

## REVIEWS

# Effectiveness of journal clubs in translating knowledge into practice: A literature review

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## ABSTRACT

**Background and objective:** Hamad Medical Corporation nurse leaders established nursing journal clubs in 2014 as an important strategy to involve nurses in translating research into practice and as an effort to provide patients with the highest possible standards of care. Since the implementation of journal clubs in Hamad Medical Corporation (HMC), evaluative research within HMC has not been conducted to examine the effectiveness of this strategy. The aim of this review was to increase decision makers' knowledge about the effectiveness of journal clubs in translating knowledge into clinical practice and to provide a framework to guide the development of a survey tool that would aid in the evaluation of nursing journal clubs' effectiveness at Hamad Medical Corporation. A literature search was conducted as an initial step to guide the development of this tool.

**Methods:** A literature search was conducted yielded 13 studies that evaluated the effectiveness of journal clubs after removing all duplicates and applying the inclusion criteria. The Mixed Methods Appraisal Tool-version 2011 was used to evaluate the quality of the included articles. Data was analyzed and extracted from each study and assembled into a summary table.

**Results:** Four themes related to journal clubs' effectiveness that are important in translating knowledge into practice: encouraging discussion among healthcare professionals, enhancing critical appraisal skills, promoting evidence-based practice knowledge, and impacting clinical practice.

**Conclusions:** This literature review provides information about the four main interrelated themes that contribute to journal clubs' effectiveness in translating knowledge into practice. This information would be useful to nurse educators at Hamad Medical Corporation and further utilized as a backdrop to the development of a tool to evaluate Hamad Medical Corporation nurses' perceptions of journal clubs' effectiveness.

**Key Words:** Journal clubs, Effectiveness, Nurses, Evidence-based practice, Qatar

## 1. INTRODUCTION

Qatar's National Health Strategy highlights the essential role of a skilled national healthcare workforce to provide high quality healthcare to Qatar's population.<sup>[1]</sup> One goal of Qatar's National Health Strategy is to incorporate high quality research and ongoing professional development into all fields of care delivery, which is aligned with Qatar's health

priority of providing the best quality healthcare to Qatar's community.<sup>[1]</sup> For more than three decades, Hamad Medical Corporation (HMC), which is the main not-for-profit leading healthcare provider in the State of Qatar, has been committed to delivering the safest, most effective, and most compassionate care to all of its patients.<sup>[2]</sup> Hamad Medical Corporation has three main pillars: health, education, and

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research. Leaders at HMC believe that research has a major role in providing nurses with up to date evidence to inform practice and patients with the highest possible standards of care.<sup>[3]</sup> This can be achieved by creating an environment that supports implementation of the best evidence available in the health literature to assist nurses in making changes in clinical practice, which would improve patient outcomes.<sup>[3]</sup> Applying research evidence to practice can sometimes take a decade; therefore, nurse leaders are exploring different strategies to encourage research utilization in practice to improve the quality and safety of nursing care.<sup>[4]</sup>

Nursing journal clubs (JCs) were introduced at HMC in 2014 as a strategy to support nurses' professional development, to increase critical thinking through discussing implications for clinical practices, and, ultimately, to improve the quality of patient care. To date, no evaluative studies have been conducted to glean nurses' perceptions related to the effectiveness of JCs. Hence, the backdrop for this literature review is building knowledge about JCs' effectiveness in translating knowledge into practice and to aide in the development of a survey tool to evaluate nurses' perceptions related to journal clubs of within the context of HMC.

## 2. BACKGROUND

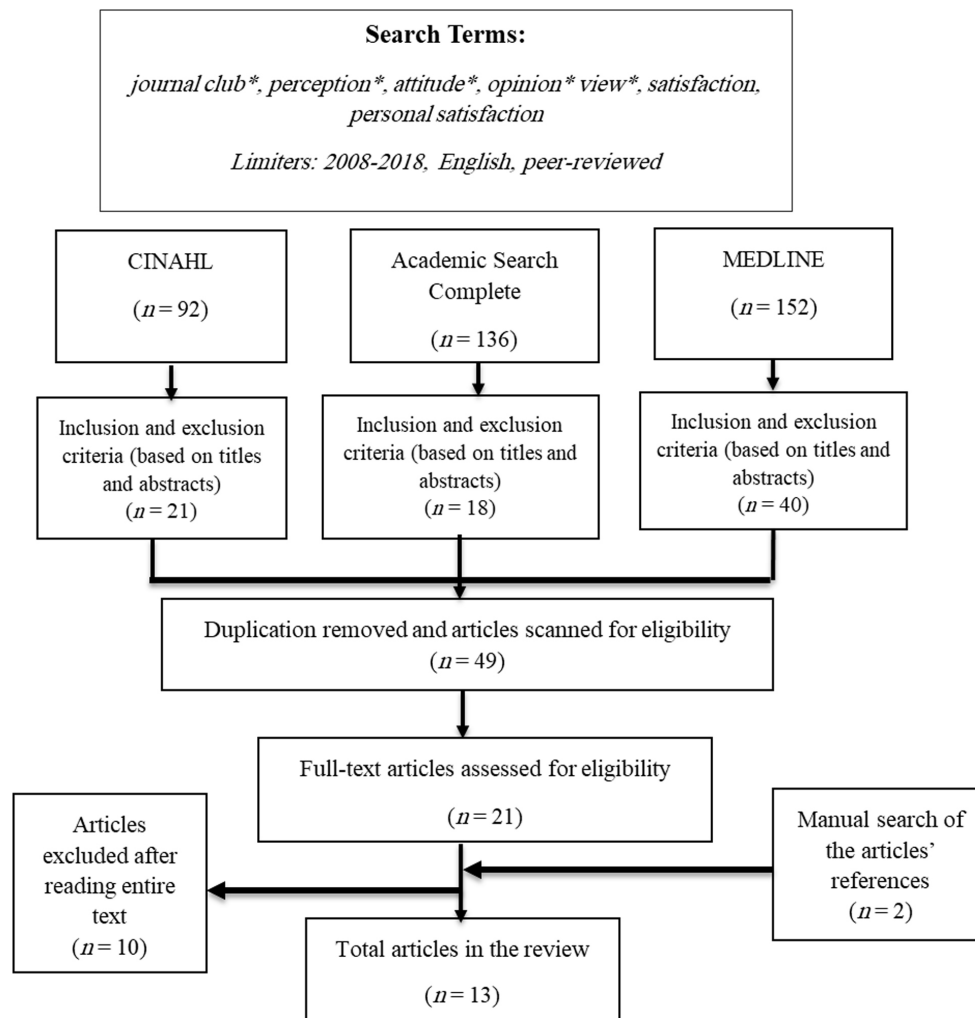
The quality of patient care can be supported through JCs through nurses sharing of informative resources and applying the current clinical evidence to relevant patient care. For more than a century, JCs have been used by healthcare professionals (HCPs). The first documented journal club was founded by Sir William Osler in 1875, who used it in medical education as an approach to review periodicals that were often unaffordable by many medication practitioners.<sup>[5]</sup> However, the goal of JCs has changed over time. Journal clubs are well-known approaches that are used by different HCPs to critique and be up to date with relevant health literature.<sup>[6]</sup> This learning approach assists HCPs in discussing the complex needs of patient care and clinical practices.<sup>[7]</sup> These discussions allow HCPs to bring research into practice. Because of this, JCs have been adopted by many health care disciplines including nursing.<sup>[8,9]</sup> Journal clubs are seen by HMC as a benchmark in providing quality up to date evidence within nursing practices.

Journal clubs are seen as an initiative to increase utilization of evidence into practice. Nursing JCs have been used to close the gap between theory and practice through linking research to clinical practice.<sup>[10-12]</sup> According to O'Nan (2011),<sup>[13]</sup> JCs are also a cost-effective initiative that supports the integration of research and practice in clinical nursing settings. Journal

clubs are considered one of the most well-known methods for learning evidence-based practice (EBP), where a number of interested HCPs gather to discuss medical literature and to learn critical appraisal skills.<sup>[14]</sup> As stated by Rogers (2009),<sup>[4]</sup> JCs are powerful approaches for education and research utilization by developing clinical nurses' experience in finding, evaluating, and applying research to practice under the direction of qualified mentors. Häggman-Laitila, Mattila, and Melender (2016)<sup>[9]</sup> indicated that "journal clubs for nurses are organized sessions to review and discuss research articles published in scientific nursing journals to facilitate research utilization and to promote EBN (evidence-based nursing)" (p. 163). Lachance (2014)<sup>[15]</sup> identified nursing JCs as a learning method that facilitates dissemination of new research findings in social and welcoming environments.

## 3. METHODOLOGY

A literature review is a written summary of relevant literature on a topic to provide readers with an overview and understanding of current knowledge on that topic.<sup>[16,17]</sup> In this literature review, articles were identified through online searches in the following widely used electronic scholarly databases: CINAHL, MEDLINE and Academic Search Complete. The following keywords were used to search the databases: journal club\*, perception\*, attitude\*, opinion\*, view\*, satisfaction, and personal satisfaction. The following search limiters were used: articles published from 2008 to 2018, articles written in English, and articles published in peer-reviewed journals. The initial search yielded 92 studies in CNAHL, 136 studies in Academic Search Complete, and 152 studies in MEDLINE databases. After scanning the titles and abstracts for relevance, the result produced 21 studies in CNAHL, 18 studies in Academic Search Complete, and 40 studies in MEDLINE to be considered for inclusion in the review. After removal of duplicates, 49 articles remained for possible inclusion in this literature review. The full text of the remaining articles were evaluated for eligibility. The most common reasons for exclusion of articles from this review were that they did not meet the inclusion criteria or they did not provide sufficient details on the processes of JCs evaluation. Eleven articles are included in this literature review from the above referenced databases. Manual screening of the reference lists of these 11 identified articles was conducted for other pertinent references, which yielded two more articles to be included to the remaining articles. A total of 13 articles were considered to be suitable for inclusion in this review: eleven quantitative, one qualitative, and one mixed method studies. A flow diagram of the literature search strategy and results is presented in Figure 1.



**Figure 1.** Flow diagram of literature search strategy and results

#### 4. QUALITY APPRAISAL OF SELECTED LITERATURE

The quality of the retrieved articles was assessed using the Mixed Methods Appraisal Tool-version 2011 (MMAT).<sup>[18]</sup> This tool consists of 19 criteria to assess the quality of five set of studies: qualitative, quantitative randomized controlled, quantitative non-randomized, quantitative descriptive, and mixed methods.<sup>[18,19]</sup> The MMAT total quality score for all types of articles ranges from 25% to 100%.<sup>[19]</sup> High scores indicate good quality, while low scores indicate poor quality studies. Seven out of the eleven quantitative studies included in this review scored 100%, the qualitative studies scored 100%, and the one mixed method study scored 75%. These results show the articles included in this review are of a high quality based on MMAT criteria.

#### 5. FINDINGS

The thirteen articles included in this literature review were primary studies including eleven quantitative, one qualitative,

and one mixed method research study. These studies were conducted in different countries: Australia (n = 5), USA (n = 3), Canada (n = 2), Saudi Arabia (n = 1), Pakistan (n = 1), and Mexico (n = 1). The eleven quantitative studies were conducted using different types of research designs. Two used a cross sectional design to assess the study participants' perceptions in relation to journal club usefulness and roles in clinical practice.<sup>[20,21]</sup> Another two used an exploratory design. O'Connor, Bennett, Gardner, Hawkins, and Wellman (2009)<sup>[22]</sup> used this design to describe the implementation and evaluation of JCs. McKeever, Kinney, Lima, and Newall (2016)<sup>[23]</sup> used this design to explore the effect of a novel competition format with a hospital-wide nursing journal club. Another used a pre-test and post-test design to determine the essential value and effectiveness of JCs as an educational method.<sup>[24]</sup> Sánchez-Mendiola, Morales-Castillo, Torruco-Garcia, and Varela-Ruiz (2015)<sup>[25]</sup> used a quasi-experimental one-group retrospective research design. These authors described their eight-years of experience with medical educa-

tion JCs. They also evaluated JCs' effectiveness over these eight years. Purnell, Majid, and Skinner (2017)<sup>[26]</sup> used a quantitative correlational method to study the impact of hospital-based JCs. Carta, Gawaziuk, Cristall, Forbes, and Logsetty (2017)<sup>[27]</sup> evaluated participants' experiences with multidisciplinary burn care JCs. These authors used a survey instrument that consisted of four Likert item questions and four open-ended questions. The last three quantitative studies used a survey design to evaluate the impact and effectiveness of JCs based on participants' perceptions.<sup>[28-30]</sup> The qualitative study used a qualitative two-site case study design to evaluate the experience of intensive care unit nurses in two nursing JCs.<sup>[31]</sup> Lizarondo, Kumar, and Grimmer-Somers (2009)<sup>[32]</sup> used a mixed method design to describe the development and evaluation of a journal club model. These authors used a survey method for quantitative evaluation and semi-structured interview method for qualitative evaluation. Findings from the synthesis of these 13 articles have been classified into four major themes. These include (a) encouraging discussion among HCPs, (b) enhancing critical appraisal skills, (c) promoting EBP knowledge, and (d) impacting clinical practice.

### 5.1 Encouraging discussion among healthcare professionals

Journal club environments encourage intellectual discussions that foster learning among HCPs. Sánchez-Mendiola et al. (2015)<sup>[25]</sup> pointed out that JCs create a stress-free open environment for discussion about clinical implications among physicians. This claim is supported by Nesbitt's (2013)<sup>[31]</sup> findings. Participants in Nesbitt's (2013)<sup>[31]</sup> study reported that JCs create a collaborative environment among journal club members, which is important to promote constructive discussions. Lizarondo et al. (2009)<sup>[32]</sup> stated that JCs create a supportive environment among participants to discuss research articles. This can be enhanced by a moderator who encourages journal club members to read articles, facilitates questions, engages in discussion, and ensures equal contribution by all journal club members.<sup>[30]</sup> According to Carta et al. (2017)<sup>[27]</sup> journal club articles should be circulated to and read by participants beforehand to facilitate effective discussion among journal club participants. Face-to-face discussion and physical presence of journal club participants in the same venues establishes engaged learning environments.<sup>[24]</sup>

According to Ismail, Al Khansa, Aseeri, Alhamdan, and Quadri (2017),<sup>[20]</sup> when JCs are made up of journal club participants from diverse backgrounds with different expertise, they promote a team approach to discussion and learning from each other through supportive environments. These supportive environments engage participants who are novices

with research in journal club discussions.<sup>[27]</sup> Journal clubs have, thus, been seen to function as communities of practice where HCPs with the same interest discuss and appraise research articles to examine the findings' implications to their practices.

### 5.2 Enhancing critical appraisal skills

Journal clubs have a major impact in promoting HCPs' critical appraisal of published clinical articles. Promoting critical thinking skills through JCs could address barriers to EBP uptake and implementation. Participants in Lizarondo et al.'s (2009)<sup>[32]</sup> study reported several barriers they encountered in their workplaces that affected their uptake and implementation of EBP. Some of these barriers were "lack of time and resources to search and appraise publications, lack of knowledge in terms of statistical analysis, critical appraisal skills, and interpretation of results" (p. 234).<sup>[32]</sup> This study finding highlights that JCs could address these barriers to EBP uptake and implementation through creation of a supportive environment to discuss research findings.

A substantial relationship has been shown between JCs and HCPs' motivation to improve their critical appraisal skills. According to participants in Campbell, Kang, and Bishop's (2017)<sup>[28]</sup> study, the most important goal of JCs is to teach the skillset of evaluating scientific articles. More than 60% of participants in Purnell et al.'s (2017)<sup>[26]</sup> study indicated that they strongly agreed or agreed that JC attendance enhanced their confidence to critically appraise research articles. Similarly, in a quantitative survey study including physicians (N = 28), almost 80% of study participants reported that JCs enhanced their confidence in evaluating the medical literature and improved their sense of independence.<sup>[30]</sup> Nurses in Nesbitt's (2013)<sup>[31]</sup> study reported that JCs supported them in gaining more comfort and confidence in reading research papers. However, the majority of these nurses admitted that they are uncertain about their ability to critically appraise research and implement evidence in their practice. This study indicated that critical appraisal was one area that nurses felt they needed more help to enhance their skills.

### 5.3 Promoting evidence-based practice knowledge

Journal club attendance enhances HCPs' knowledge of EBP. Journal clubs increase knowledge of research in general, which consequently promotes knowledge of EBP principles. Lao, Puligandla, and Baird (2014)<sup>[24]</sup> found that JCs were effective in disseminating EBP principles among physicians who then applied these principles to their practice. Improved application of EBP has also been found among nurses. This may be due to dissemination of EBP principles in JCs that educate nurses on how to apply these principles to their

clinical practices and get research competence. Purnell et al. (2017)<sup>[26]</sup> surveyed 33 pediatric nurses to explore the effectiveness of JCs. Ninety-three percent of these nurses reported that JCs are a useful approach in promoting EBP in a workplace. Consequently, nurses develop the ability to do more review of literature, which ultimately improves their practices through clinical knowledge translation and implementation of best practice.<sup>[31]</sup> Improved clinical practices was also found to be a result of journal club attendance by Lizarondo et al. (2009).<sup>[32]</sup> Respondents in their study reported that attending JCs was an effective use of their time, which kept them informed and abreast with current research findings, which improved their clinical practices.

#### 5.4 Impacting clinical practice

Journal clubs have a major impact on clinical practices. In a study by Ismail et al. (2017),<sup>[20]</sup> 75% of clinical pharmacist participants responded that JCs had been helpful in changing their clinical practice. However, Nesbitt (2013)<sup>[31]</sup> found that changes to clinical practice through JCs were limited to an individual level not to a unit level or organization wide policies and practices. In other words, JCs impacted the clinical practice of some of the nurses in Nesbitt's study but not all of them.

Changing clinical practices through participation in JCs is a process. Participants in Carta et al.'s (2017)<sup>[27]</sup> study reported that they enjoyed hearing about evidence during JCs and connected that evidence to their clinical practices. This enjoyment could stimulate journal club participants to reflect on their current clinical practices.<sup>[22]</sup> Consequently, participants would be enabled to consider different ways that could help them to improve their practices.<sup>[26]</sup> Purnell et al. (2017)<sup>[26]</sup> reported that 97% of their study participants agreed or strongly agreed that JCs enabled them to consider changes to their practices based on discussions. Nesbitt (2013)<sup>[31]</sup> found that JCs support nurses to reflect on their clinical practice in particular on sensitive topics, such as end-of-life nursing care and organ donation. Reflection on clinical practices as a result of journal club attendance was also found by Lizarondo et al. (2009).<sup>[32]</sup> The majority of their participants pointed out that JCs acted as a vehicle to their own reflection on evidence from articles reviewed in JCs that could be transferred into their current clinical practice when applicable.

## 6. DISCUSSION

The main aim of JCs is typically to bring a group of HCPs together who share the same interests to engage in a discussion of selected articles related to their field and clinical practice.<sup>[33]</sup> Facilitators of JCs lead the presentation of the article

and the discussion among journal club members. Journal club discussion environments help participants to network and learn different clinical experiences and perspectives from each other.<sup>[34,35]</sup> Lehna, Berger, Truman, Goldman, and Topp (2010)<sup>[36]</sup> supported this view. These authors indicated that JCs allowed senior nurses to share their professional experience with their colleagues who had less experience. These interactive environments support HCPs to move from their current level of professional development to a more highly developed level.

Based on the findings in this literature review, JCs provide supportive learning opportunities because they provide safe environments to voice opinions and contribute to discussions. When journal club participants feel safe to voice their opinions in relation to the discussion, they would not fear criticism to ask questions relevant to club articles,<sup>[10]</sup> which is vital for participants' understanding and learning. Thus, journal club participants should tolerate and respect others' points of view and perceptions. These comfortable and encouraging environments can motivate club participants to contribute to the discussion of how to incorporate article findings into their current practice when applicable. According to Nesbitt and Barton (2014),<sup>[35]</sup> building environments that promote open, reflective, and collaborative discussions attract nurses to JCs.

Evidence gathered in this literature review shows longstanding support for the effectiveness of JCs in enhancing the critical appraisal skills of club participants. This occurs through participants' engagement in critical scholarly conversations on selected articles with other participants. According to Fleenor, Sharma, Hirschmann, and Swarts (2018),<sup>[8]</sup> "critical appraisal is defined as those skills that enable practitioners to apply laws of logic to published clinical data so they may estimate the validity, reliability, and utility of the information presented in the article" (p. 44). As suggested by the included literature, lacking the skills to appraise the quality of different literature delays the application of evidence to clinical practice.<sup>[32,37,38]</sup> Journal clubs have been seen to address this lack of critical appraisal skills. Eighty-three percent of the participants in Mullen and Sabri's (2016)<sup>[39]</sup> study reported that the most important outcome of JCs was to improve participants' critical appraisal skills. This study finding supports the results of this literature review. Learning these skills is essential for HCPs to draw connections between the usefulness of new findings and their current care practice and decide whether to incorporate them into their clinical practice.

The literature included in this review has also shown that JCs bridge the gap between research and practice by pro-

moting EBP knowledge. In 2009, The Institute of Medicine reported that its goal is that 90% of clinical decisions should be evidence-based by 2020.<sup>[40]</sup> In a study by Rolfe, Segrott, and Jordan (2008),<sup>[41]</sup> nurses reported that their experience is the second greatest influence on their practice and is considered as a source of evidence. This revealed that nurses rely more on their personal experience than on scientific sources of knowledge. Although individual clinical expertise is important, it has to be integrated with the best available scientific clinical evidence and patient preferences.<sup>[41]</sup> According to Brown, Johnson, and Appling (2011),<sup>[37]</sup> exposure of nurses to the research process encourages development and application of research to clinical practice. This is vital especially with the constant change in healthcare knowledge and innovations. An increasing body of evidence substantiates that JCs are important approaches to promote EBP across healthcare disciplines including nursing.<sup>[42]</sup>

This literature review further showed that the introduction of JCs in different healthcare organizations enhanced EBP and research knowledge of HCPs. In one of the included articles, Lao et al. (2014)<sup>[24]</sup> indicated that JC attendance supports the dissemination of EBP principles among HCPs. This view was supported by Campbell-Fleming, Catania, and Courtney (2009).<sup>[43]</sup> They highlighted the substantial outcomes of JCs in promoting EBP concepts among HCPs. This is important to encourage HCPs to stay abreast of the literature related to their field and connect that to their practice.

There is abundant evidence addressing the link between JCs and their impact on clinical practice. Journal clubs are often used as a medium for sharing and discussing clinical cases.<sup>[44]</sup> Journal clubs can be a powerful tool in keeping HCPs up to date on current research findings and encouraging discussions about the applicability of these findings to HCPs' practice.<sup>[45]</sup> Tan, Hatah, and Tan (2017)<sup>[46]</sup> found a positive association between involvement in JCs and research utilization practice. They reported that respondents who had been involved in JCs had higher research utilization

practices than respondents who had not been involved in JCs ( $p < .001$ ). To engage participants and connect theory to practice, articles discussed during JCs have to be on topics and issues that club participants encounter within their practice that are pertinent to their work environments.<sup>[34,47]</sup> These issues could be "change in policies, procedures, or treatment, education on medications, reviews on nursing practice, or legal issues in nursing" (p. 541).<sup>[47]</sup> Pitner, Fox, and Riess (2013)<sup>[48]</sup> found that 85% of study participants preferred discussing articles that had topics that could impact their clinical decision-making. However, when journal club topics are not relevant to all the club participants' practice, discussions are controlled by a few participants and the club becomes a forum for presentation skills,<sup>[44]</sup> which would make journal club discussions less effective.

## 7. CONCLUSION

The main purpose of this review was to gain awareness of JCs' effectiveness in translating knowledge into practice and guide the development of a survey tool to assess nurse perceptions regarding journal clubs. This awareness is essential in understanding the facilitators and barriers to the implementation of JCs, nurses' satisfaction with JCs, and the impact of JCs on nurses' EBP knowledge within the context of Qatar. Most of the studies in this literature review showed that JCs are effective in four main interrelated themes. By encouraging discussion among journal club participants, JCs enhance their critical appraisal skills. This enhancement of critical appraisal skills leads to development of knowledge about EBP. Development of knowledge about EBP impacts participants' clinical practices. This article provides information about these four main interrelated ways related to JCs' effectiveness, which can be useful to nurse leaders and educators at HMC to enhance the translation of knowledge into nursing practice.

## CONFLICTS OF INTEREST DISCLOSURE

The authors have no conflicts of interest.

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