The State of the Evidence on Clinical Trials In Social Engagement: A Systematic Review Of Reviews

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Background

Social isolation, the objective absence of social contact and social activity, has been identified as a significant midlife risk factor for dementia. To date, the majority of evidence is stemming from observational studies and evidence on intervention studies is lacking.

Objective

As part of the 2026 update of the WHO guidelines on risk reduction of cognitive decline and dementia, this systematic review examined whether social activity interventions reduce the risk of cognitive functioning/decline, mild cognitive impairment (MCI), or dementia in adults 40 years and older.

Methods

Design

Umbrella review of systematic reviews and meta-analyses of randomized controlled trials (RCTs) examining social activity intervention in adults 40 years and older with normal cognition or MCI) without a history of dementia

- Medline, EMBASE, PsycINFO, Cochrane Central
- Up to January 2025
- Reviews of observational studies were included if evidence from RCTs was unavailable

Intervention

Any type of intervention with the primary objective of bringing people into contact with each other and promoting engagement in social activities.

Primary outcomes

- Incident dementia
- MCI
- Cognitive decline/functioning

Quality rating

AMSTAR-2

Certainty of evidence

GRADE profiles

Protocol registration

PROSPERO: CRD420250652234

References:

Wang, S., Molassiotis, A., Guo, C., Leung, I. S. H., & Leung, A. Y. M. (2023). Association between social integration and risk of dementia: A systematic review and meta-analysis of longitudinal studies. Journal of the American Geriatrics Society, 71(2), 632-645.

Results

- Of n=3125 identified articles, n=63 were assessed for eligibility, of which 3 were eventually included.
  - Two reviews of RCTs
  - One review of observational studies
- None of the systematic reviews of RCTs included MCI or dementia as outcome, instead these included various cognitive tests and domains.

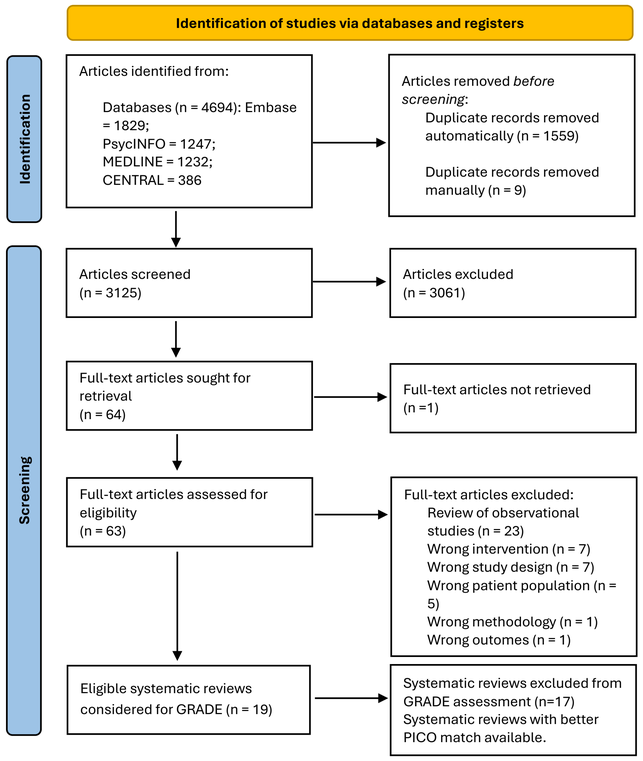
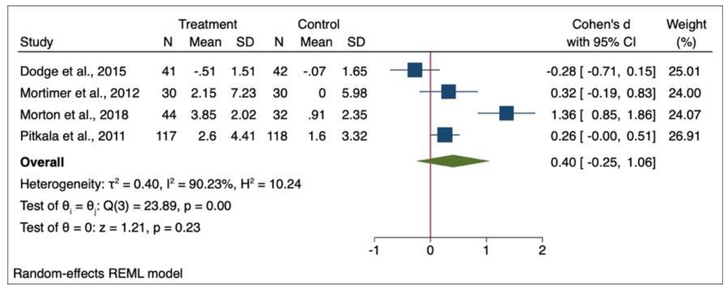


Table 2. Visual summary of GRADED evidence.

Population	Intervention	Dementia	Incident MCI	Cognitive function	Comments
Normal cognition	Social activity interventions [i]	X	X	**Global:** Small benefit[n.s.,c] **Memory:** Small benefit[n.s.,c] **Attention: Trivial to** small benefit[c] **Executive function:** Small benefit[c]	
	High vs Low Social engagement[ii]	Small benefit[b]	X	X	Based on observational evidence
MCI	Social activity interventions	X	n/a	**Global:** trivial/no[n.s,c.] **Executive function:** Small benefit[n.s.,c]	Only one primary study focused on people with MCI.
	High vs Low Social engagement[ii]	X	n/a	X	No reviews identified

Certainty of the evidence based on GRADE: very low certainty; low certainty; moderate certainty; high certainty.
To define minimally important difference, we used the following absolute thresholds for benefit/harm:
For binary outcomes (dementia, MCI): <10 per 1000 trivial/no meaningful effect
For continuous outcomes (cognitive function): standardized mean difference SMD (trivial: <0.15; small: 0-15 to 0.49; moderate to large: ≥0.50)
[i]: Social activity interventions included interventions that incorporate social interaction components, involving elements of communication or interaction with others (e.g., group recreational activities, volunteering, attending sport events or online social interactions).
[ii]: Social engagement was measured differently across observational studies. Commonly this was measured using index scores, for example regarding participation in social activities, in which the highest category was compared to the reference category .

- The random-effect meta-analysis conducted showed no effect of social activity interventions on global cognitive function (SMD 0.40 SD, 95% CI-0.25 to 1.06; I^2 90.23%), yet some small beneficial effects were observed on specific cognitive subdomains.



- One review of observational studies (n= 77,826; Wang et al, 2023) found that people with higher level of social activity had a lower risk for dementia (pooled RR =0.81, 95% CI 0.74 to 0.89; I^2 78.2%).

Conclusions

Evidence suggests that social activity interventions may have a small beneficial effect on cognitive functioning. There is inconclusive evidence from intervention studies regarding their potential to delay or prevent dementia.

In contrast, evidence from observational studies suggest that higher social engagement is associated with a reduced risk of developing dementia.

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