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Exploring the role of symptom monitoring in self-management of chronic physical health conditions experienced by women: protocol for a scoping review

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ABSTRACT

Introduction Self-management is essential for girls, women and individuals assigned female at birth (AFAB) living with chronic physical health conditions. Evidence suggests that symptom monitoring can support self-management and empower individuals, yet limited research has explored how symptom monitoring is conceptualised, implemented and integrated within self-management frameworks considering the unique needs of biological, gendered and social factors affecting women and people AFAB. This scoping review aims to explore the role of symptom monitoring in self-management for girls, women and individuals AFAB. To achieve this, this review aims to define and conceptualise symptom monitoring and self-management, map existing symptom monitoring interventions and mechanisms linked to self-management and identify how sex, gender and systemic influences are considered in the context of chronic physical health conditions.

Methods and analysis This scoping review will be reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews checklist. Six bibliographic databases (Cochrane Library, Scopus, PsycINFO (Ovid), MEDLINE (Ovid), EMBASE (Ovid) and CINAHL (EBSCO)) were searched from inception to 13 May 2025. Eligible studies will include primary research from Organisation for Economic Co-operation and Development countries, published in English, involving girls, women and individuals AFAB with chronic physical health conditions that involve symptom-monitoring tools linked to self-management. Studies focusing solely on obesity without reference to chronic conditions, acute illnesses or mental health conditions will be excluded. Screening will be undertaken independently by two reviewers in Rayyan, and citation management will be supported through reference software. Data extraction will follow Joanna Briggs Institute (JBI) guidance, capturing study characteristics, participant demographics and definitions related to symptom monitoring and self-management. Both inductive and deductive qualitative content analyses will be used: deductively, data will be organised according to the population, concept and context framework and research objectives. Inductively, descriptive categories will be developed from the data. Two complementary approaches will guide coding such as direct extraction of data and content coding of structured textual information, and thematic coding of interpretive data, supported by Microsoft Excel and SPSS. A small subset (5%–10%) will be double-coded to ensure consistency. Key outputs will include descriptive tables showing representation of girls, women and people AFAB by condition and context, following a synthesis of symptom monitoring and self-management (through theory/models). Tables summarising symptom-monitoring tools, mechanisms and a table outlining moderating factors influencing symptom monitoring and self-management experiences will be presented. Results will be presented through narrative summaries and visual diagrams to illustrate key relationships and concepts.

Ethics and dissemination Formal ethical approval is not required for this study, as no primary data will be collected. The results of this scoping review will be shared with a wide range of audiences, including healthcare

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This review will map out the full spectrum of evidence on self-management of chronic conditions in women and people assigned female at birth through subjective and objective symptom monitoring tools.
- ⇒ This review will examine sex-related and gender-related factors that have been underexplored in influencing outcomes related to symptom monitoring in the self-management of chronic physical health conditions.
- ⇒ The planned review uses the Joanna Briggs Institute (JBI) methodology to systematically review and clearly report evidence, ensuring rigorous appraisal and synthesis.
- ⇒ The searches and study selection had to be limited to Organisation for Economic Co-operation and Development countries; thus, potentially relevant studies conducted in other countries will be excluded.
- ⇒ Only studies published in the English language will be considered eligible for inclusion in the review.

professionals, researchers, the public, policymakers, charities and patient advocacy groups. In the efforts of dissemination, this work strives to promote inclusive, evidence-based and equitable approaches to symptom monitoring and self-management among girls, women and people AFAB living with chronic physical health conditions.

Study registration This protocol has been registered on the Open Science Framework, .

INTRODUCTION

Chronic physical health conditions, also known as long-term conditions or non-communicable diseases (NCDs), persist over time and often require ongoing medical, behavioural and/or therapeutic support.[1–3] In 2021, NCDs were responsible for 43 million deaths, representing 75% of global deaths unrelated to the COVID-19 pandemic.[3] Centres for Disease Control and Prevention[2] note that some groups are more affected by chronic conditions due to factors that limit healthy choices. These conditions arise from complex biological, environmental, behavioural and social factors and often affect daily functioning.[4] While chronic conditions impact all sexes and genders, they disproportionately affect girls, women and people assigned female at birth (AFAB) across the life course.[5 6] This population faces unique biological and gendered challenges that shape symptom experiences, diagnosis and access to care.[5 6] The interaction of sex (biological attributes) and gender (social roles and norms) influences how chronic conditions are experienced and treated.[5]

Globally, women experience a greater burden of chronic conditions. Disparities in disability-adjusted life years are most pronounced in conditions such as low back pain, depressive disorders and headache disorders, increasing with age.[7] In the UK, 50.1% of women report living with a chronic condition compared with 45.7% of men, and 22.3% of women report limitations in daily activities, compared with 18.5% of men.[8] In Australia, 52% of females report at least one chronic condition, compared with 47% of males.[9] Despite this higher burden of chronic conditions in women, gender disparities in diagnosis, treatment and research persist.

Evidence shows that women experiencing chronic conditions often experience delays in diagnosis, are more likely to be misdiagnosed or dismissed, and suffer greater impacts on quality of life and mental health.[10 11] A global study found that women consistently report poorer health than men, reflecting both biological vulnerabilities and gender-based inequalities, including healthcare access and social factors.[12] Furthermore, the study underscores that this gap is not solely due to biological factors. Instead, it is significantly shaped by the interplay of these higher rates of specific conditions in women and the broader societal context, which likely encompasses disparities in healthcare access and the different social roles and pressures faced by women.[12]

Self-management and self-care are recognised approaches in the management of chronic conditions, referring to individuals' active role in managing symptoms, treatments, psychological effects and lifestyle changes.[13–15] Frameworks such as the Chronic Care Model, Stanford Model and Innovative Care for Chronic Conditions place self-management at the centre of care.[16] The Stanford Model highlights symptom monitoring as a key self-management skill supporting decision-making and behaviour change.[16] Symptom monitoring, defined as the regular tracking of symptom severity, frequency and duration, is therefore central to effective self-management.[17 18] Tools to support this include symptom diaries, mobile applications, wearables and ecological momentary assessments (EMAs), which enable routine or real-time symptom tracking.[17 18] Patient-reported outcome measures are also used to regularly assess health status retrospectively and have been applied in female-specific conditions, such as measuring pelvic floor disorder symptoms.[19] Given that women and people AFAB experience a higher burden of chronic conditions and face distinct societal and systemic influences on their health,[5–7] it is essential to understand how symptom monitoring can best support self-management in this context. However, there remains limited evidence on tailored self-management approaches for women and people AFAB, despite research suggesting that gender-specific strategies improve health outcomes.[11 20]

In recent years, technology has improved access to symptom monitoring, as EMA enables real-time data collection in natural environments, improving accuracy over retrospective recall.[21] Wearables are effective in monitoring symptoms, allowing continuous tracking of physiological and behavioural data.[21–23] Recent evidence from reviews and randomised controlled trials (RCTs) shows that symptom monitoring tools help users identify patterns, evaluate treatment responses and make informed decisions in managing menopause and endometriosis.[23–25] However, existing research does not clearly define how symptom monitoring and self-management are conceptualised in the context of chronic conditions experienced by women and people AFAB. Moreover, although symptom monitoring tools have been evaluated in condition-specific trials for conditions such as menopause[25] and a realist synthesis of endometriosis symptom reporting tools,[26] there is no comprehensive scoping review that synthesises their role in supporting self-management across chronic conditions and life stages for women and people AFAB. Given the increased recognition of gender disparities in women experiencing chronic conditions[7–9] and the growing availability of symptom monitoring tools,[21 22] a comprehensive review of their role in supporting self-management for women and people AFAB with chronic conditions is necessary. Currently, it is acknowledged within a review that digital interventions such as symptom monitoring tools can help track complex symptom patterns, inform personalised treatment strategies and promote non-surgical interventions within chronic conditions such as endometriosis.[23] Despite evidence of these benefits associated with symptom monitoring of chronic conditions such as endometriosis, barriers to self-management remain as women and people AFAB with chronic conditions often face limited access to supportive care, low health literacy, lack of tailored information, physical constraints and caregiving responsibilities.[11 12 27] With this, enablers such as supportive healthcare relationships, peer networks and co-designed tools can facilitate self-management, yet women's health reporting is often shaped by gender norms and health system inequities, which contributes to diagnostic gaps.[12]

Moreover, a preliminary search of MEDLINE, Cochrane and Joanna Briggs Institute (JBI) found no reviews mapping the role of symptom monitoring tools in supporting self-management of chronic physical health conditions experienced in women and people AFAB. This scoping review will examine how symptom monitoring supports self-management for women and people AFAB with chronic conditions, aiming to inform future interventions, healthcare delivery and policy across various life stages and conditions.

Review question

The objective of this scoping review is to summarise and create a comprehensive understanding of how symptom monitoring supports self-management in women and people AFAB with chronic physical health conditions in four parts:

1. Conceptualising symptom monitoring and self-management
    a. In studies examining the relationship between symptom monitoring and self-management, what theories or conceptual models are used?
2. Methods of symptom monitoring.
    a. Tools: what types of symptom monitoring tools are used (eg, symptom scales, mHealth apps) and what frequency/duration are tools reported.
    b. Methodological approaches: what methodological approaches are used to measure symptoms (eg, continuous, retrospective)?
3. Outcomes and mechanisms of symptom monitoring
    a. Outcomes: what are the outcomes of symptom monitoring (eg, behavioural changes, treatment adherence)?
    b. Mechanisms: what mechanisms are proposed to explain the relationship between symptom monitoring and self-management outcomes (eg, self-efficacy, symptom awareness)?
4. Moderators
    a. Are analyses disaggregated by sex, gender or age to explore differences in self-management outcomes?

METHODS AND ANALYSIS

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews.[28] Additionally, the review will be reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) checklist.[29] This scoping review will systematically map evidence focusing on the role of symptom monitoring in supporting self-management of chronic physical health conditions among women and people AFAB.

Eligibility criteria

Population

The inclusion criteria for this scoping review will consider studies where participants are cisgender women, girls and individuals AFAB (inclusive of trans men, trans boys and non-binary gender diverse individuals AFAB). The studies and research considered will include these population groups across life stages and age groups such as adolescence (from puberty), young adulthood, midlife and older adulthood. Research that exclusively involves men/males, without female(s) (women, girls, trans men, trans boys and individuals AFAB) will be excluded. This review will examine studies investigating the role of symptom monitoring in the self-management of individuals with chronic physical health conditions, encompassing but not limited to cardiovascular diseases, diabetes mellitus, chronic respiratory diseases, autoimmune disorders, chronic pain syndromes and female-specific conditions such as endometriosis and polycystic ovary syndrome. Investigations focusing solely on acute or short-term illnesses and conditions that do not affect women or people AFAB will be excluded from this review. Furthermore, due to feasibility constraints, studies specifically addressing mental health conditions, cancer and obesity will not be included in this analysis.

Concept

The concept of this scoping review is to explore how symptom monitoring is understood, used and studied in the context of chronic physical health conditions experienced by women and people AFAB. This includes its role in self-management and how it is influenced by biological, social and systemic factors. These aims will be addressed through the research questions outlined above.

Context

This scoping review will include studies that use symptom monitoring in the management of chronic physical health conditions in women across a range of settings internationally. This may involve any self-reported tracking methods (eg, symptom diaries, digital health applications, wearable technologies). This review will include studies from countries that are members of the Organisation for Economic Co-operation and Development exclusively, given their generally similar healthcare systems, digital health integration and access to mHealth technologies, which enables a more consistent and meaningful evaluation of symptom monitoring tools.[30] Research that does not explore symptom monitoring as a tool for self-management, such as purely diagnostic studies or intervention studies without a monitoring component, is outside the scope of this review. As the reviewers do not have proficiency in languages other than English and there are no resources available for translation, all studies in languages other than English will be excluded at the full-text screening stage. The excluded studies will be reported in the appendix of the completed scoping review to provide a more accurate account of the review limitations and inform future work.

Types of sources

This scoping review will include a diverse range of evidence sources. Eligible study designs will encompass quantitative research, such as RCTs, cohort studies, case-control studies and cross-sectional studies, which involve symptom monitoring, self-management, clinical, psychological, health outcomes, self-management outcomes and meet appropriate population eligibility. Qualitative studies will be included that explore patient experiences, perceptions and barriers to symptom monitoring through interviews and focus groups, with a focus on its role in self-management and its implementation within chronic conditions. Mixed-methods studies that integrate quantitative and qualitative approaches will be included to provide a more holistic analysis of symptom monitoring in chronic disease management. To maintain methodological rigour and avoid duplication, this review will include only studies presenting original, primary data. As such, systematic reviews, meta-analyses and other secondary analyses will be excluded. However, systematic and scoping reviews will be used as a source of potentially relevant primary studies. These reviews will not be included in the final analysis but will be mined pragmatically for their included studies.

Patient and public involvement

Patient and Public involvement and engagement will be central to this scoping review, ensuring that the research remains relevant and accessible to those directly affected by chronic conditions. Collaboration with organisations such as Fair Treatment for the Women of Wales (FTWW) or other relevant charities will help shape the review to reflect community needs and priorities. Efforts will be made to ensure that research questions, findings and outputs are meaningful and accessible to patients, healthcare professionals and policymakers. This includes co-producing clear, accessible summaries tailored to different audiences. Additionally, the contributions of FTWW or other partner organisations will be formally acknowledged to highlight the importance of patient and public involvement in shaping research that informs policy and practice.

Search strategy

The search strategy will aim to locate published studies. An initial limited search of MEDLINE (Ovid) was conducted to identify relevant articles and refine search terms, with guidance from information specialist librarians at Cardiff University. The final search, conducted on 13 May 2025, was applied across six databases: Cochrane Library, Scopus, PsycINFO (Ovid), EMBASE, MEDLINE (Ovid) and CINAHL (EBSCO). Databases were searched from inception to 13 May 2025. The MEDLINE (Ovid) search strategy was developed using text words from titles and abstracts, along with relevant index terms, and was subsequently adapted for each of the other databases. The full MEDLINE search strategy and results are presented in online supplemental appendix 1 as an example. In addition, forward citation searching of the reference lists of all included studies will be conducted to identify further relevant evidence if needed.

Study/source of evidence selection

All identified citations will be collated and uploaded into Mendeley and Rayyan (Qatar Computing Research Institute, Doha, Qatar), and duplicates will be removed. Following a pilot test of 50 papers, titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review. Relevant sources will be retrieved in full, and their citation details will be imported into Rayyan (Qatar Computing Research Institute, Doha, Qatar). The full text of selected citations will be assessed in detail against the inclusion criteria by two independent reviewers. Reasons for exclusion of sources of evidence at full text that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion, or with an additional reviewer/s. The results of the search and the study inclusion process will be reported in full in the final scoping review and presented in a PRISMA flow diagram.[31]

Data extraction

Data extraction from included studies will take place using a data extraction tool developed which was pilot tested for this review, piloted on three studies. The data extraction tool will be designed to systematically capture details relevant to the research questions and will include information about the participants, concept, context, study methods and key findings. A draft extraction form is provided (see online supplemental appendix 2). The draft data extraction form will be pilot tested on three studies by two reviewers. If any issues arise during pilot testing, the data extraction table will be changed to ensure clarity and ease of use, in alignment with the PCC (population, concept and context) framework (JBI Methodology),[30] extracted data will address key review questions. The final data charting process will be taken from the extraction tool and reported in detail to ensure transparency and rigour in addressing the review's objectives.

Data analysis and presentation

As per the JBI methodology for scoping reviews, the analysis will focus on mapping and describing how objective and subjective symptom monitoring approaches are conceptualised, methodological approaches considered and relationship to self-management among girls, women and people (AFAB) with chronic physical health conditions. Both deductive and inductive (descriptive) coding approaches will be employed throughout the analysis process. Deductively, extracted data will be categorised according to the predefined conceptual framework and review questions, including the domains of conceptualisation (theory) (1), outcomes (3a) and moderators (4) (sex and gender). Additionally, this method will involve direct extraction of quantitative and descriptive data (eg, study country, participant characteristics, health condition studied). Descriptively, information within these domains will be organised inductively to illustrate how symptom monitoring tools are used (2a), and the methodological approaches used (eg, continuous vs intermittent, active vs passive, retrospective vs real-time) (2b), and how monitoring practices are linked to aspects of self-management through various mechanisms (3b). Where appropriate, inductive categorisation will be used to group conceptually. This will involve content coding of structured textual information. Moreover, the inductive content analysis will involve familiarisation with the included studies, generation and iterative refinement of codes, and team discussions to ensure consistency. Coding and data management will be supported by Microsoft Excel and SPSS, with a subset (approximately 5%–10%) of studies double-coded by two reviewers to confirm shared understanding and reliability.

In relation to presentation, the key outputs will include descriptive tables summarising the proportion of girls, women and people AFAB represented across studies by condition and context or setting, reflecting the JBI PCC framework.[28] Further output tables will be presented in line with the study objectives which offer summaries by condition, outlining key symptom monitoring characteristics (eg, objective or subjective monitoring, tools and related self-management categories (eg, mechanisms and theoretical links). Finally, a summary table will identify moderating factors that influence experiences of symptom monitoring and self-management of chronic physical health conditions among girls, women and people AFAB. Findings will also be presented in narrative form, with conceptual maps or graphs used where appropriate to illustrate content and relationships between key concepts.

ETHICS AND DISSEMINATION

Formal ethical approval is not required for this study, as no primary data will be collected. The results of this scoping review will be shared with a wide range of audiences, including healthcare professionals, researchers, the public, policymakers, charities and patient advocacy groups. In the efforts of dissemination, this work strives to promote inclusive, evidence-based and equitable approaches to symptom monitoring and self-management among girls, women and people AFAB living with chronic physical health conditions. The findings will be published in a peer-reviewed journal and disseminated through appropriate mailing lists, such as those maintained by Cardiff University and the FTWW. Results will also be shared on various social media platforms, appropriate websites and in newsletters to ensure they reach diverse audiences.

Project timeline

The scoping review will be conducted throughout 2025 according to the following schedule. The final database searches were planned for May 2025. The screening process (title, abstract and full-text screening) in date ranges from June to October 2025. Data extraction between October and November 2025, followed by coding, analysis and results synthesis from November to December 2025.

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Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

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