

Cognitive Reserve, Alzheimer's Neuropathology, and Risk of Dementia: A Systematic Review and Meta-Analysis. *Neuropsychology Review*.

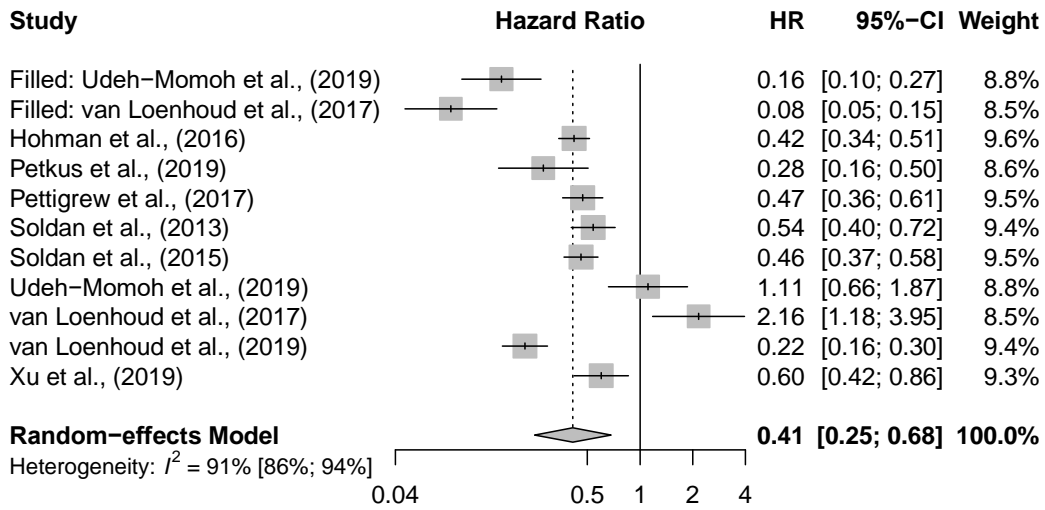
Supplemental Table 1

Search String and Results from Databases

Database	Search String	Results
Embase	(cognitive reserve':ti,ab,kw OR 'cognitive capacity':ti,ab,kw OR 'brain reserve':ti,ab,kw OR 'neural reserve':ti,ab,kw OR 'brain maintenance':ti,ab,kw OR 'residual variance':ti,ab,kw OR 'cognitive reserve'/exp) AND ('magnetic resonance imaging':ti,ab,kw OR mri:ti,ab,kw OR 'grey matter':ti,ab,kw OR 'gray matter':ti,ab,kw OR 'white matter':ti,ab,kw OR 'positron emission tomography':ti,ab,kw OR PET:ti,ab,kw OR 'beta amyloid':ti,ab,kw OR tau:ti,ab,kw OR 'nuclear magnetic resonance imaging'/de OR 'gray matter'/de OR 'white matter'/de OR 'positron emission tomography'/de OR 'amyloid beta protein'/exp OR 'tau protein'/exp) AND ('mild cognitive impairment':ti,ab,kw OR mci:ti,ab,kw OR alzheimer*:ti,ab,kw OR ad:ti,ab,kw OR dement*:ti,ab,kw OR 'mild neurocognitive disorder':ti,ab,kw OR 'major neurocognitive disorder':ti,ab,kw OR 'mild cognitive impairment'/exp OR 'Alzheimer disease'/exp) AND (transition:ti,ab,kw OR 'cognitive decline':ti,ab,kw OR 'cognitive deterioration':ti,ab,kw OR neurodegeneration:ti,ab,kw OR progress*:ti,ab,kw OR conver*:ti,ab,kw OR longitudinal:ti,ab,kw OR risk:ti,ab,kw OR incident:ti,ab,kw OR 'cognitive decline'/exp OR 'longitudinal study'/de)	461 (14)
PsycINFO	(TI ("cognitive reserve" OR "cognitive capacity" OR "brain reserve" OR "neural reserve" OR "brain maintenance" OR "residual variance") OR AB ("cognitive reserve" OR "cognitive capacity" OR "brain reserve" OR "neural reserve" OR "brain maintenance" OR "residual variance") OR DE ("Cognitive Reserve")) AND (TI (transition OR "cognitive decline" OR "cognitive deterioration" OR neurodegeneration OR progress* OR conver* OR longitudinal OR risk OR incident) OR AB (transition OR "cognitive decline" OR "cognitive deterioration" OR neurodegeneration OR progress* OR conver* OR longitudinal OR risk OR incident) OR DE ("Neurodegeneration" OR "Longitudinal Studies")) AND (TI ("magnetic resonance imaging" OR MRI OR "grey matter" OR "gray matter" OR "white matter" OR "positron emission tomography" OR PET OR "beta amyloid" OR tau) OR AB ("magnetic resonance imaging" OR MRI OR "grey matter" OR "gray matter" OR "white matter" OR "positron emission tomography" OR PET OR "beta amyloid" OR tau) OR DE ("Magnetic Resonance Imaging" OR "Gray Matter" OR "White Matter" OR "Positron Emission Tomography" OR "Beta Amyloid" OR "Tau Proteins")) AND (TI ("mild cognitive impairment" OR MCI OR Alzheimer* OR AD) OR AB ("mild cognitive impairment" OR MCI OR Alzheimer* OR AD) OR (TI dement* OR AB dement*) OR TI ("mild neurocognitive disorder" OR "major neurocognitive disorder") OR AB ("mild neurocognitive disorder" OR "major neurocognitive disorder") OR (DE "Alzheimer's Disease"))	93 (8)
PubMed	((((((((((("cognitive reserve"[Title/Abstract] OR "cognitive capacity"[Title/Abstract] OR "brain reserve"[Title/Abstract] OR "neural reserve"[Title/Abstract] OR "brain maintenance"[Title/Abstract] OR "residual variance"[Title/Abstract] OR "cognitive reserve"[Mesh]) AND ("magnetic resonance imaging"[Title/Abstract] OR "MRI"[Title/Abstract] OR "grey matter"[Title/Abstract] OR "gray matter"[Title/Abstract] OR "white matter"[Title/Abstract] OR "positron emission tomography"[Title/Abstract] OR PET[Title/Abstract] OR "beta amyloid"[Title/Abstract] OR "tau"[Title/Abstract] OR "Magnetic Resonance Imaging"[Mesh:NoExp] OR "gray matter"[Mesh] OR "White Matter"[Mesh] OR "Positron-Emission Tomography"[Mesh] OR "Amyloid beta-Peptides"[Mesh] OR "tau Proteins"[Mesh])) AND ("mild cognitive impairment"[Title/Abstract] OR MCI[Title/Abstract] OR Alzheimer*[Title/Abstract] OR AD[Title/Abstract] OR dement*[Title/Abstract] OR "mild neurocognitive disorder"[Title/Abstract] OR "major neurocognitive disorder"[Title/Abstract] OR "Alzheimer Disease"[Mesh] OR "Cognitive Dysfunction"[Mesh])))) AND (transition[Title/Abstract] OR "cognitive decline"[Title/Abstract] OR "cognitive deterioration"[Title/Abstract] OR neurodegeneration[Title/Abstract] OR progress*[Title/Abstract] OR conver*[Title/Abstract] OR risk[Title/Abstract] OR incident[Title/Abstract] OR longitudinal[Title/Abstract] OR "Disease Progression"[Mesh:NoExp])))	208 (14)
Web of Science	TS=((("cognitive reserve" OR "cognitive capacity" OR "brain reserve" OR "neural reserve" OR "brain maintenance" OR "residual variance") AND (transition OR "cognitive decline" OR "cognitive deterioration" OR progress* OR conver* OR neurodegeneration OR longitudinal OR risk OR incident) AND ("mild cognitive impairment" OR MCI OR Alzheimer* OR AD OR dement* OR "mild neurocognitive disorder" OR "major neurocognitive disorder") AND ("magnetic resonance imaging" OR MRI OR "grey matter" OR "gray matter" OR "white matter" OR "positron emission tomography" OR PET OR "beta amyloid" OR tau))	314 (18)

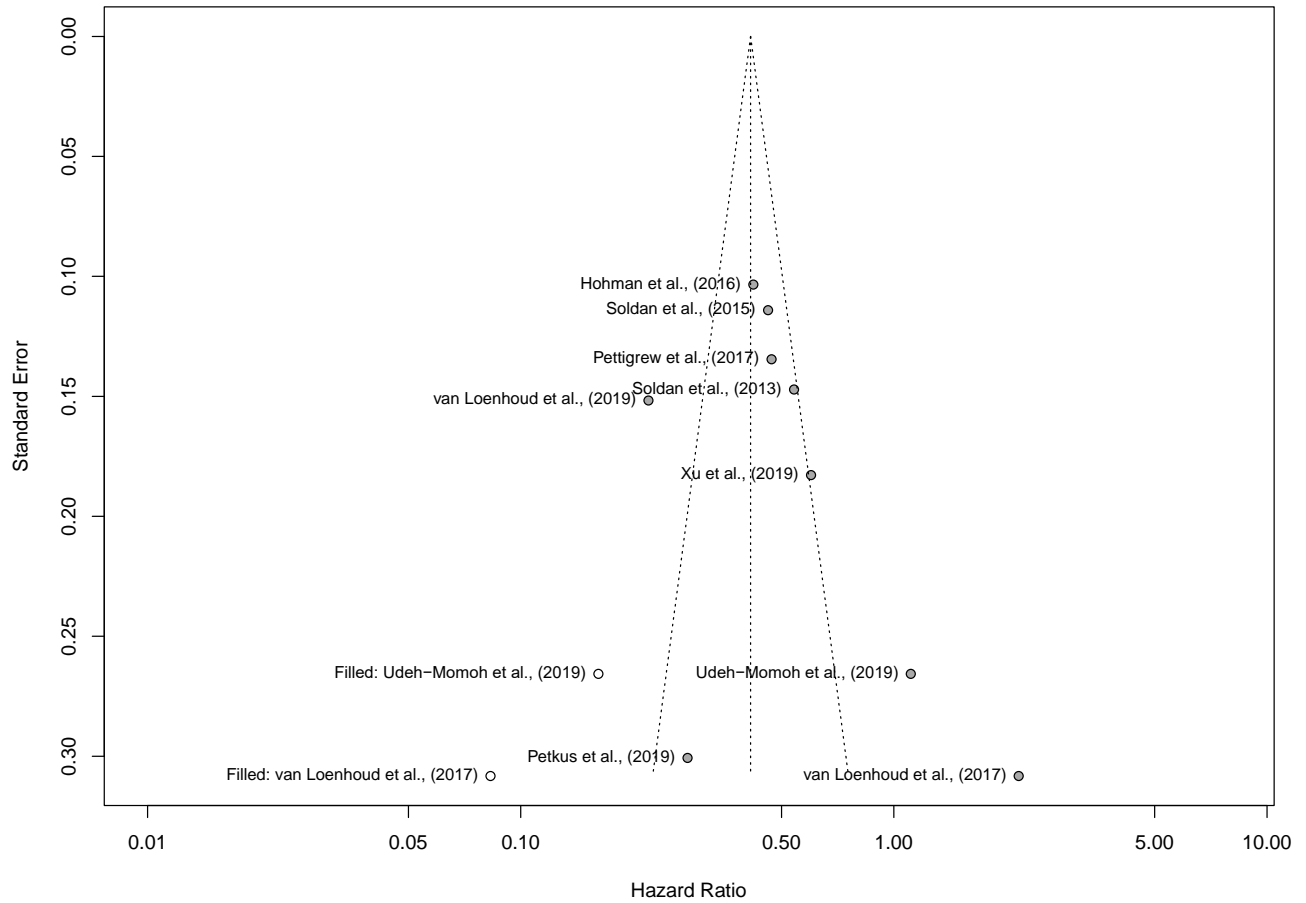
Note. Initial search was conducted on 12 February 2020. Updated search was conducted on 09 September 2020. Values in parentheses indicate additional articles identified in the updated search.

Supplemental Fig. 1 Forest plot conveying the risk of progression to MCI or all-cause dementia using the trim-and-fill procedure



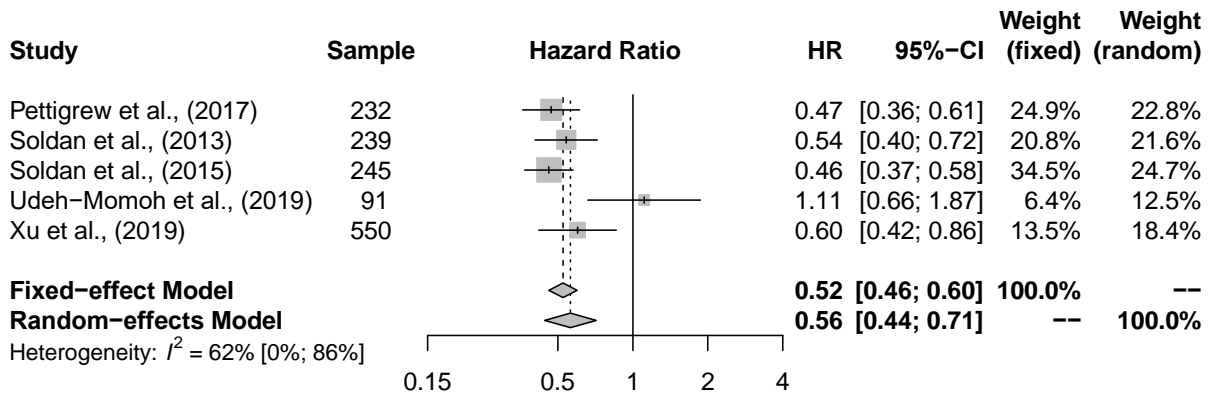
Note. Meta-analysis using Duval and Tweedie’s trim-and-fill procedure resulted in two filled studies in addition to our nine included studies

Supplemental Fig. 2 Funnel plot of the included studies to estimate publication bias using the trim-and-fill procedure



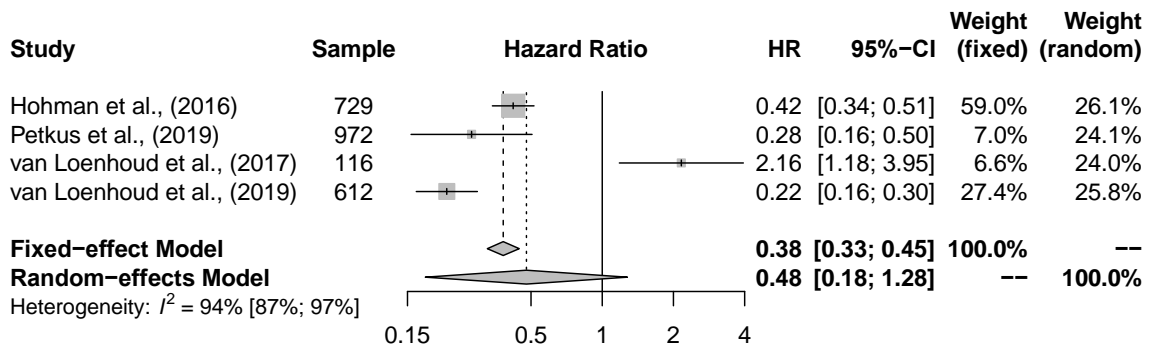
Note. Meta-analysis using Duval and Tweedie's trim-and-fill procedure resulted in two filled studies in addition to our nine included studies

Supplemental Fig. 3 Composite proxy sub-analysis forest plot



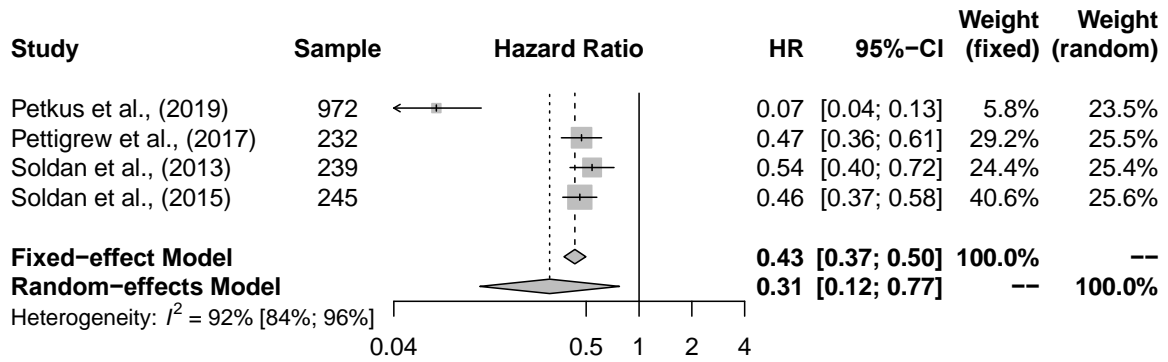
Note. Forest plot conveying the risk of progression to MCI or all-cause dementia for studies that used the composite proxy approach

Supplemental Fig. 4 Residual variance sub-analysis forest plot



Note. Forest plot conveying the risk of progression to all-cause dementia for studies that used the residual variance approach

Supplemental Fig. 5 Forest plot conveying the risk of progression to MCI



Note. Forest plot conveying the risk of progression to MCI from normal cognition