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Factors affecting the critical appraisal of research articles in Evidence-Based practices by advanced practice nurses: A descriptive qualitative study

Ai Tomotaki[1] | Ikuko Sakai[2] | Hiroki Fukahori[3] | Yasunobu Tsuda[4] | Akemi Okumura-Hiroshige[5]

[1]Faculty of Nursing, School of Medicine, Tokai University, Isehara-shi, Kanagawa, Japan

[2]Department of Nursing Systems Management, Graduate School of Nursing, Chiba University, Chiba-shi, Chiba, Japan

[3]Faculty of Nursing and Medical Care, Keio University, Fujisawa-shi, Kanagawa, Japan

[4]St. Marianna University Hospital, Kawasaki-shi, Kanagawa, Japan

[5]Department of Nursing Science, Faculty of Health Sciences, Tokyo Metropolitan University, Arakawa-ku, Tokyo, Japan

Correspondence
Ai Tomotaki, Faculty of Nursing, School of Medicine, Tokai University, 143 Shimokasuya, Isehara-shi, Kanagawa 259-1193, Japan.
Email: atomotaki-tky@umin.ac.jp

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Abstract

Aim: To describe factors affecting critical appraisal of research articles in evidence-based practice by certified nurse specialists who were advanced practice nurses in Japan.

Design: A descriptive qualitative study.

Methods: Fourteen certified nurse specialists with master's degree were included by a snowball sampling to maximize the variety of specialty fields for advanced practice nurses in Japan. Individual semi-structured interviews were conducted between November 2016 and March 2017. Interview guides included the experience of evidence-based practice and learning about critical appraisal.

Results: The following four aspects were identified as factors affecting the critical appraisal of research articles in evidence-based practices—individual beliefs and attitude, learning status, organizational readiness and availability of research evidence. Each factor included both positive and negative aspects for critical appraisal in evidence-based practice.

Patient or Public Contribution: If advanced practice nurses acquire knowledge/skills of critical appraisal, they would be able to select more appropriate care. This will increase to improve the health-related outcome for patients or populations.

KEYWORDS
advanced practice nurses, certified nurse specialists, content analysis, critical appraisal, evidence-based practice, organizational culture, qualitative research, research utilization

1 | INTRODUCTION

Evidence-based medicine has been defined as the integration of best research evidence, clinical expertise, and the patient's unique values and circumstances (Straus et al., 2019). The process is based on the following five steps: ask, acquire, appraise, apply and assess. This definition has been adopted in various medical fields, and evidence-based practice (EBP) is one of the core competencies for clinical nurses and the foundations of nursing and healthcare (Melnyk et al., 2018).

Clinical trial registration number: No.

Generally, clinical nurses have recognized the importance of EBP. However, the self-evaluations have revealed a low frequency of engagement (Melnyk et al., 2018; Saunders & Vehviläinen-Julkunen, 2016; Tomotaki et al., 2020). The previous studies reported that nurses lack knowledge and skills in statistics and research design (Hines et al., 2021; Saunders & Vehviläinen-Julkunen, 2016) and there is little time to do "appraise" in the five steps of EBP (Tomotaki et al., 2020). A critical appraisal of research articles evaluates and discusses the validity of the study design and methodology, effect size and precision, and applicability to one's own clinical setting (Straus et al., 2019). Lack of knowledge and skills in these research activities is a barrier to doing EBP for many clinical nurses, which indicate the importance of strengthening education, especially about critical appraisal in EBP.

The curriculum to enhance EBP should include both clinical practice and research and such education is provided in graduate school for advanced practice nurses (APNs). An APN is a generalist or specialized nurse who has acquired, through additional graduate education with a master's or doctoral degree (International Council of Nurses, 2022). They are especially expected to take on the role of enhancing EBP (Institute of Medicine of the National Academies, 2011). APNs' competencies for EBP are higher than other clinical nurses (Melnyk et al., 2018), but the frequency was low. In Japan, certified nurse specialists (CNSs) with master's degree are recognized as APNs and will be expected as leaders in enhancing EBP (Subcommittee on Nursing Science, Committee on Health/Human Life Science, Science Council of Japan, 2011). The CNS system was the first certification system adopted in Japan for training APNs at the graduate level.

1.1 | Background

EBP education is provided in continuous education for professionals, including in undergraduate and graduate schools, and on-the-job training (OJT) as clinical practitioners. Examples of OJT for EBP include participating in an EBP implementation project or journal clubs (Häggman-Laitila et al., 2016). Through activity in a journal club, clinical practitioners have an opportunity to reflect on their own professional practice and can increase their confidence in daily practice when their clinical experience links to research findings (Beck et al., 2020). Such journal clubs, and EBP rounds, are incorporated into the EBP implementation strategy model termed Advancing Research and Clinical Practice Through Close Collaboration Model (Melnyk & Fineout-Overholt, 2018).

Many previous studies of EBP education include programs for critical appraisal (Albarqouni et al., 2018). However, effective EBP education has not yet been established (Lehane et al., 2019). It requires to strengthen design and develop interventions considering principles (e.g. motivations, barriers) that are particular to the learner, including the interaction between the characteristics of EBP learners and the development of EBP competencies. This might mean that traditional empirical studies are limited in establishing effective educational interventions. Further research, using qualitative or mixed method study, is needed to clarify the mechanism and conditions under which educational interventions work effectively.

EBP is a part of point-of-care; it needs to be described that how APNs overcome or effort for improving knowledge and skills of clinical appraisal in the context of not only academic settings but also clinical settings. As to the healthcare professionals who graduated from a master's program, Hole et al. (Hole et al., 2016) reported that they perceived higher skill/knowledge on a personal level, but organizational factors were essential for them to use their skills; individual competence and organizational factors are interdependent. However, it remains unclear what the barriers and facilitators of critical appraisal of research articles have in the EBP process. In addition, a previous study showed that nurses perceive research education as essential and nurses sometime express negative feelings about research (Hines et al., 2021), but this study was not focused on APNs. Thus, to examine the process of acquiring critical appraisal skills, it must investigate APNs who have learned and engaged in critical appraisal in EBP.

2 | THE STUDY

2.1 | Aims

To describe factors affecting critical appraisal of research articles in EBP by APNs in Japan.

2.2 | Methods

2.2.1 | Design

This was a qualitative descriptive study using summative content analysis (Hsieh & Shannon, 2005). To derive the barriers and facilitators to the critical appraisal of EBP, individual face-to-face interviews were conducted between November 2016 and March 2017. Quantitative data about the participants' background were gathered. An instrument for evaluating EBP was used to describe APNs' perception of EBP quantitatively. The study was reported according with the consolidated criteria for reporting qualitative research (COREQ) checklist (Tong et al., 2007).

2.2.2 | Sample/participants

Inclusion criteria were (a) CNSs with master's degree certifying them as an APN by the Japan Nursing Association (https://www.nurse.or.jp/jna/english/nursing/education.html), (b) engaging in clinical care for patients, including nurse educator in clinical settings, and (c) previous experience in EBP, or is planning and interested in EBP. The hospital's Director of Nursing and academic

faculty members were excluded. Participants were recruited by investigators involved in this study using the snowball sampling approach via e-mail. A purposive sampling was adopted to acquire samples with various CNSs' specialty fields. The sample size for this study was planned as 20 CNSs. However, recruitment of CNSs from some specialties could not be achieved. Therefore, the number of participants was lower than planned. Of the 16 CNSs screened for this study, two were excluded due to conflicting schedules.

2.3 | Data collection

2.3.1 | Interview data

A semi-structured interview was conducted using an interview guide (Appendix S1). Our main question studied critical appraisal of the evidence and quantitative research literature used as a reference in own EBP. To focus on the EBP context, the following items were included the: (a) EBP activities that the participants have been involved in or are planning to involve in; (b) factors for success and challenge in EBP activities; and (c) literature used to reference EBP and the critical appraisals of quantitative research. Each interview was conducted by one investigator (AT), who was a faculty member in a nursing university with a master's degree in health science and a licence as a registered nurse. Interviews were conducted at a location selected by the participant or in a quiet place selected by the investigator. Each participant was only interviewed one time for approximately 1 h. All interviews were audio-recorded, and the transcriptions were written in Japanese.

2.3.2 | Demographics data

Participants' characteristics were collected by self-reported questionnaires. Demographics included gender, years of clinical experience as a nurse, years certified as a CNS, CNS specialty field, workspace (university hospital, public hospitals, non-hospital facilities or department of research in hospital), and position (staff nurse, charge nurse, full-time member of a cross-functional team, researcher). EBP readiness was assessed using the Japanese version of the Evidence-Based Practice Questionnaire (EBPQ-J) (Tomotaki et al., 2018). The EBPQ-J is an 18-item scale with four subscales (practice, attitude, knowledge/skills about research and knowledge/skills about practice) assessed with 7-Likert scale, with scores ranging from 1 to 7. The higher scores mean that the respondent is doing EBP more frequently, has a more positive attitude and perceives that they have the knowledge and skills for EBP. For the "Habit of reading article," participants were asked how many research articles were read per month, including full-text and abstract. This quantitative data were collected to describe the participants' characteristics.

2.4 | Data analysis

Participants' demographics were calculated by descriptive statistics. EBPQ-J scores were calculated as the total scores of all items and each subscale.

A descriptive qualitative analysis using summative content analysis was used to analyse interview data (Hsieh & Shannon, 2005). AT conducted all the interviews, reviewed all transcriptions, and coded all the data. After text in relation to EBP initiatives was identified and extracted for this study, codes, sub-categories, categories and factors were labelled. Microsoft Word and Excel were used to manage data.

2.5 | Rigour

In the initial process of the interview data analysis, one case was analysed by the principal investigator, AT, who did not have experience in conducting qualitative research, and four cases were analysed under the supervision of AO, HF and YT (AO, HF, YT and IS were the researchers for the qualitative research, and HF, YT and IS were the researchers for EBP), and these cases underwent member checking by the participants in this interview. Finally, IS reviewed the transcriptions and pre-coded and analysed the codes, sub-categories, categories and factors. The other investigators (YT, AO and HF) reviewed them as supervisors. The final factors, categories, sub-categories and quotes in this article were translated from Japanese into English. Examples of qualitative data are shown in italic font.

3 | RESULTS

3.1 | Participants' demographics

Fourteen CNSs in nine specialties were finally enrolled (Table 1). Most of the participants had 10–14 years of clinical experience as a clinical nurse. Almost all participants worked as a staff nurse in a university or public hospital. Six participants were currently enrolled in or had completed their doctoral courses in a university. The total EBPQ-J score ranged from 48 to 99, and the scores of practice and knowledge/skills about research were lower than the scores of attitude and knowledge/skills of practice on each subscale. Almost half of participants read five or more research articles per month.

3.2 | Factors influencing critical appraisal of EBP

Four factors were extracted from the data: individual beliefs and attitude, learning status, organizational readiness, and availability of research evidence, which comprised 12 categories (Table 2).

TABLE 1 Participants' demographics

	Frequency (%) or Median (min-max)
Years certified as CNS	
<5 years	9 (64%)
>5 years	5 (36%)
Clinical experience	
Under 10 years	2 (14%)
10–14 years	6 (43%)
15–19 years	3 (21%)
20–24 years	1 (7%)
>25 years	1 (7%)
Unanswered	1 (7%)
Specialty fields	
Cancer Nursing	3 (21%)
Psychiatric Mental Health Nursing	1 (7%)
Community Health Nursing	1 (7%)
Gerontological Nursing	1 (7%)
Child Health Nursing	3 (21%)
Women's Health Nursing	1 (7%)
Chronic Care Nursing	1 (7%)
Critical Care Nursing	1 (7%)
Infection Control Nursing	2 (14%)
Family Health Nursing	1 (7%)
Home Care Nursing	0 (0%)
Workspace	
University hospital	6 (43%)
Public hospitals	7 (50%)
Non-hospital facilities	2 (14%)
Research institute	1 (7%)
Position	
Staff nurse	10 (71%)
Charge nurse	1 (7%)
Full-time cross-functional team member	2 (14%)
Researcher fellow	1 (7%)
EBPQ-J scores[a]	
Total scores (range 18–126)	86 (48–99)
Scores in each subscale	
Practice (range 6–42)	27 (8–33)
Attitude (range 3–42)	19 (14–21)
Knowledge/skills of research (range 7–49)	30 (15–38)
Knowledge/skills of practice (range 2–14)	10 (6–14)

Abbreviations: CNS, certified nurse specialists; EBPQ-J: Evidence-Based Practice Questionnaire-Japanese version; Min: Minimum value; Max: Maximum value.

[a]Higher scores indicate higher readiness.

3.3 | Factor 1: Individual beliefs and attitude

"Individual beliefs and attitude" refers to the CNSs' positive beliefs and attitude towards EBP and critical appraisal. Participants had daily activities connected to EBP, with both positive beliefs about and conflicts with EBP.

Daily activities connected to EBP were in various situations: challenges in their own clinical practice, issues in their organization, consultation with others and insights from research articles.

> It is often used in the literature when there is a care method or policy in place that makes it difficult to choose what to do with the patient.
>
> (ID-9)

> I am in charge of education at my workplace, and I do a needs assessment at my workplace, and I found that the staff had a very high need for a study session on a care of A.
>
> (ID-2)

> I am in a leadership position (in my work zone) and provide care together with other nurses, and the care differs depending on the person (patient). What? We talked about whether it makes sense.
>
> (ID-3)

> An academic article in 2013 reported that the authors could use a device A with patients, and in 2014, they reported that they could do this much with it. I thought that was interesting (if I could use it in own clinical practice).
>
> (ID-8)

These daily activities were supported by their positive beliefs—that they had own roles or responsibilities to practice EBP or had experienced the need for research evidence in clinical practice. As a CNS, they were expected to act as a change agent or a core member in an EBP project, or they had perceived that EBP is the responsibility of medical professionals. They also used research evidence as a basis for decision-making or confirmed research evidence to compensate for their own lack of knowledge.

> I thought that I could do the best and improve the quality of my work in the best environment if I had a base in practice and gradually gained knowledge in research. I knew it had to be CNS.
>
> (ID-8)

> I've experienced to stumble in practice that would have been better if there was evidence.
>
> (ID-5)

The conflicts in EBP included integration with patient's individuality and difficulties in application. For example, they experienced hesitation in applying care to individuals by making it a rule, and difficulty in applying it in a way that suited the facility.

> In short, even if guidelines and such are published quickly, everyone thinks that it is rather difficult to

TABLE 2 Categorization matrix

Factor	Category	Sub-category	*n*
Individual beliefs and attitude	Daily activity connected to EBP	Challenges in own clinical practice	6
		Issues in own organization	10
		Consultation from others	4
		Insights from research articles	4
	Positive beliefs about EBP	Roles or responsibilities for practicing EBP	10
		Recognition for the need for research evidence in clinical practice	9
	Conflict	Integration with patient's individuality	1
		Difficulties in application	8
Learning status	Self-assessment	Difficulty of critical appraisal and searching of research	9
		Barrier on languages for English	4
	Currently studying or have studied	Self-learning	2
		Currently receiving support for learning	5
		Previously learned in the master's program at CNS courses	10
	Inadequate learning environment in the past	Lack of learning support in the master's program at CNS course	8
		Not integrated into the curriculum for CNS	7
Organizational readiness	Collaborative	Collaborative system	4
		Positive climate	5
		Understanding person	11
	Difficult	Difficulty in getting cooperation	4
		Inadequate readiness	7
		Unutilized learning opportunities	4
	Not ready	Less emphasis on research evidence	3
		Unconcerned	3
		Insufficient learning environment	1
Availability of research evidence	Ease of search and availability	Use of searching database	1
		Reading full-text articles	3
		Procedures for copy services	2
	Richness of the research evidence	Secondary literatures	1
		Issues of research	9
	Recognition that obtaining it is not the same as reading it.	Lack of time for reading	3
		Not reading the full-text in detail	3

Abbreviations: CNS, Certified nurse specialist; EBP, Evidence-based Practice; *n*, Number of participants.

> apply them in a way that fits the needs and methods of their own facility.
>
> (ID-14)

3.4 | Factor 2: Learning status

Learning status included the participants' self-assessment of their competency in critical appraisal of research articles and learning experiences of it in the current and past. The experience also included learning about research methodology.

The participants self-evaluated their own knowledge/skills in quantitative research and research utilization in clinical practice, including difficulty in examining research methodology and statistics, and language barriers (i.e. papers written in English). One participant expressed uncertainty in reading articles correctly without others' help.

> I still can't understand a quantitative research paper. It's too difficult.
>
> (ID-6)

The participants used various opportunities for learning critical appraisal, including participation into a journal club hosted by doctors in a hospital, case study conferences with CNSs and certified nurses, autonomous study groups, educational research programs and admission to doctoral programs. Self-learning included reading English while using a dictionary and books on research design and statistics.

> There are a lot of things I don't understand in the medical research articles (when I participate in a journal club by medical doctors), but I can learn about statistical data analysis. Even if I don't know anything about medical topics, I can learn about critical appraisal of the article. If I don't touch those things, I'll forget them. (ID-9)

The participants had previous coursework experience and had received their supervisor's teaching in the CNS programs. However, almost all participants perceived their past learning environment to be insufficient, citing a lack of academic support and curriculum in the CNS program. They said that there were few opportunities to learn about quantitative research, the faculty member's specialty was qualitative research, and the research they conducted in the CNS program was qualitative or case studies.

> I think one of the strengths of CNS is that when they want to do EBP, they know how to get to EBP. We're trained in how to find resources. (ID-1)

> When I got to the CNS course, there was no course on research utilization or anything like that. I thought, 'Is this okay?' I thought, 'Is this right?' (ID-4)

3.5 | Factor 3: Organizational readiness

Organizational readiness refers to the other staff and healthcare professionals' attitudes and organizational culture for EBP activities related to critical appraisal. The factors were identified as cooperative, difficult or not ready.

First, "cooperative" organizational readiness included that the participants' organization had a cooperative structure, positive climate and understanding persons for EBP. The CNSs cooperated with the Quality Improvement Center, cross-departmental activities and collaborate with the Epidemiology Center in EBP. In a positive climate, other staff and professionals were willing to look into questions and were open to good practices and research evidence. Understanding persons included nurses, doctors, nurses from other hospitals and supervisors and managers.

> We have a culture here where we can introduce staffs to the evidence that's out there and say, 'This is something that's been proven to be good, so let's do it.' (ID-14)

> We now have a group consisted of certified nurse specialists and certified nurses, and once a month we have a case study meeting where we introduce our own cases to the staff adding a scientific perspective. (ID-9)

Second, "difficult" organizational readiness presented a situation in which EBP is less of a priority. Three examples of such situations were as follows: difficulty in getting cooperation, inadequate readiness and unutilized learning opportunities. Difficulty in obtaining cooperation was created by the workload (balance with routine work, after-hours work) and feasibility (difficulty in reorganizing conventional methods). Inadequate readiness included research evidence and attitudes towards understanding patients and knowledge skills in clinical practice. Lastly, even though learning opportunities were available, they were not being utilized because someone was not motivated or could not afford to participate in a voluntary study group.

> When it comes to incorporating something new and different, it's difficult to find a way to link it with existing things… We can't make major changes to what you're already working on. (ID-2)

> We are very busy (in clinical practice). We have to deal with what is right in front of us, and that's how we get swept away. (ID-13)

Third, "not ready" organizational readiness indicates less emphasis on research evidence or an unconcerned and insufficient learning environment. For example, some nurses were reluctant to accept research evidence reported outside of Japan, resisted being asked for evidence, felt as if their way of doing things is being denied, followed conventional policies, emphasize hearsay or adopted the opinion of the person with the most say. Unconcerned attitude means that someone is not interested in "reviewing care," which is the start of EBP. Additionally, some may not be interested in the need for evidence to support their practice, or nursing managers require only minimal care to nurses and such care does not include EBP. An insufficient learning environment included a lack of clinical nurses to support EBP and collaboration with nursing universities.

> I thought nurses were just adjusting an intravenous drip as the doctor told you to. … I wonder if the nurses I work with have the same sense of urgency that I do (such as it's not good if they don't have the evidence to back up their practice.) (ID-5)

3.6 | Factor 4: Availability of research evidence

Availability of research evidence refers includes ease of search and availability, richness of the research evidence and not reading enough before and during the process of obtaining research evidence.

Ease of search and availability included ease of reading full-text articles (e.g. subscribing to open access articles and browsing services of full-text articles for domestic literature), ease of searching (e.g. the facility subscribes to a fee-based database) and procedures

for copy services (e.g. the need to go to the library for the procedures). The richness of research evidence included whether there was secondary literature (e.g. Cochrane review or clinical guidelines) and issues of research (no literature published that met own objectives, low quality of research) were mentioned.

> In Japan, there are many cases where we can't read the text, when the title of an article catches our attention. So, we have to go to the library and request it. Then, after reading the text, I find that it was something different. It's a lot of work.
>
> (ID-8)

4 | DISCUSSION

This study identified factors affecting the critical appraisal of research articles in EBP from experiences and perceptions of CNSs who were APNs in Japan. Four factors (individual beliefs and attitude, organizational readiness, learning status and availability of research evidence) were identified as both enhancing and inhibiting critical appraisal in EBP. For example, many participants recognized that they were not sufficiently skilled or good at critical appraisal of research articles. These negative aspects about research and statistics generally are barriers to EBP activities (Kajermo et al., 2010), in other words, it means that the APNs in this study could identify what is lacking to enhance critical appraisal in EBP. This finding would support the previous studies that the barriers to research utilization or EBP are not necessarily related to practice, attitudes and knowledge and skills for EBP (Brown et al., 2010). In addition, this study highlights that the CNSs perceived both positive and negative factors simultaneously, even though they were engaged or interested in critical appraisal in EBP.

The CNSs who participated in this study had positive beliefs about EBP and a positive attitude towards critical appraisal, which is similar to previous studies of clinical nurses with postgraduate degrees (Karlsson et al., 2019). Although EBP activity was associated with a positive attitude towards EBP (Squires et al., 2011), clinical nurses do not necessarily practice EBP. APNs' stronger motivation to engage in EBP might be influenced by individual recognition of the need to review current care to give optimal patient care in addition to positive beliefs and attitude.

The factor of organizational readiness derived from this study was similar to the implementation and dissemination of evidence-based intervention (Damschroder et al., 2022) and knowledge uptake and sustainability (Grinspun et al., 2022). The step of critical appraisal of research evidence in EBP requires discussion about the generalizability and applicability of research evidence to patients in one's own clinical setting. Since the process of applying research evidence is usually decided by a multidisciplinary team or departments, this result would be reasonable. Additionally, physicians are one of the proponents for EBP, and a previous study reported that nurse practitioners recognized a collaboration with doctors for EBP implementation (Clarke et al., 2021). There are few CNSs in Japan and only one or a few CNSs are often assigned per facility; the lack of human resources for EBP in the organization might affect CNSs' activity of critical appraisal. For example, one of the barriers to EBP is a lack of teamwork and organizational support for implementing evidence-based guidelines (McArthur et al., 2021). The current study showed that such teamwork and organizational support are required not only for the implementation phase of evidence but also for critical appraisal of the evidence. The findings of this study are useful for countries and organizations applying the EBP implementation strategy model developed in EBP-leading countries (Melnyk et al., 2018).

Additionally, an environment in which individuals can continue to learn after obtaining their CNS certification must be provided. The current findings show that improvement of knowledge skills of critical appraisal in EBP needs to be an organizational activity, rather than relying on individual efforts. Such organizational activities to empower EBP for APNs include, for example, running of journal clubs in each institution and expanding contracts for available bibliographies and academic articles. At the same time, a positive climate for EBP is particularly necessary for nurse managers, staff nurses and other medical staffs (Hines et al., 2021).

When planning an EBP education program focused on critical appraisal, educators and researchers could use the four factors derived from this study to review their program and the evaluation. A further study is expected to evaluate the relationship between CNSs' EBP activities and the four factors identified in this study by using quantitative research or a mixed methods model. Additionally, it has been suggested that EBP education needs to be taught in the context of clinical practice rather than just for conducting research (Straus et al., 2019). Education about critical appraisals should be established with the focus on EBP as continuous education for professionals at each phase of EBP including undergraduate, graduate and post-graduate.

4.1 | Limitations

First, the findings may not reach saturation in this study due to fewer participants than planned. Second, the results of our study might have been affected by sampling bias since the recruitment of the participants considered only CNSs' specialty fields. For example, almost all the participants were urban residents. It is estimated to have influenced their learning environment or performance of critical appraisal in EBP. Third, the definition of EBP might have been perceived differently for each CNS, and lead to different findings. Finally, our findings would not be generalizable to CNSs who were uninterested in or not confident in EBP and critical appraisal.

5 | CONCLUSION

As factors affecting critical appraisal in EBP by CNSs who were APNs in Japan, 4 factors comprising 12 categories were extracted from the obtained data. These factors included both positive and

negative aspects for critical appraisal in EBP and comprised an internal factor, learning status, organizational context and acquiring literature. APNs are expected to be role models for staff nurses to integrate research evidence into practice. Continuous critical appraisal will result in obtaining the best available research for the EBP team. Therefore, a richer learning environment for critical appraisal of EBP is required for APNs.

AUTHOR CONTRIBUTIONS

AT, YT and HF participated in the study design. AT collected the clinical data and data analysis was conducted by AT and IS. All investigators interpreted the row data and results. AT wrote and revised the draft and subsequent manuscripts. All investigators reviewed the draft manuscripts and approved the final manuscript.

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CONFLICT OF INTEREST

The authors have no conflicts of interest directly relevant to the content of this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

This study was approved by the relevant ethical review board of the National Center for Global and Health and Medicine in Japan (approval no. NCGM-G-002093-00). We followed the Ethical Guidelines for Medical Research Involving Human Subjects in Japan. The investigator explained this study to the participants in writing and orally, and consent was obtained from participants before starting the interview.

ORCID

Ai Tomotaki https://orcid.org/0000-0002-8891-7950
Ikuko Sakai https://orcid.org/0000-0003-1715-0331
Hiroki Fukahori https://orcid.org/0000-0002-6589-2607
Yasunobu Tsuda https://orcid.org/0000-0002-6281-3491
Akemi Okumura-Hiroshige https://orcid.org/0000-0001-6584-4739

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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