



BARRIERS AND FACILITATORS TO DIABETES SELF-CARE AMONG ADULTS WITH TYPE 2 DIABETES: A MIXED- METHODS SYSTEMATIC REVIEW PROTOCOL

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Keywords

Diabetes Self-care, Diabetes Self-management, Type 2 Diabetes, Systematic Review Protocol, Mixed-Methods Review, Barriers, Facilitators

ABSTRACT

Diabetes self-care remains central to glycaemic control, complication prevention, quality of life, and long-term health-system sustainability. Recent evidence indicates that diabetes self-management support can improve selected clinical and behavioural outcomes, yet the literature remains fragmented across intervention types, psychosocial determinants, family and social support, health-literacy factors, structural barriers, and digital care models. This protocol foundation proposes a mixed-methods systematic review focused on barriers and facilitators to diabetes self-care among adults with type 2 diabetes. The review is designed to retrieve and screen a minimum of 150 recent peer-reviewed studies published from 2021 onward across PubMed/MEDLINE, Scopus, Web of Science Core Collection, Embase, CINAHL, and PsycINFO. The planned review will map the evidence landscape, identify empirical and implementation-sensitive determinants of self-care, assess methodological and contextual gaps, and generate a publishable synthesis relevant to clinical practice, programme design, and policy. Eligibility criteria, search architecture, study-selection procedures, data-extraction variables, quality-appraisal methods, and mixed-methods synthesis plans are specified in line with PRISMA 2020 and PRISMA-P guidance. The protocol is structured to support submission to a Scopus-indexed journal and prospective registration in PROSPERO, where eligible.

Important scope note. This document is a protocol-ready foundation informed by current high-quality guidelines and representative recent review evidence. It provides a search architecture deliberately calibrated to retrieve a minimum of 150 recent peer-reviewed studies on diabetes self-care/self-management published from 2021 to the search date in 2026 across multiple databases, with scope for a larger yield after database-specific expansion, citation chaining, and deduplication. Because a full database export, deduplication log, and title/abstract screening archive are not available inside this workspace, the evidence map below is a rigorous protocol-facing synthesis of current evidence signals rather than a line-by-line appendix of 150 individually screened records.

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1. WORKING TITLE

Barriers, facilitators, and implementation-sensitive determinants of diabetes self-care among adults with type 2 diabetes: a systematic review protocol foundation.

2. SCHOLARLY INTRODUCTION AND REVIEW FRAMING

Diabetes remains one of the most consequential chronic conditions in global public health. The World Health Organization reports that the number of people living with diabetes rose from 200 million in 1990 to 830 million in 2022, with faster growth in low- and middle-income countries than in high-income settings. The International Diabetes Federation further estimates that 589 million adults aged 20-79 years were living with diabetes worldwide in 2024, projects this burden to rise to 853 million by 2050, and estimates 3.4 million diabetes-related deaths in 2024 alongside at least USD 1 trillion in health expenditure (International Diabetes Federation [IDF], 2025; World Health Organization [WHO], 2024).

Within this burden profile, diabetes self-care is not an optional adjunct to clinical treatment; it is a central mechanism through which glycaemic control, complication prevention, quality of life, and service efficiency are achieved. Self-care spans medication adherence, healthy eating, physical activity, self-monitoring of blood glucose, foot care, problem-solving, clinic attendance, and coping with the psychosocial workload of chronic illness. The ADA-led consensus report on diabetes self-management education and support (DSMES) positions structured self-management support as essential because it builds the knowledge, skills, and confidence required for day-to-day diabetes control (Powers et al., 2020).

Recent evidence suggests that self-management interventions can improve glycaemic outcomes, yet the literature is no longer well served by a generic question of whether self-management matters. Digital interventions appear feasible and modestly effective for HbA1c reduction in adults with type 2 diabetes, DSME in low- and middle-income countries is associated with improved glycaemic and psychosocial outcomes, and mHealth-delivered DSMES shows modest but clinically relevant effects in pooled analyses (Chowdhury et al., 2024; Kerr et al., 2024; Versluis et al., 2025). At the same time, review-level evidence points to unresolved fragmentation across behavioral domains, social support, implementation context, outcome measurement, and health-system constraints (Busebaia et al., 2023; Nsobundu et al., 2024).

That combination matters for evidence synthesis. The field now contains many intervention studies and several focused reviews, but it remains conceptually diffuse. Some reviews center on digital tools, some on family support, some on educator-led programmes, some on foot-care education, and others on regional intervention effectiveness. What remains insufficiently synthesized is how barriers and facilitators operate across social, psychological, cultural, structural, and service-delivery levels to shape real-world self-care, particularly for adults with type 2 diabetes, the population with the greatest public health burden. A high-value review therefore needs to move beyond a broad intervention inventory toward an implementation-sensitive synthesis that can explain why self-care succeeds or fails across contexts (Busebaia et al., 2023; Kerr et al., 2024; Nsobundu et al., 2024).

3. SEARCH STRATEGY FRAMEWORK FOR THE 150-ARTICLE EVIDENCE BASE

3.1 Databases

The core databases should be PubMed/MEDLINE, Scopus, Web of Science Core Collection, Embase, CINAHL, and PsycINFO. PubMed/MEDLINE is essential for biomedical and diabetes-specific indexing; Scopus and Web of Science strengthen multidisciplinary coverage and citation tracking; Embase improves retrieval of international and pharmacological literature; CINAHL captures nursing and self-management education studies; PsycINFO is important for psychosocial, behavioral, self-efficacy, distress, and adherence research.

3.2 Main Search Concepts

- Population: adults with diabetes, preferably adults with type 2 diabetes
- Core phenomenon: diabetes self-care / self-management / self-management education and support
- Domains: medication adherence, diet, physical activity, blood glucose monitoring, foot care, appointment keeping, problem-solving, coping
- Determinants: barriers, facilitators, self-efficacy, health literacy, distress, depression, family support, socioeconomic and structural factors
- Intervention/process terms where needed: DSME, DSMES, mHealth, telehealth, app-based support, nurse-led programmes, pharmacist-led support

3.3 Search Terms

Illustrative keywords and controlled vocabulary should include: Diabetes Mellitus, Type 2 Diabe-

tes Mellitus, Self Care, Self-Management, Self-Management Education, Self-Management Support, Treatment Adherence and Compliance, Medication Adherence, Diet Therapy, Exercise, Blood Glucose Self-Monitoring, Foot Care, Health Literacy, Self Efficacy, Social Support, Family Support, Diabetes Distress, Depression, barriers, facilitators, determinants, implementation, telemedicine, mobile health, mHealth, digital health, and patient education.

3.4 Sample PubMed Search String

("Diabetes Mellitus, Type 2"[Mesh] OR "type 2 diabetes" OR T2DM OR diabetes) AND ("Self Care"[Mesh] OR "self-management" OR "self care" OR DSME OR DSMES OR "self-management education" OR "self-management support") AND ("Medication Adherence"[Mesh] OR adherence OR diet OR nutrition OR exercise OR physical activity OR "blood glucose self-monitoring" OR SMBG OR "foot care" OR "clinic attendance" OR coping) AND (barrier* OR facilitator* OR determinant* OR "health literacy" OR "self efficacy" OR "social support" OR family OR distress OR depression OR implementation OR mHealth OR telehealth OR digital) Filters: English; Humans; 2021:2026[pdat]; Journal Article

3.5 Sample Scopus Search String

To achieve a minimum retrieval threshold of 150 recent studies, the search will use a multilayered strategy: (1) broad core searches in PubMed/MEDLINE, Scopus, Web of Science, Embase, CINAHL, and PsycINFO; (2) database-specific subject headings and proximity operators; (3) backward and forward citation searching of sentinel reviews; and (4) targeted supplementary searches for specific self-care domains such as diet, medication adherence, physical activity, blood glucose monitoring, foot care, psychosocial burden, family support, health literacy, and digital self-management support. Search limits will be set to 1 January 2021 through the final search date in 2026, English language, human studies where applicable, and peer-reviewed journal articles/reviews. The operational aim is to retrieve at least 150 eligible recent studies after title/abstract screening, not merely 150 raw search hits.

3.6 Search Limits

Table 1. Search Limits for the Minimum 150-Study Retrieval Framework

Parameter	Planned limit
Publication years	1 January 2021 to search date in 2026 for the core evidence map
Language	English; note as limitation
Population	Humans; adults aged 18 years and above
Source type	Peer-reviewed journal articles and systematic reviews
Quality expectation	Indexed in major databases; avoid predatory or obviously low-credibility outlets

4. ELIGIBILITY CRITERIA FOR THE EVIDENCE-MAPPING PHASE

Table 2. Eligibility Criteria for the Evidence-Mapping Phase

Criterion	Include	Exclude
Population	Adults with diabetes, preferably type 2 diabetes	Children/adolescents unless separately justified; gestational diabetes-only studies
Phenomenon	Self-care, self-management, DSME/DSMES, adherence, or determinants of self-management	Studies with no explicit self-management or self-care component
Study designs	Systematic reviews, RCTs, quasi-experimental, cohort, case-control, cross-sectional, mixed-methods, qualitative	Editorials, letters, conference abstracts, commentaries, theses without peer review
Outcomes	HbA1c, self-care behavior, self-efficacy, quality of life, distress, adherence, implementation/process outcomes	Purely biochemical or pharmacologic studies with no self-care relevance
Years	2021-2026 search window	Studies before 2021 for the core map, except seminal methods or measurement papers
Settings	All settings; subgroup emphasis on LMICs and sub-Saharan Africa	None by geography at search stage

Current review-level evidence indicates a mature but uneven field. Broadly, the literature supports

diabetes self-management as clinically meaningful, but the strongest evidence is concentrated in selected domains such as DSME delivery, digital interventions, and structured educator-led programmes. Thematically, the field shows consistent benefit signals for glycaemic control, but weaker and less consistently reported evidence for long-term adherence, quality of life, and sustained implementation (Chowdhury et al., 2024; Kerr et al., 2024; Polsook et al., 2024; Sun et al., 2025).

5.1 Levels and patterns of diabetes self-care practice

Across recent studies, self-care is rarely uniform across domains. Patients may perform comparatively better in medication taking than in diet, exercise, foot care, or glucose monitoring. This domain-specific pattern helps explain why global self-care summary scores can conceal clinically important weaknesses. The evidence base is therefore stronger on whether some self-care happens than on whether balanced, sustained self-management occurs across all required domains.

5.2 Determinants of self-care behavior

DSMES remains one of the most consistently supported approaches in the literature. The ADA consensus report frames DSMES as a core component of adult type 2 diabetes care, while recent reviews continue to show improvement in HbA1c and patient-reported outcomes. However, the more mature question is no longer whether DSMES works in principle; it is which models work best, for whom, in what contexts, and with what implementation supports (Powers et al., 2020; Chowdhury et al., 2024; Sun et al., 2025).

5.3 Psychosocial influences and patient beliefs

Psychological burden remains underappreciated relative to glycaemic endpoints. Diabetes distress, depressive symptoms, illness perception, and confidence in self-management are recurrent explanatory factors, and recent evidence links emotional burden to poorer self-management and less adaptive illness perceptions. This suggests that reviews centered only on education or information transfer risk underestimating the role of psychosocial context.

5.4 Health literacy, education, and DSMES

DSMES remains one of the most consistently supported approaches in the literature. The ADA consensus report frames DSMES as a core component of adult type 2 diabetes care, while meta-analytic evidence from recent reviews continues to show improvement in HbA1c and patient-reported outcomes. However, the more mature question is no longer whether DSMES works in principle; it is which models work best, for whom, in what contexts, and with what implementation supports.

5.5 Family and social support

Family support is repeatedly identified as a practical enabler of adherence, particularly for diet, medication routines, monitoring, and emotional coping. The 2023 umbrella review by Busebaia et al. concluded that family involvement can improve adherence to diabetes self-care management practices, but also noted that the literature varies in how support is conceptualized and measured. This variability strengthens the case for a review that integrates social support within a wider barriers-and-facilitators framework rather than treating it as an isolated variable (Busebaia et al., 2023).

5.6 Structural and health-system barriers

Evidence from low-resource settings increasingly points to affordability, medicine availability, travel burden, fragmented follow-up, and limited continuity of counseling as central constraints on self-care. These factors are especially important in LMIC settings, where the diabetes burden is rising quickly but treatment coverage and self-management support remain uneven (WHO, 2024; IDF, 2025).

5.7 Digital and technology-supported self-management

Digital interventions, including mHealth and app-based support, now have a sizeable evidence base. Recent systematic reviews indicate modest beneficial effects on HbA1c and acceptable feasibility, especially when technology is paired with coaching, feedback, or human support rather than functioning as a stand-alone digital prompt (Kerr et al., 2024; Versluis et al., 2025).

5.8 Intervention effectiveness and sustainability

Recent meta-analyses support the short-term effectiveness of self-management interventions, including nurse-led programmes and region-specific interventions in sub-Saharan Africa. However, heterogeneity in programme content, follow-up duration, implementation fidelity, and contextual adaptation still limits direct comparison across studies (Chowdhury et al., 2024; Polsook et al., 2024; Sun et al., 2025; Yimer et al., 2025).

5.9 Population and setting disparities

Important disparities remain across age group, geography, socioeconomic status, and care setting. Reviews suggest that older adults can benefit from self-management programmes, but the intervention mix matters. Young adults with type 2 diabetes appear comparatively under-served, and many digital or technology-heavy studies are still concentrated in better-resourced settings. Evidence from sub-Saharan Africa and other LMICs is growing but remains thinner than evidence from high-income countries.

6. GAP ANALYSIS

Empirical gaps

There is abundant evidence that self-management interventions can improve HbA1c, but less clarity on how different barriers and facilitators interact across domains such as medication, diet, physical activity, and glucose monitoring. Quality of life, treatment burden, and sustainability are often underreported relative to glycaemic endpoints.

Methodological gaps

The literature mixes RCTs, observational studies, qualitative studies, and review-level syntheses but often without an integrating framework. Outcome definitions, self-care measures, follow-up periods, and intervention components vary substantially. The continued reliance on self-reported adherence scales, often without harmonized thresholds, limits comparability.

Theoretical gaps

Many studies invoke theory lightly or retrospectively rather than using a clearly specified behavioral framework to guide intervention design, analysis, or synthesis. Self-efficacy and health belief constructs appear often, yet the field still lacks enough theoretically integrated reviews that explain mechanisms rather than merely associations.

Geographical and contextual gaps

Evidence remains disproportionately shaped by higher-income contexts even though diabetes burden is rising rapidly in LMICs. Reviews from sub-Saharan Africa are emerging, but context-sensitive synthesis remains limited, especially where poverty, transport barriers, medication affordability, and constrained primary-care infrastructure affect day-to-day self-care (Chowdhury et al., 2024; IDF, 2025; WHO, 2024; Yimer et al., 2025).

Population gaps

Adults with type 2 diabetes are well represented overall, but important subgroups remain comparatively under-synthesized, including young adults with type 2 diabetes, older adults requiring tailored support, people with multimorbidity, and populations with limited digital access or low literacy.

Measurement gaps

Different studies use different instruments for self-care, knowledge, self-efficacy, distress, and adherence. This makes pooled interpretation difficult and weakens cross-study comparison. It also means some reviews can estimate effect size for HbA1c while remaining much less certain about behavioral change itself.

Intervention gaps

The evidence base is crowded with multicomponent interventions, yet the active ingredients are often unclear. Reviews frequently show that programmes work, but are less able to isolate whether the critical driver is education intensity, relational support, feedback, digital prompts, family involvement, or service redesign.

Implementation gaps

Process evaluation and implementation reporting remain weak. Recent scoping work specifically notes the need for stronger process evaluations of diabetes self-management programmes, clearer use of implementation frameworks, and better reporting of reach, fidelity, contextual adaptation, and mechanisms of action (Nsobundu et al., 2024).

Policy and practice gaps

Policy-makers and service leaders need synthesis that translates evidence into programme design in routine care, especially where clinics are overstretched and patients face transport, cost, or medicine-supply barriers. Current evidence is not yet synthesized in a way that fully supports pragmatic service redesign.

Review-level gaps

Several focused reviews already exist, but they are topic-fragmented: digital interventions, family support, nurse-led education, foot-care education, older adults, and regional intervention reviews. What remains insufficiently synthesized is an implementation-sensitive review of barriers and facilitators to self-care in adults with type 2 diabetes across contexts.

7. JUSTIFICATION FOR A NEW SYSTEMATIC REVIEW

A new systematic review is justified because the field has moved beyond proof-of-concept. The unresolved problem is no longer whether diabetes self-management matters, but which barriers and facilitators most strongly shape real-world self-care across diverse contexts and how these determinants interact across individual, interpersonal, and health-system levels. Existing reviews are valuable but too fragmented by intervention type, support source, region, or single self-care domain to answer that integrative question adequately (Busebaia et al., 2023; Kerr et al., 2024; Nsobundu et al., 2024).

That gap is timely, relevant, and reviewable. It is timely because diabetes burden continues to rise and because treatment coverage and self-management support remain especially weak in many lower-resource settings. It is relevant because health systems need implementation-ready evidence rather than another broad affirmation that self-management is beneficial. It is reviewable because

recent literature is now large enough to support a rigorous mixed-methods synthesis with a deliberately broad search expected to retrieve at least 150 recent studies for mapping and formal screening (IDF, 2025; WHO, 2024).

The proposed review would contribute original value by integrating behavioral, psychosocial, family, health-literacy, digital, and structural factors into one evidence architecture. This would make the review attractive to a Scopus-indexed journal because it addresses a clinically important, globally relevant, and methodologically coherent question with strong implications for programme design, patient support, and health-system adaptation.

8. REVIEW TOPIC DEVELOPMENT

- Recommended topic: Barriers and facilitators to diabetes self-care among adults with type 2 diabetes: a mixed-methods systematic review.
- Alternative 1: Determinants of sustained adherence to diabetes self-management behaviors among adults with type 2 diabetes: a systematic review.
- Alternative 2: Health literacy, self-efficacy, and social support as predictors of diabetes self-care in adults with type 2 diabetes: a systematic review and narrative synthesis.
- Alternative 3: Implementation characteristics of diabetes self-management support interventions for adults with type 2 diabetes in low- and middle-income countries: a systematic review.

The strongest option is the mixed-methods review of barriers and facilitators among adults with type 2 diabetes. It has the best balance of novelty, public health importance, literature availability, and publication potential. It is more original than another broad efficacy review, broader and more useful than a single-domain review, and more transferable to programme design than a purely digital or educator-led review.

FULL SYSTEMATIC REVIEW PROTOCOL

9. PROTOCOL TITLE

Barriers and facilitators to diabetes self-care among adults with type 2 diabetes: a mixed-methods systematic review protocol.

10. BACKGROUND

Adults with type 2 diabetes must perform numerous daily self-management tasks outside formal clinical settings. These include medication use, dietary regulation, physical activity, glucose monitoring, foot care, symptom interpretation, and sustained engagement with follow-up care. Although this is well established, recent evidence shows that successful self-care depends not only on individual motivation or knowledge but also on social support, emotional burden, access to supplies and medication, health-system responsiveness, and the usability of digital or educational support models (Busebaia et al., 2023; Chowdhury et al., 2024; Kerr et al., 2024; Versluis et al., 2025). This fragmentation matters because implementation decisions are made in real service environments rather than under ideal trial conditions. Reviews focused narrowly on intervention efficacy do not fully explain why self-care programmes are taken up, sustained, or abandoned in routine practice. Process-review evidence shows that implementation mechanisms remain underreported, while family-support and digital-health reviews show that context, responsiveness, and human support meaningfully shape outcomes (Busebaia et al., 2023; Kerr et al., 2024; Nsobundu et al., 2024).

11. RATIONALE

The review is necessary because there is no single recent synthesis that integrates patient-level, interpersonal, and system-level barriers and facilitators to diabetes self-care among adults with type 2 diabetes while remaining explicitly implementation-sensitive. A mixed-methods systematic review can address that gap by synthesizing both quantitative associations and qualitative explanations in one coherent evidence architecture.

12. OBJECTIVE

Primary objective: To synthesize evidence on the barriers and facilitators influencing diabetes self-care among adults with type 2 diabetes.

Secondary objectives: (1) To classify barriers and facilitators by individual, interpersonal, community, health-system, and structural levels; (2) to compare patterns across settings, including LMICs versus high-income settings where feasible; and (3) to identify implementation implications for routine diabetes care and support programmes.

13. REVIEW QUESTIONS

Main review question: What barriers and facilitators influence diabetes self-care among adults with type 2 diabetes?

Subquestions: Which factors recur most consistently across studies? How do psychosocial, family, health-literacy, and structural determinants interact? Which contextual factors appear most important for implementation in routine care?

Framework choice: PICO is the best fit because the review focuses on a population (adults with type 2 diabetes), a phenomenon of interest (barriers and facilitators to self-care), and context (rou-

tine care and real-world community/health-system settings), rather than a narrowly bounded intervention-comparator trial question.

14. ELIGIBILITY CRITERIA FOR THE SYSTEMATIC REVIEW

Table 3. Eligibility Criteria for the Proposed Systematic Review

Element	Specification
Population	Adults aged 18 years and above with type 2 diabetes mellitus
Phenomenon of interest	Barriers and/or facilitators influencing diabetes self-care/self-management
Context	Any healthcare or community setting, including primary care, hospital outpatient care, community programmes, and digital care settings
Outcomes	Self-care performance, adherence, self-efficacy, distress, quality of life, glycaemic outcomes where linked to self-care, implementation/process findings
Study designs	Quantitative, qualitative, and mixed-methods primary studies; systematic reviews may inform background but not primary synthesis unless review-of-reviews is chosen
Timeframe	Studies published from 2021 onward
Language	English
Publication status	Peer-reviewed full-text articles

15. INFORMATION SOURCES

Electronic databases will include PubMed/MEDLINE, Scopus, Web of Science Core Collection, Embase, CINAHL, and PsycINFO. Additional searching will include backward reference searching of included studies and relevant reviews, forward citation chasing in Scopus and Web of Science, hand-searching of key diabetes and self-management journals where needed, and targeted supplementary searches to ensure a minimum screened pool of 150 recent studies.

16. SEARCH STRATEGY

The search strategy will be developed iteratively from the review question, sentinel papers, and controlled vocabulary terms. It will be piloted in PubMed and Scopus, refined to maximize sensitivity, translated across databases, and documented in full for transparency and reproducibility. The strategy will be intentionally broad at the mapping stage to increase the likelihood of retrieving well above 150 recent records before deduplication and to retain at least 150 eligible recent studies for the final evidence map where feasible.

17. STUDY SELECTION PROCESS

Search results will be exported to a reference manager and deduplicated before screening. Two reviewers will independently screen titles and abstracts against predefined eligibility criteria, followed by full-text assessment of potentially eligible records. Disagreements will be resolved through discussion or adjudication by a third reviewer. Reasons for full-text exclusion will be recorded, and the final selection process will be presented in a PRISMA 2020 flow diagram.

18. DATA EXTRACTION

A standardized extraction form will capture: author, year, country, setting, study aim, design, sample characteristics, diabetes type, self-care domain, barrier/facilitator category, theoretical framework, measurement tools, key findings, outcomes, implementation observations, limitations, and author conclusions relevant to self-care. Extraction will be piloted on a small sample of studies and refined before full extraction.

19. QUALITY APPRAISAL / RISK OF BIAS ASSESSMENT

Because the proposed review is mixed-methods in orientation, the Mixed Methods Appraisal Tool (MMAT) is the most defensible primary appraisal instrument for diverse study designs. If the final corpus is dominated by intervention trials or cohort studies, supplementary use of RoB 2 for randomized studies and ROBINS-I for non-randomized intervention studies may be considered. This combination supports design-appropriate assessment while preserving comparability across a heterogeneous evidence base.

20. DATA SYNTHESIS PLAN

A convergent integrated mixed-methods synthesis is recommended. Quantitative findings will be

narratively summarized and grouped by barrier/facilitator category, while qualitative findings will be thematically synthesized and integrated into a unified conceptual matrix. Meta-analysis is unlikely to be the primary synthesis strategy because the expected studies will vary in design, measures, and reported outcomes. However, limited quantitative pooling may be considered for sufficiently homogeneous subgroups, such as studies reporting common associations between a specific determinant and a standardized self-care or HbA1c outcome.

21. OUTCOMES OF INTEREST

Primary outcomes: reported barriers and facilitators influencing diabetes self-care behaviors among adults with type 2 diabetes.

Secondary outcomes: self-care adherence scores, HbA1c where linked to self-care processes, self-efficacy, diabetes distress, quality of life, implementation indicators, and contextual factors affecting programme uptake or sustainability.

22. HETEROGENEITY AND SUBGROUP CONSIDERATIONS

Heterogeneity will be explored by diabetes duration where available, age group, sex, geographic region, income setting, healthcare setting, self-care domain, and measurement method. Particular analytic attention will be given to the contrast between high-resource and resource-constrained settings because structural feasibility may fundamentally shape self-care behavior.

23. PUBLICATION BIAS AND META-BIAS

Formal publication-bias assessment will be undertaken only if quantitative pooling includes a sufficient number of comparable studies. Where meta-analysis is not feasible, risk of meta-bias will be addressed narratively through attention to selective outcome reporting, overrepresentation of high-income settings, and the likelihood that positive intervention studies are more likely to be published than null or implementation-focused studies.

24. CERTAINTY OR CONFIDENCE IN THE EVIDENCE

If quantitative pooling is conducted, GRADE will be used to assess certainty of evidence for major quantitative findings. For qualitative or mixed qualitative themes, GRADE-CERQual may be considered if the final synthesis structure supports it. This dual approach is methodologically coherent for a mixed-methods review that may generate both effectiveness-oriented and explanatory conclusions.

25. REPORTING STANDARD

The protocol will be prepared in line with PRISMA-P 2015 and the completed review will be reported according to PRISMA 2020 (Page et al., 2021; PRISMA Statement, 2025; Shamseer et al., 2015).

26. REGISTRATION

The protocol is intended to be prospectively registered in PROSPERO, provided the final review question and methods meet PROSPERO eligibility for systematic reviews with outcomes of direct relevance to human health (PROSPERO, 2026).

27. ETHICAL CONSIDERATIONS

Ethical approval is not required for the systematic review itself because it synthesizes data already available in published literature and does not involve direct recruitment of human participants. Ethical considerations remain relevant, however, in relation to transparent reporting, conflict disclosure, and accurate representation of the included evidence.

28. EXPECTED CONTRIBUTION OF THE REVIEW

Academically, the review will consolidate a fragmented field and provide a clearer conceptual map of self-care determinants in type 2 diabetes. Clinically, it can support more tailored patient support strategies. From a public health and policy perspective, it can help shift attention from patient blame toward modifiable structural and service-delivery barriers that constrain self-care. For programme design, it can identify leverage points for diabetes education, counseling, family engagement, and service redesign.

29. CONCEPTUAL AND THEORETICAL FRAMING

The most suitable overarching lens is the COM-B model, supported by constructs from Self-Efficacy Theory and the Health Belief Model where relevant. COM-B is especially useful because it organizes self-care determinants into capability, opportunity, and motivation, which maps well onto the current evidence base: knowledge and literacy fit capability; family support and service access fit opportunity; distress, beliefs, and confidence fit motivation. This makes COM-B particularly suitable for an implementation-sensitive synthesis.

30. JOURNAL POSITIONING

Suitable protocol outlets include BMJ Open, Systematic Reviews, JBI Evidence Synthesis, and other peer-reviewed journals that publish protocol papers in evidence synthesis and public health. Suitable journals for the completed review include Diabetes Care, Diabetic Medicine, Primary Care Diabetes, BMC Public Health, BMJ Open, Frontiers in Public Health, and implementation-oriented or chronic disease journals whose scope includes self-management, patient education, and service delivery. The strongest fit will depend on whether the final review emphasizes behavioral determinants, mixed-methods synthesis, or implementation relevance in routine care.

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