

**LETTER TO THE EDITOR**

The Grand Connection: Association Between Grandchild Care Involvement and Grandparents' Cognitive Functioning

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Cognitive impairment is increasingly becoming a public health agenda. Lifestyle factors that can be modified to optimize cognitive ability thus become increasingly important in maintaining an active life in old age. The number of dual-income families is increasing, so grandparents are frequently called upon for childcare. The social distancing measures applied due to the COVID-19 global pandemic mean that some older adults have had to reduce social contact with their family members, including their grandchildren. Whilst emerging evidence suggested that social engagement possibly delays the onset of cognitive decline. There is relatively limited data on the association of grandparent childcare and cognition function preservation.

Recently, the role of grandparenting in preserving cognition in later life has been explored, although several studies have identified a link, the findings are inconclusive.¹⁻³ Studies found that spending time with grandchildren was positively associated with executive functions, others found that caregiving grandparents demonstrated improvements in global cognitive functioning, orientation and language ability.¹⁻² However, previous studies found that grandparents who provide intensive care have poorer cognitive performance in numeracy and recall.⁴ More intense caregiving by grandparents has also been found to accelerate cognitive decline in terms of global cognitive functions and episodic memory. Thus, the effects of grandparenting on preserving cognition and its consequences in various cognitive domains remain unclear.

Grandparenthood can be experienced by people in any ethnicity, the health implication may differ according to cultural variations. Study reported a racial differences in cognitive outcomes between White and African American grandparents.⁵ The caregivers who provide more hours of care demonstrated better cognitive functioning among White but not African Americans. White grandparents often assuming as playmates which may improve memory. In contrast African-American have higher expectation and perceive as stressor.

No studies have investigated what grandparents do when caring for their grandchildren, so the mechanism of any potential effect on cognition is unclear. Specific types of grandparenting activities may contribute to cognitive changes need to be explored.

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A positive correlation between participating in grandparent childcare and cognition has been identified in various studies.¹⁻³ Grandparenting has been measured by asking simple questions about the time spent with grandchildren, but no studies have investigated the specific care tasks involved. Thus, they cannot explain the link between participation in grandparenting activities and improved cognitive outcomes. No study has clearly defined the specific types of grandparenting activities or the optimum level of participation that can improve cognition. The evidence for the relationship between specific types of grandparenting activities and cognitive function is therefore limited. Further investigation of the specific types of childcare activities that may help cognitive preservation will be meaningful.

Grandparenting derive intrinsic motivators in preserving cognitive functioning in older adults. Researchers should provide more evidence to identify grandparental activities pertinent to cognitive preservation and will potentially help formulate new population-based strategies for preventing cognitive impairment.

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