitals is another challenge. To improve the quality of journal clubs, the first step is to investigate current situation to determine standards gap. Then by performing effective interventions and evaluation during a dynamic process, more successful journal clubs could be expected. The aim of this study was to compare the current situation of journal clubs in clinical wards of Kashan University of Medical Sciences with national approved standards from the university lecturer and residents' viewpoints in 2014.

Methods

During a descriptive cross-sectional study and after obtaining ethical approval from local IRB, a self prepared questionnaire based on National standards for clinical journal clubs were distributed to 134 persons (46 lecturers and 88 residents) from different specialties (Internal medicine, Surgery, Gynecology, Anesthesiology, Infectious disease, and Pediatrics) of Kashan University of Medical Sciences (KAUMS). Through this questionnaire participants were asked about the journal clubs that were run in their groups. The tool had two parts: the first part was included demographic data of participants, and the second part was included 34 questions in 5-point Likert scale (always, often, sometimes, rarely or never that scored 5 to 1 respectively) measuring triple fields of journal club including Preparation, Scheduling, and performance compared to standards. Content validity and face validity of questionnaire were confirmed based on the experts opinion in the field of medical education and its reliability was assessed via test-retest approach. The correlation coefficients was 0.74 ($P < 0.001$), Spearman-Brown reliability coefficient was 0.85 and the Cronbach's alpha value for internal consistency was calculated 0.86. For judging about the journal club implementation conformity with approved standards, desirability of each item was determined using the percentage of desirability that calculated as follows:

Desirability percentage = $100 \times \text{Mean score of each questionnaire item from 5}$

Then the desirability status criteria were determined as follows:

Desirability percent of 81-100: Ideal

Desirability percent of 61-80: Favorable

Desirability percent of 41-60: Moderately acceptable

Desirability percent of ≤ 40 : Unacceptable

To assess conformity with the standards for each domain and finally, to check the conformity of total of three domains and deciding about the accordance of the journal clubs with standards the mentioned approach was used. All faculty

members and residents of clinical groups with resident for all period of residency program (years 1 to 4) in 2014 were enrolled the study. Faculty members and residents of newly launched specialty groups were not enrolled the study. SPSS statistical software (Version 16) and T-Test was used to analyze the data.

Results

42 faculty members and 75 residents filled out the questionnaire (response rate of 91% and 85% for faculty members and residents, respectively). In terms of triple domains of journal club standards, and based on lecturer's viewpoints, desirability percentage for "Preparation", "Scheduling", and "Performance" domains shows favorable situation for preparation domain, ideal for scheduling and moderately acceptable for performance. In terms of "preparation", according to lecturers and residents viewpoints equipping the journal club venue with audio-visual equipments and Internet had obtained the highest score (88 and 82 respectively) and were evaluated "ideal". However, in the same domain seating arrangement in circular position or U-pattern was unacceptable (scores of 24 and 32 for lecturers and residents respectively). Nevertheless, the most important strength in performance domain based on either lecturer or residents viewpoints, was regular holding of journal clubs in due time and participating of residents in all sessions (Ideal), and the most important weakness was absence of epidemiologist or biostatistician in journal sessions (unacceptable). Generally, lecturers believed that journal clubs in KAUMS clinical wards were held favorably [Figure 1]. On the other hand, based on residents viewpoints, preparation and scheduling domains were favorable and performance was moderately acceptable and in general, they agreed with lecturers that journal clubs are held favorably [Figure 2]. There was no significant difference between lecturers and residents viewpoints regarding conformity of journal clubs with standards ($P = 0.22$) [Table 1].

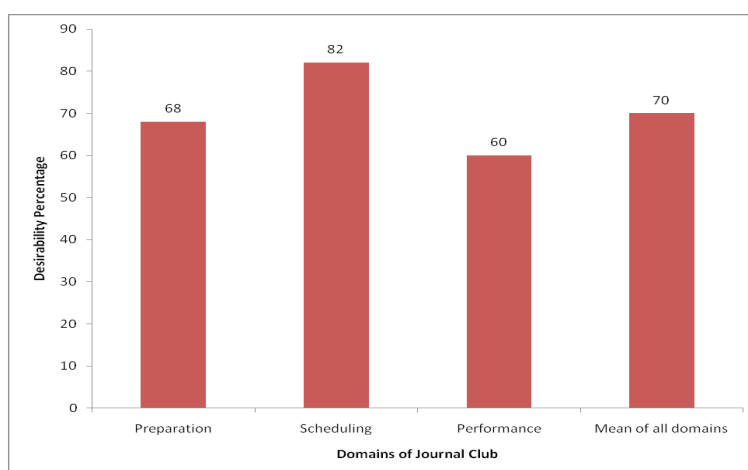


Figure 1. Desirability percentage of different domains of journal club presentation based on KAUMS lecturers' point of view, 2014.

Notice: Criteria for conformity of journal clubs with standards: Desirability percent of 81 – 100: Ideal; 61 – 80: Favorable; 41 – 60: Moderately acceptable; and ≤ 40: Unacceptable.

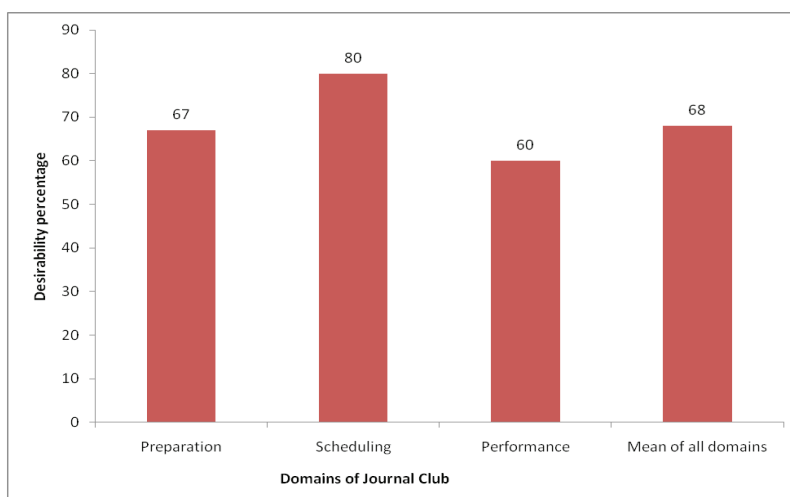


Figure 2. Desirability percentage of different domains of journal club presentation based on KAUMS residents’ point of view, 2014.

Notice: Criteria for conformity of journal clubs with standards: Desirability percent of 81 – 100: Ideal; 61 – 80: Favorable; 41 – 60: Moderately acceptable; and ≤ 40: Unacceptable.

Table 1. Statistical indices of journal club presentation in different domains based on KAUMS lecturers and residents’ point of view, 2014.

Domain	Position	Mean score (out of 5)	Standard Deviation	P	Desirability percentage	Desirability status
Preparation	Lecturer	3.5	0.70	0.38	70	Favorable
	Resident	3.3	0.71		66	Favorable
scheduling	Lecturer	4.2	0.70	0.88	84	Ideal
	Resident	4	0.65		80	Favorable
Performance	Lecturer	3	0.63	0.93	60	Moderately acceptable
	Resident	3	0.59		60	Moderately acceptable
All triple domain	Lecturer	3.6	0.46	0.22	72	Favorable
	Resident	3.5	0.47		70	Favorable

Discussion

The results of this study showed that in total, the journal clubs are run favorably in clinical wards of KAUMS, based on lecturers and resident viewpoints. Regarding three domains of journal club holding, all participants believed that journal club meetings were held regularly and there is no problem in scheduling, but the main problem were seen in performance.

Many studies have been focused on how to organize more effectively journal clubs in residency training programs [1,5-8]. In the present study the mean score for scheduling (timing) was the highest among the other scores. In other words, in KAUMS clinical wards, Journal clubs are held on time and regularly. Several studies have showed that journal clubs as a part of residency programs are run once a month [9-12]. Holding of journal clubs more than once a month can be difficult, especially if it entails reviewing several articles in detail. In fact in our teaching hospitals, journal clubs are held at least twice a month (occasionally up to 4 monthly)

and each session lasts approximately one hour. Some studies suggest the effectiveness of holding journal club weekly in some wards, like internal medicine and pediatric wards [3,13,14]. A serious weakness in our clinical journal programs is lack of epidemiologist or biostatistician in journal sessions. Regarding desirability score, based on lecturers and residents viewpoints, the score of this question for both faculty members and residents (22 and 28 respectively) was unacceptable. Providing access to epidemiologist or biostatistician to assist the journal club leader both in selecting appropriate articles and to answer questions that may arise during discussions is essential [3,5,15]. Several studies have shown that maximum participation of residents in journal clubs is an important factor in the success of the Journal Club objectives [3,9,10]. The residency teaching programs should emphasize on the importance of journal clubs and participation of residents should be mandatory and the only exception to this rule is where the residents have patients who need emergency care [13]. Fortunately,

according to our results participation of residents in KAUMS journal clubs had good score and was Ideal based on lecturers and residents beliefs. During preparation for holding a journal club, arrangement of chairs in U-shape manner facilitates eye to eye contacts and increases the chance of active participation [16,17]. Regarding preparation domain, the lowest score was given to this item by either lecturers or residents and therefore our results show a marked standard gap in this regard. Interestingly, in this domain and in terms of equipping the conference room with audiovisual and internet facilities, we had maximum score and ideal desirability. Preparing the seminar room with internet access, computers and presentation equipments are recommended for a more successful results [18]. Unfortunately, in KAUMS, educational objectives for journal club are not drafted and presented to residents before journal sessions. The results a survey has shown that about 42% of journal club programs have not had educational objectives [9]. In each residency training program written learning objectives for journal club should be established. These objectives should be addressed the content and number of articles discussed during the journal session, and the journal (s) that articles are drawn [15]. Effective evaluation, another basic problem of journal clubs, also will be facilitated by these drafted objectives. Every journal club should be evaluated through a questionnaire or by a checklist in terms of structure, process and outcome [1,15]. It can be expected with proper and regular evaluation; the journal clubs become more effective.

In conclusion, our study showed that journal clubs are run favorably in KAUMS either by faculty members or residents opinion and there was no significant difference between their standpoints regarding holding journal sessions. In general, therefore, it seems that despite the favorable running of journal clubs in the university and given the weaknesses mentioned previously, like absence of methodologists or biostatisticians, appropriate intervention should be performed to reach ideal condition.

Conflicts of Interest

There are no conflicts to declare.

Acknowledgements

This research was performed by Soheila Yadollahi in partial fulfillment of the requirements for certification as a master of science in Medical Education. The present paper was adopted from the thesis proposal approved by School of Medical Education of Shahid Beheshti University of Medical Sciences. The authors wish to thank Dr. Akbar Aliasgharzadeh, for his cooperation in data analysis. The authors also extend their appreciation to the all lecturers and residents of Kashan University of Medical Sciences, who

contributed kindly to the completion of our questionnaire.

References

1. Patil PS. Establishing an effective journal club: a postgraduate educational tool. *Education in Medicine Journal*. 2013; 5 (3).
2. Linzer M. The journal club and medical education: over one hundred years of unrecorded history. *Postgraduate medical journal*. 1987; 63 (740): 475-8.
3. Sidorov J. How are internal medicine residency journal clubs organized, and what makes them successful? *Archives of internal medicine*. 1995; 155 (11):1193-7.
4. Standards of Clinical Education. Ministry of Health and Medical Education 2009.
5. Deenadayalan Y, Grimmer - Somers K, Prior M, Kumar S. How to run an effective journal club: a systematic review. *Journal of evaluation in clinical practice*. 2008; 14 (5): 898-911.
6. Spillane A, Crowe P. The role of the journal club in surgical training. *Australian and New Zealand journal of surgery*. 1998; 68 (4): 288-91.
7. HOW TO MANAGE A JOURNAL CLUB? *URMIA MEDICAL JOURNAL*. 2008; 19 (3): 257-64.
8. Pearce-Smith N. A journal club is an effective tool for assisting librarians in the practice of evidence-based librarianship: a case study. *Health Information & Libraries Journal*. 2006; 23 (1): 32-40.
9. Jouriles NJ, Cordell WH, Martin DR, Wolfe R, Emerman CL, Avery A. Emergency medicine journal clubs. *Academic Emergency Medicine*. 1996; 3 (9):872-8.
10. Linzer M, DeLong ER, Hupart KH. A comparison of two formats for teaching critical reading skills in a medical journal club. *Academic Medicine*. 1987; 62 (8): 690-2.
11. Melchior JA, Meals RA. The journal club and its role in hand surgery education. *The Journal of hand surgery*. 1998; 23 (6): 972-6.
12. Moberg-Wolff EA, Kosasih JB. JOURNAL CLUBS: Prevalence, Format, And Efficacy In PM & R. *American journal of physical medicine & rehabilitation*. 1995; 74 (3): 224-9.
13. Alguire PC. A review of journal clubs in postgraduate medical education. *Journal of General Internal Medicine*. 1998; 13 (5): 347-53.
14. Valentini R, Daniels S. The journal club. *Postgraduate medical journal*. 1997; 73 (856): 81-5.
15. Dirschl DR, Tornetta P, Bhandari M. Designing, conducting, and evaluating journal clubs in orthopaedic surgery. *Clinical orthopaedics and related research*. 2003; 413: 146-57.
16. Lee AG, Boldt HC, Golnik KC, Arnold AC, Oetting

-
- TA, Beaver HA, et al. Using the Journal Club to teach and assess competence in practice-based learning and improvement: a literature review and recommendation for implementation. *Survey of ophthalmology*. 2005; 50 (6): 542-8.
17. Swift G. How to make journal clubs interesting. *Advances in Psychiatric Treatment*. 2004; 10 (1): 67-72.
18. Research in Progress (RIPS) Talks and Journal Club. Guidelines for RIPS and Journal Club.: University of California, San Francisco; 2016; Available from: <http://www.neuroscience.ucsf.edu/neurograd/journalclub.html>.