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# Prevalence of Subjective Cognitive Decline among Adults with Diabetes: A Systematic Review and Meta-Analysis

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**Corresponding author:**
Hui-chuan Huang

huichuan@tmu.edu.tw

**Author Affiliation:**
School of nursing, college of nursing, Taipei medical university, Taipei, Taiwan.

Sriprasert, K, Subpaiboonkit, R, Huang, HC.

**ADMINISTRATIVE INFORMATION**

**Support -** This study did not receive any grant from funding agencies in the public, commercial, or non-profit sector.

**Review Stage at time of this submission -** The review has not yet started.

**Conflicts of interest -** None declared.

**INPLASY registration number:** INPLASY202650024

**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 6 May 2026 and was last updated on 6 May 2026.

## INTRODUCTION

**Review question / Objective** Review question: What is the pooled prevalence of Subjective Cognitive Decline among adults with diabetes?
Objective: The study aims to examine the pooled prevalence of Subjective Cognitive Decline among with adults with diabetes using meta-analysis techniques.

**Rationale** Diabetes is a major global health burden and is increasingly associated with cognitive decline, including early-stage of changes. Subjective cognitive decline (SCD) represents the earliest stage in the cognitive decline continuum preceding mild cognitive impairment and progressive dementia. However, existing studies have reported substantial variability in the prevalence of SCD among adults with diabetes. This variability may be attributed to differences in study characteristics, including country classification, data sources, and assessment methods. Currently, there is a lack of comprehensive quantitative synthesis examining the prevalence of SCD among adults with diabetes. Therefore, this systematic review and meta-analysis will be conducted to quantify the burden of SCD to inform early detection and prevention in diabetes routine care.

**Condition being studied** This review will focus on subjective cognitive decline (SCD) among adults with diabetes. SCD id defined as self-perceived worsening in on or more cognitive domains despite normal cognitive objective assessments. It is considered an early stage of cognitive decline that may precede mild cognitive impairment and dementia.

## METHODS

**Search strategy** A searching strategies will be conducted in PubMed, Embase, CINAHL, Scopus, and Web of Science.

The search term will included specific term (e.g., MeSH, Emtree, CINAHL heading) and free-text terms related to diabetes and subjective cognitive decline. Keywords will include "diabetes", “Subjective cognitive decline”, “Subjective cognitive complaint”, “Subjective memory decline”, “Subjective memory complaint”, “Subjective memory loss”, “Cognitive dysfunction”, and “adult”. Boolean operators (“AND”, “OR”) will be used to combine search terms. Additionally, Thai journal Online (ThaiJo) will be manually searched to identify relevant regional studies.

**Participant or population** This review will include studies involving adults aged 18 years or older with diabetes.

**Intervention** Not applicable.

**Comparator** Not applicable.

**Study designs to be included** Observational studies, including cross-sectional, cohort, and case-control studies that report the prevalence of subjective cognitive decline among adults with diabetes will be included.

**Eligibility criteria** Studies will be included if they:
1. Adults over 18 years with diabetes
2. Report the prevalence of SCD based in self-reported cognitive decline
3. Using observational studies and written in English.

Exclusion
1. Do not provide sufficient data to estimate prevalence
2. Assess only objective cognitive function assessment without subjective measures.
3. Have unavailable full texts.

**Information sources** Electronic databases to be searched will included PubMed, Embase, CINAHL, Scopus, and Web of Science
Additional source will include Thai journal Online (THaiJo) and manual searches of relevant references.

**Main outcome(s)** The primary outcome will be the prevalence of subjective cognitive decline among adults with diabetes, defined as the proportion of adults reporting SCD within each study population.

**Additional outcome(s)** Not applicable.

**Data management** All identified records will be imported into EndNote (version 21) for data management and duplicate removal. Two independent researchers will screen titles, abstracts, and full-text articles according to predefined eligibility criteria. Data extraction will be conducted independently using a standardised form. Any disagreements will be resolved through discussion or consultation with a third researcher.

**Quality assessment / Risk of bias analysis** The methodological quality of included studies will be assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies. Each study will be evaluated across eight domains, and overall quality will be categorised as good, moderate, or poor based on the proportion of “Yes” responses. Two researchers will independently assess study quality.

**Strategy of data synthesis** Data will be analysed using Comprehensive Meta-Analysis (CMA) version 3.0. The pooled prevalence of SCD will be estimated using a random-effects model. Heterogeneity will be assessed using Cochran’s Q statistic and $I^2$ statistics. Subgroup analyses and meta-regression will be conducted to explore potential sources of heterogeneity. Publication bias will be assessed using Egger’s regression test and Begg’s rank correlation test.

**Subgroup analysis** Subgroup analyses will be conducted based on:
– Data source
– Country classification
– SCD assessment method.

**Sensitivity analysis** Sensitivity analyses will be conducted, where appropriate, to examine the robustness of the findings.

**Language restriction** Only studies published in English will be included.

**Country(ies) involved** Taiwan.

**Other relevant information** The first and second authors have dual affiliations with the School of Nursing, College of Nursing, Taipei Medical University, Taipei, Taiwan, and the Faculty of Nursing, Chiang Mai University, Chiang Mai, Thailand. The corresponding author is primarily affiliated with the School of Nursing, College of Nursing, Taipei Medical University, Taipei, Taiwan.

**Keywords** diabetes; subjective cognitive decline; prevalence; meta-analysis, adult, assessment, screening.

**Dissemination plans** The findings of this systematic review and meta-analysis will be submitted to a peer reviewed journal and presented at relevant academic conferences.

**Contributions of each author**

Author 1 - KORAWIT SRIPRASERT - Writing-review & editing, Writing-original draft, Supervision, Methodology, Formal analysis, data curation, conceptualization.
Email: d432114010@tmu.edu.tw
Author 2 - Ramida Subpaiboonkit - Investigation.
Email: d432112019@tmu.edu.tw
Author 3 - Hui-chuan Huang - Writing-review & editing, Writing-original draft, Supervision, Methodology, Investigation, Data curation, Formal analysis, Conceptualization.
Email: huichuan@tmu.edu.tw