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Methodological rigor and research integrity in evidence synthesis for nursing

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EDITORIAL

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Introduction

As evidence-based practice gains prominence, evidence syntheses—including systematic reviews (SRs), meta-analyses (MAs), integrative reviews (IRs), and scoping reviews (ScRs)—have become increasingly prominent in nursing scholarship. Yet an analysis of articles published in the *Journal of Korean Academy of Nursing* (JKAN) from 2015 to 2024 found that these reviews accounted for only 6.8% of its articles, compared with 36.4% in the *International Journal of Nursing Studies* and 19.6% in the *Journal of Advanced Nursing* [1]. For JKAN, this disparity presents a challenge that extends beyond increasing the number of reviews to promoting syntheses that address meaningful, relevant questions.

At the same time, concerns have arisen about the proliferation of redundant, formulaic reviews that prioritize procedural completion over substantive scholarly contribution [2]. The rapid integration of artificial intelligence (AI) and large language models (LLMs) into literature searching, screening, and data extraction has intensified these concerns [3]. In response, Cochrane, the Campbell Collaboration, JBI, and the Collaboration for Environmental Evidence have emphasized human accountability, critical oversight, and transparency in AI-assisted evidence synthesis [3].

This editorial therefore examines three complementary dimensions of research integrity in evidence synthesis: methodological rigor, interpretive integrity, and contribution to knowledge.

Methodological rigor is necessary, but not sufficient

Methodological rigor underpins trustworthy evidence synthesis, but it is not synonymous with complete reporting or scholarly contribution. Assessment therefore requires two distinct questions: Was the review conducted appropriately and reported transparently? Are its conclusions warranted and meaningful?

First, methodological trustworthiness concerns the identification, evaluation, and synthesis of evidence, encompassing both the rigor of the review process and the suitability of the synthesis method. Each design—SR (with or without MA), ScR, IR, and umbrella review—serves a distinct scholarly purpose, addresses different types of questions, and requires specific appraisal approaches. The design should therefore be selected to match the review aims (Table 1) [4-7]. To support trustworthiness and transparency, protocols should be registered before the review begins in established international registries, such as PROSPERO or the Open Science Framework, and relevant reporting guidelines, including the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement and its extension for scoping reviews, should be

Table 1. Key features of major evidence synthesis designs

Design	Primary scholarly purpose	Typical question framework	Role of critical appraisal	Key methodological/ reporting guideline
Systematic review (with or without meta-analysis)	Verify intervention effectiveness, efficacy, and safety and inform practice guidelines and policies	Commonly PICO; narrow and specific	Mandatory (risk of bias)	PRISMA 2020 [4] and relevant methodological guidance
Scoping review	Map the extent, conceptual boundaries, and trends of a body of literature and identify research gaps	Commonly PCC; exploratory and iterative	Not universally required; determined by the review purpose	PRISMA-ScR [5]
Integrative review	Understand complex, multifaceted phenomena across empirical and theoretical literature	Broad and concept-driven	Recommended, with approaches suited to the diverse evidence included	Whittemore and Knafl process [6]
Umbrella review	Synthesize published systematic reviews and meta-analyses into a higher-order evidence map	Broad, PICO-based or related frameworks	Appraisal of the included reviews	JBI umbrella review guidance [7]

PCC, population, concept, context; PICO, population/patient/problem, intervention, comparison, outcome; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses; PRISMA-ScR, Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews.

followed. However, registration and reporting checklists support transparent reporting but do not by themselves demonstrate methodological rigor.

Second, interpretive integrity concerns whether conclusions remain within the epistemic boundaries of the review design and available evidence. Even a methodologically sound review can overinterpret its findings. Conclusions should thus reflect the intended purpose of the synthesis design (Table 1) and be proportionate to the strength, volume, and certainty of the evidence. A summary table of included studies is not, in itself, evidence synthesis, just as a registration number does not guarantee originality. Interpretive integrity requires conclusions that are justified by the review findings and meaningful within the relevant knowledge context.

Emerging pitfalls in contemporary evidence synthesis

ScRs are increasingly common in nursing research and offer considerable value. This growth is not inherently problematic; concerns arise when scoping methodology is used to answer questions that require other forms of inference or when conclusions exceed the interpretive scope of a mapping-oriented design [8,9]. A ScR aims to map the extent, characteristics, concepts, and boundaries of a body of evidence and identify gaps or areas for further inquiry [8]. However, ScRs may be misapplied to narrow research questions for which they are less suitable, partly because a design requiring neither critical appraisal nor statistical synthesis may appear to be a simpler alternative [9]. If a ScR neither formally evaluates the validity of the included evidence nor synthesizes comparative effects, a claim that a technology "should be implemented" in clinical practice exceeds the review's inferential capacity [9]. Levac et al. [8] described stakeholder consultation as essential to developing a ScR and as the source of its utility and credibility, yet most published ScRs omit it [8,9]. ScRs should therefore seek the views of patients, caregivers, clinical nurses, and policy makers; authors are encouraged to report whether they did so and how these views influenced their conclusions.

The increasing use of AI and LLMs may reduce the substantial manual workload of literature searching, deduplication, screening, extraction, classification, and preliminary summarization. Four major evidence synthesis organizations emphasize that human reviewers retain responsibility for the synthesis and that AI applications involving substantive judgment require appropriate oversight and transparent reporting. Their Responsible AI in Evidence SynthEsis (RAISE) guidance recommends specifying which tasks were delegated to AI, which tools and versions were used, and how the outputs were verified [3]. As review procedures become more amenable to automation, researchers' scholarly contributions should shift toward work that cannot be reduced to literature processing: formulating meaningful questions, making defensible methodological decisions, interpreting conflicting findings, contextualizing evidence, identifying inappropriate inferences, and taking responsibility for final knowledge claims. Automation

should reduce mechanical workload, not replace scholarly reasoning.

Conclusion

Methodological rigor is a prerequisite for evidence synthesis, not its ultimate purpose. Synthesis should move beyond aggregating individual findings to critically interpreting patterns, inconsistencies, theoretical foundations, historical developments, and relevant clinical contexts, generating insight and new understanding rather than information alone. JKAN will continue to welcome evidence syntheses, emphasizing methodologically sound reviews that address meaningful questions and inform evolving clinical practice rather than the number of reviews published. We aim to advance nursing scholarship by promoting evidence syntheses grounded in research integrity and deep scholarly reflection, beyond mere fulfillment of procedural requirements.

Article Information

Conflicts of Interest

Jinkyung Park serves as deputy editor and Joohyun Chung as editor of the *Journal of Korean Academy of Nursing* but have no role in the decision to publish this article. Except for that, no other potential conflict of interest relevant to this article was reported.

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Disclosure and declaration of AI use

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Author Contributions

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References

1. Park JH, Kim HK, Kim G, Bae SH. Ten-year trends in research designs and keywords: a bibliometric comparison of the Journal of Korean Academy of Nursing and leading international nursing journals. J Korean Acad Nurs. 2025;55(4):557-567. https://doi.org/10.4040/jkan.25119
2. Thorne S. On empty, redundant or pointless systematic reviews. Nurs Inq. 2024;31(2):e12634. https://doi.org/10.1111/nin.12634
3. Flemyng E, Noel-Storr A, Macura B, Gartlehner G, Thomas J, Meerpohl JJ, et al. Position statement on artificial intelligence (AI) use in evidence synthesis across Cochrane, the Campbell Collaboration, JBI, and the Collaboration for Environmental Evidence 2025. JBI Evid Synth. 2025;23(11):2162-2166. https://doi.org/10.11124/JBIES-25-00480
4. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021;372:n71. https://doi.org/10.1136/bmj.n71
5. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169(7):467-473. https://doi.org/10.7326/M18-0850
6. Whittemore R, Knafl K. The integrative review: updated methodology. J Adv Nurs. 2005;52(5):546-553. https://doi.org/10.1111/j.1365-2648.2005.03621.x
7. Aromataris E, Fernandez R, Godfrey CM, Holly C, Khalil H, Tungpunkom P. Summarizing systematic reviews: methodological development, conduct and reporting of an umbrella review approach. Int J Evid Based Healthc. 2015;13(3):132-140. https://doi.org/10.1097/XEB.0000000000000055
8. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. Implement Sci. 2010;5:69. https://doi.org/10.1186/1748-5908-5-69
9. Gray R, Higgins N, Yobas P, Stievano A, Bressington D. The rise of scoping reviews in nursing science: trends, merits, and responsible use. Nurs Rep. 2025;15(12):423. https://doi.org/10.3390/nursrep15120423