

Menopause education of healthcare professionals: A scoping review protocol

Short title: Menopause education of healthcare professionals.

Authors

Keye C¹, Murphy M², Saab MM², O Driscoll M¹

¹ Pharmaceutical Care Research Group, School of Pharmacy, University College Cork, Cork, Ireland

² Catherine McAuley School of Nursing and Midwifery, University College Cork, Cork, Ireland

Corresponding author E-mail: 125106949@umail.ucc.ie

Acknowledgements

The authors would like to acknowledge Siobhan Bowman, Academic Librarian, University College Cork, for assisting in the development of the search strategy for this scoping review.

Orchid ID: C Keye 0009-0009-4658-7998, M Murphy 0000-0001-9979-9462, MM Saab 0000-0002-7277-6268, M O Driscoll 0000-0001-5466-4214

The research plan was preregistered on the Open Science Framework: <https://osf.io/652su/>

Abstract

The reported lack of adequate menopause care is a significant issue, leaving many women feeling isolated and unsupported as they navigate this transition. The increasing mainstream attention on menopause healthcare highlights the need to evaluate whether healthcare professionals are adequately educated and competent to provide effective care for menopausal women. The aim of this scoping review is to ascertain to what extent undergraduate and post registration healthcare professionals are educated regarding menopause throughout their training and subsequent careers, with a view to informing future educational initiatives. This scoping review will be carried out using the JBI Manual for Evidence Synthesis and reported using the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for scoping reviews checklist. It will include all healthcare professionals relevant to the provision of menopause care, including medical doctors, nurses, pharmacists, physiotherapists, and psychologists. The search will use the following databases: CINAHL; MEDLINE; EMBASE; APA PsycINFO; ERIC; and Academic Search Complete. Grey literature will be searched using Google Scholar and Open Grey. An academic librarian has been contacted to assist in the development of the search strategy. Covidence online software will be used to manage the screening and data extraction process. Purposely developed data extraction tables will be created by the reviewers. The data will be synthesised and reported narratively.

Keywords: curriculum, doctor, education, healthcare professional, menopause, midwife, nurse, pharmacist, physician, physiotherapist, psychologist

1. Introduction

Menopause is defined as the last menstrual period, with perimenopause being the time leading up to the final menses and post-menopause being one year since the final period^{1,2,3}. The average age of menopause is 51 years⁴. Symptoms of menopause can begin 7 to 10 years before cessation of menses and can last for up to 12 years post menopause, meaning women can spend up to 22 years experiencing impacts of menopause⁵.

Research shows many women feel unprepared, unsupported, and receive poor practitioner care during menopause transition^{6,7,8}. It is recommended that an understanding of menopause physiology, signs and symptoms, and impact of menopause are essential for creating an individualised patient management plan⁹. However, clinicians have reported a lack of understanding and treatment of menopause⁹, with training gaps leading to half of healthcare professionals (HCPs) studied not being aware of contra-indications to prescribing menopausal hormonal treatment^{10,11}. Despite the fact that there is no limitation to the length of time women should remain on hormone replacement therapy (HRT) and that the British Menopause Society recommend persistent symptoms usually overrule the risks¹², 2023 data from the United Kingdom (UK) shows that only approximately 15% of women aged between 45 to 64 use HRT¹³. This can be attributed to several factors, including shortage of HRT¹⁴, lower prescribing rate in deprived areas¹⁵ and probably most importantly the impact of the 2002 Women's Health Initiative trial¹⁶. This large long-term study had a profoundly negative impact on the perception and prescribing of HRT. Initial findings in that study suggested that HRT posed more risks than benefits, highlighting increased risks of breast cancer and cardiovascular disease, leading to a significant decline in HRT use, as both patients and healthcare providers

became wary of its potential harms¹⁶. However, it was later shown that this study's analysis was flawed. It has since been reanalysed, demonstrating that HRT, when initiated at the right time and for the right population, can have significant benefits, including symptom relief, cardiovascular protection, and improved bone health¹⁶.

In 2014, the European Menopause and Andropause Society provided guidance on the importance of medical undergraduate training in menopause¹⁷. This statement was updated in 2022 to include all HCPs at all stages of their careers, ensuring that knowledge about reproductive aging and menopause is integrated into all healthcare education and training programs¹⁷. The British Menopause Society vision statement also agrees that menopause care is multi-disciplinary, and that it is necessary for all HCPs both in primary and secondary care to have access to sufficient menopause education¹⁸.

To the best of our knowledge, and based on a preliminary search of CINAHL, Medline, and Embase, only one existing scoping review was found, which explored the menopause education of HCPs¹⁹. However, this scoping review only included doctors and did not include other allied HCPs. Therefore, the overarching aim of the current scoping review is to assess the extent of the literature on HCP education on menopause care.

The review questions were developed using the population, concept, and context (PCC) framework as recommended by the JBI Manual for Evidence Synthesis¹⁶ as follows:

1. What menopause educational programmes are available for HCPs?
2. Which HCP(s) have received menopause education?

3. How has menopause education been delivered?

4. Where and in what settings has menopause education been delivered?

2. Methods

This scoping review will be conducted in accordance with the JBI methodology for scoping reviews²⁰, and will be reported using the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR), ensuring the scoping review is carried out rigorously, and is transparent and reproducible, enhancing the credibility and utility of the findings (Appendix S1)²¹.

2.1 Inclusion criteria

Review inclusion criteria have been informed by the PCC framework as follows:

Population:

- All HCPs who provide menopause care to women, inclusive of nurses, midwives, doctors, physiotherapists, pharmacists, and psychologists.
- Undergraduate, postgraduate students and qualified HCPs undertaking Continuing Professional Development.

Concept:

This review is focused on exploring the breadth of evidence available on the types of HCPs menopause education and training delivered. This review will help identify key concepts,

definitions, important learning outcomes, as well as identify specific indicators that can be used to shape the development of research design and a future comprehensive educational model.

Context:

The review will include all HCPs who are involved in the provision of menopause-related care in both primary and secondary healthcare settings. There will be no geographical, language, or date limitations placed on the review. All primary research papers relating to menopause education provision will be included. This scoping review will consider quantitative studies such as experimental or quasi-experimental study designs including randomized and non-randomized controlled trials. This review will also include descriptive observational studies. Qualitative studies will be included with a focus on, but not limited to, study designs such as phenomenology, grounded theory, and qualitative description. Articles, reviews, abstracts, and opinion pieces will not be considered for inclusion.

2.2 Search strategy

A preliminary search was conducted in MEDLINE to identify relevant free-text and subject heading terms. Keywords were determined through discussions with an academic librarian and the co-authors, and further terms were identified by examining literature during the scoping phase of the search. Using these terms, a comprehensive search strategy for MEDLINE was developed (S2 Appendix). The search strategy will be developed further by all the authors in conjunction with the academic librarian and will aim to locate all relevant published and unpublished studies across CINAHL, MEDLINE, EMBASE, APA PsycINFO, ERIC, and Academic Search Complete. Grey literature will be searched using Open Grey and Google Scholar.²²

2.3 Study selection

Firstly, titles and abstracts will be screened against the predefined inclusion criteria. Documents that meet the criteria or require further clarification will advance to the full-text screening stage. Secondly, full-text screening will be conducted to thoroughly assess the full detail of the remaining documents. Those that meet the criteria will be included in the review, while the remaining will be excluded with reason for exclusion documented. Thirdly, the reference list of all included papers will be hand-searched to source any additional relevant papers for inclusion. A PRISMA²³ flowchart will be used to illustrate the study screening process. Covidence online software will be used to assist in the automatic deletion of duplicated articles, with an additional manual screening for these conducted²⁴. Title, abstract, and full text screenings will be conducted by two reviewers independently. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved by a third independent reviewer.

2.4 Data extraction

Two data extraction tables have been drafted to collect all data of relevance to the review (S3 Appendix, S4 Appendix). The use of the data extraction tools reduces transcription errors, ensures all relevant information is collected, assists checking accuracy and acts as a record of information collected²⁵. Data extraction tables will be checked and validated by a second reviewer in line with best practice to reduce extraction errors²⁶. The reviewers will firstly record general information such as the author(s), publication year, the country and setting of the research, as well as the population size, participants profession, aims of the study and methodology (S3 Appendix). A second data extraction table has been developed to extrapolate

specific details around the education provided to address the aims of the review (S4 Appendix). The draft data extraction tables will be modified and revised as necessary during the process of extracting data from each included evidence source. Modifications will be detailed in the scoping review. Data collection is ongoing, with completion aimed at the end of July 2025. The results and completed Scoping Review is due for completion before the end of 2025.

2.5 Data analysis and presentation

Data will be synthesised by addressing the four key questions outlined in the review. By organising the findings into these categories, we will visualise relationships between the concepts, highlighting areas where consensus/contradictions exist to identify any gaps in the literature. The results will be reported narratively with diagrams, charts, or narrative maps to show relationships between themes. We will include descriptive statistics as appropriate. As this scoping review progresses, emergent themes or concepts not initially anticipated may arise. Given the iterative nature of scoping review methodologies^{20,21}, the framework will remain flexible to accommodate new insights. Any modifications to structure or approach will be documented in the final review, ensuring transparency.

3. Limitations

The authors will do their utmost to reduce study selection bias by using translation software to include non-English papers and optimising the search strategy to identify all relevant papers. There may also be limitations regarding searching grey literature, with some papers not being identified in the search due to lack of controlled vocabulary.

4. Conclusion

This scoping review aims to identify gaps in the literature to provide a platform for further evidence-based research on HCPs menopause education. This will subsequently serve to inform the development of a framework for future studies on service planning and delivery of menopause education for HCPs.

194 **Supplementary files**

- 195 • S1 PRISMA protocol checklist
- 196 • S2Appendix: Search strategy
- 197 • S3 Appendix: Data extraction table 1
- 198 • S4 Appendix: Data extractions table 2

199

200

201

202

203

204

205

206

207

208

References

1. Baber RJ, Panay N, Fenton A. 2016 IMS Recommendations on women's midlife health and menopause hormone therapy. *Climacteric*. 2016;19(2):109-50. doi:10.3109/13697137.2015.1129166.
2. Magraith K, Stuckey B. Making choices at menopause. *Aust J Gen Pract*. 2019;48(7):457-62. doi:10.31128/AJGP-02-19-4851.
3. National Institute for Health and Care Excellence (NICE). Menopause: diagnosis and management. NICE guideline [NG23]. 2015 [cited 2023 Feb 26]. Available from: <https://www.nice.org.uk>.
4. Sikon AL, Thacker HL. Chapter 16 - Menopause. In: Sokol AI, Sokol ER, editors. *General Gynecology*. Philadelphia: Mosby; 2007. p. 383-407.
5. Health Service Executive (HSE). Menopause symptoms. 2024 [cited 2024 Nov 28]. Available from: <https://www2.hse.ie/conditions/menopause/symptoms>.
6. The Menopause Hub. Survey results: what women want in menopause. 2020 [cited 2023 Mar 5]. Available from: <https://www.themenopausehub.ie/menopause-blog/2020/12/7/survey-results-what-women-want-in-menopause-1>.
7. Female Founders Fund. Suffering in silence: the biases and data gaps of menopause. 2020 [cited 2025 Jan 13]. Available from: <https://blog.femalefoundersfund.com/suffering-in-silence-the-biases-and-data-gaps-of-menopause-e5f131b4b581>.
8. Bonafide. The State of Menopause Survey. 2021 [cited 2022 Jan 13]. Available from: https://cdn.shopify.com/s/files/1/0011/8590/6751/files/Bonafide_State_of_Menopause.pdf?v=1624280664.

9. Bacon JL. The Menopausal Transition. *Obstet Gynecol Clin North Am.* 2017;44(2):285-96. doi:10.1016/j.ogc.2017.02.008.
10. Geukes M, Oosterhof H, van Aalst MP, Anema JR. Attitude, confidence, and social norm of Dutch occupational physicians regarding menopause in a work context. *Maturitas.* 2020;139:27-32. doi:10.1016/j.maturitas.2020.05.015.
11. Lin L, Feng P, Yu Q. Attitude and knowledge for menopause management among health professionals in mainland China. *Climacteric.* 2020;23(6):614-21. doi:10.1080/13697137.2020.1775809.
12. British Menopause Society (BMS). BMS/WHCS 2020 recommendations on hormone replacement therapy in menopausal women. 2020 [cited 2024 Nov 30]. Available from: <https://thebms.org.uk/publications/consensus-statements/bms-whcs-2020-recommendations-on-hormone-replacement-therapy-in-menopausal-women/>.
13. Department of Health and Social Care. Hundreds of thousands of women experiencing menopause symptoms to get cheaper HRT. 2023 Feb 21 [cited 2023 Feb 21]. Available from: <https://www.gov.uk>.
14. British Menopause Society (BMS). British Menopause Society further update on HRT supply shortages. 2020 Jun 20 [cited 2020 Jun 20]. Available from: <https://thebms.org.uk/2020/01/british-menopause-society-further-update-on-hrt-supply-shortages-27th-january-2020/>.
15. Hillman S, Shantikumar S, Ridha A, Todkill D, Dale J. Socioeconomic status and HRT prescribing: a study of practice-level data in England. *Br J Gen Pract.* 2020;70(700):e772-7. doi:10.3399/bjgp20X713045.
16. Cagnacci A, Venier M. The controversial history of hormone replacement therapy. *Medicina (Kaunas).* 2019;55(9):602. doi:10.3390/medicina55090602.

17. Rees M, Abernethy K, Bachmann G, et al. The essential menopause curriculum for healthcare professionals: A European Menopause and Andropause Society (EMAS) position statement. *Maturitas*. 2022;158:70-7. doi:10.1016/j.maturitas.2021.12.001.
18. British Menopause Society (BMS). Vision for menopause care in the UK. 2024 [cited 2024 Nov 30]. Available from: <https://thebms.org.uk/wp-content/uploads/2024/07/BMS-Vision-JULY2024%E2%80%933B.pdf>.
19. Macpherson BE, Quinton ND. Menopause and healthcare professional education: A scoping review. *Maturitas*. 2022;166:89-95. doi:10.1016/j.maturitas.2022.08.009.
20. Pollock D, Peters MDJ, Khalil H, et al. Recommendations for the extraction, analysis, and presentation of results in scoping reviews. *JB I Evid Synth*. 2023;21(3):520-32. doi:10.11124/JBIES-22-00123.
21. Tricco AC, Lillie E, Zarin W, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med*. 2018;169(7):467-73.
22. Hadie SNH. ABC of a scoping review: a simplified JBI scoping review guideline. *Pract Examples*. [Date unknown].
23. Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021;372:n71. doi:10.1136/bmj.n71.
24. Covidence systematic review software [Internet]. Melbourne, Australia: Veritas Health Innovation. Available from: www.covidence.org.
25. Joanna Briggs Institute (JBI). An introduction to systematic reviews, changing practice. Suppl 1. 2001 [cited 2025 Jan 29]. Available from: <http://www.joannabriggs.edu.au/pdf/CP2.pdf>.
26. Buscemi N, Hartling L, Vandermeer B, Tjosvold L, Klassen TP. Single data extraction generated more errors than double data extraction in systematic reviews. *J Clin Epidemiol*. 2006;59(7):697-703. doi:10.1016/j.jclinepi.2005.11.010.