

Data S1

Complete electronic search strategies. The electronic search strategy was developed in collaboration with an information specialist and followed PRISMA-S recommendations for transparent reporting of systematic review searches. Searches were conducted from database inception up to May 2025 without language restrictions. The search combined controlled vocabulary terms (MeSH/Emtree) and free-text keywords associated with cardiac surgery, perioperative neurocognitive disorder/postoperative cognitive dysfunction and Mini-Mental State Examination (MMSE). Reference lists of reviews and included studies were also screened to identify additional eligible articles.

PubMed/MEDLINE search strategy. ['Cardiac Surgical Procedures'(MeSH) OR 'cardiac surgery' OR 'heart surgery' OR 'coronary artery bypass' OR 'CABG' OR 'cardiopulmonary bypass' OR 'valve surgery' OR 'aortic surgery'] AND ['Postoperative Cognitive Dysfunction'(MeSH) OR 'postoperative cognitive dysfunction' OR 'POCD' OR 'perioperative neurocognitive disorder*' OR 'postoperative cognitive decline' OR 'cognitive impairment after surgery'] AND ['Mini-Mental State Examination'(MeSH) OR 'MMSE' OR 'mini mental state examination'].

Embase (Elsevier) search strategy. ('Cardiac surgery'/exp OR 'cardiac surgery' OR 'heart surgery' OR 'coronary artery bypass graft' OR CABG OR 'cardiopulmonary bypass' OR 'valve surgery') AND ('postoperative cognitive dysfunction'/exp OR 'postoperative cognitive dysfunction' OR POCD OR 'perioperative neurocognitive disorder' OR 'postoperative cognitive decline') AND ('mini mental state examination'/exp OR MMSE OR 'mini mental state examination').

CINAHL (EBSCOhost). (MH 'Cardiac Surgical Procedures' OR 'cardiac surgery' OR 'heart surgery' OR CABG OR 'cardiopulmonary bypass') AND (MH 'Postoperative Cognitive Dysfunction' OR 'postoperative cognitive dysfunction' OR POCD OR 'perioperative neurocognitive disorder') AND (MH 'Mini Mental State Examination' OR MMSE OR 'mini mental state examination').

Cochrane library (CENTRAL). ('Cardiac surgery' OR 'heart surgery' OR CABG OR 'cardiopulmonary bypass') AND ('postoperative cognitive dysfunction' OR POCD OR 'perioperative neurocognitive disorder' OR 'postoperative cognitive decline') AND ('mini mental state examination' OR MMSE).

PsycINFO. ('Cardiac surgery' OR 'coronary artery bypass' OR CABG) AND ('postoperative cognitive dysfunction' OR POCD OR 'perioperative neurocognitive disorder') AND ('mini mental state examination' OR MMSE).

Web of science core collection. TS=[('cardiac surgery' OR 'coronary artery bypass' OR CABG OR 'cardiopulmonary bypass') AND ('postoperative cognitive dysfunction' OR POCD OR 'perioperative neurocognitive disorder') AND ('mini mental state examination' OR MMSE)]. Indexes searched: SCI-EXPANDED, SSCI.

Scopus. TITLE-ABS-KEY [('cardiac surgery' OR 'coronary artery bypass' OR CABG OR 'cardiopulmonary bypass') AND ('postoperative cognitive dysfunction' OR POCD OR 'perioperative neurocognitive disorder') AND ('mini mental state examination' OR MMSE)].