

Does School Quality Shape Cognitive Aging? A Systematic Review of Pre-College Education and Late-Life Cognition

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Early-life school quality shows a consistent positive association with cognitive performance after age 50. Effects are strongest for individuals with lower educational attainment and show diminishing returns with higher total education. Evidence for effects on the rate of cognitive decline is inconsistent across studies. Overall, findings align with a cognitive reserve model in which better early education enhances resilience to later-life neurodegeneration.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
Education is a known protector against cognitive decline¹ and may delay the onset of symptoms in neurodegeneration. This review investigates the relationship between educational quality in early life (EQEL), measured using quality indicators from pre-collegiate educational institutions, and late-life cognitive function (LLCF).	We conducted systematic searches through PubMed, PsycInfo, Web of Science, ERIC, and Cochrane. Eligible studies were incorporated if they had: i) institutional measures of EQEL ii) quantitative LLCF measured at age ≥ 50 iii) were a peer-reviewed journal article in English	Seven studies were deemed eligible for inclusion. The total sample size was 49,274, and mean ages ranged from 56 to 77.1 years. EQEL data were assessed from grades 1-12, with high variability in the specific school quality indicators used. All studies reported significant positive associations between EQEL and LLCF in at least one cognitive domain, while one reported a significant positive effect on cognitive decline.	The current evidence suggests a positive association between EQEL and baseline cognition later in life, particularly for those with less educational attainment. These findings are consistent with a cognitive reserve framework² in which higher-quality early education enhances resilience to neurodegenerative processes, potentially delaying the clinical manifestation of pathology.	 CONTACT Gavin Yang: gaviny456@g.ucla.edu Kenny Liu: kliu9762@g.ucla.edu  ALZHEIMER'S ASSOCIATION AAIC 26