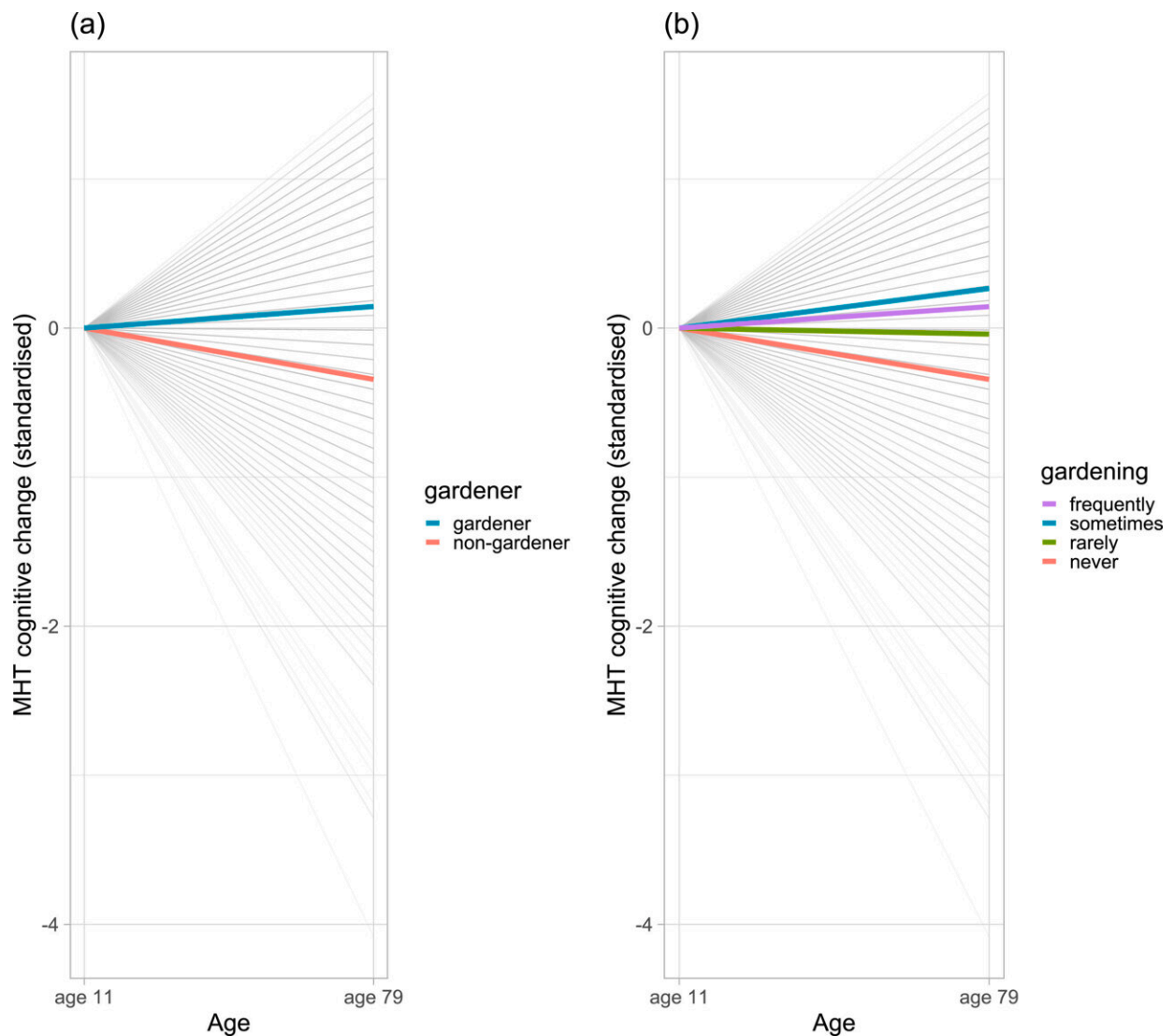


Gardening linked to improved thinking skills in older age

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Distribution of lifetime cognitive change scores from age 11 to age 79 using residualized (baseline-corrected) Moray House Test (MHT) scores and presented

according to mean trajectories of age 79 gardening. Gray lines show individual trajectories and colored lines show mean trajectories of participants according to: (a) gardening grouped as a binary variable (gardeners vs non-gardeners) and; (b) gardening frequency (never, rarely, sometimes, frequently). Credit: *Journal of Environmental Psychology* (2024). DOI: 10.1016/j.jenvp.2024.102361

A new study has examined the lifestyles of hundreds of older adults and found that those who spent time gardening had better cognitive function in later life than those who did not.

Importantly, this was the case even when accounting for a person's socio-economic status, time spent in education, childhood cognitive ability, health, and overall level of physical activity in older age.

Researchers say the findings provide some of the first evidence that [gardening](#) activity in older age is associated with small, but detectable, [cognitive benefits](#) over the life course. The research is [published](#) in the *Journal of Environmental Psychology*.

Long-term study

Researchers made their findings as part of a long-term study that is tracking participants throughout their lifetimes.

It follows people born in the Edinburgh area who sat for an [intelligence test](#) aged 11, with hundreds of participants asked to sit the same exam at age 79.

The test included questions requiring verbal reasoning, spatial ability, and numerical analysis.

Throughout the long-term study, participants also gave details of their lifestyles and completed frequent assessments of their thinking skills up to the age of 90.

Of the 467 people tested, almost 31% had never gardened, but 43% regularly did.

On average, the 280 who frequently or sometimes gardened showed greater lifetime improvement in cognitive ability compared with those who never gardened or rarely did so. Between the ages of 79 and 90, cognitive ability, including memory, [problem solving](#), and word fluency, generally declined across the board, but the earlier advantage of gardeners endured.

"Identifying lifestyle behaviors that facilitate healthy cognitive aging is of major public interest for the prevention of cognitive decline and dementia. Gardening is a key leisure activity in late adulthood.

"Engaging in gardening projects, learning about plants, and general garden upkeep, involves complex cognitive processes such as memory and executive function. Consistent with the 'use it or lose it' framework of cognitive function, more engagement in gardening may be directly associated with a lower risk of cognitive decline," says Dr. Janie Corley, School of Philosophy, Psychology and Language Sciences.

The researchers add that the results cannot prove that gardening directly boosts cognitive ability because factors not included in the study—such as the level of greenery in the neighborhood or [social interaction](#) during gardening activities—could have played their part.

The study is the first to test whether participating in gardening activities is linked to cognitive benefits across the life-course.

Lothian Birth Cohort

The participants were part of the Lothian Birth Cohort 1921 study, a group of individuals who were born in 1921 and took part in the Scottish Mental Survey of 1932.

Since 1999 researchers have been working with the Lothian Birth Cohort of 1921 to chart how a person's thinking power changes over their lifetime.

More information: Janie Corley et al, Gardening and cognitive ageing: Longitudinal findings from the lothian birth cohort of 1921, *Journal of Environmental Psychology* (2024). [DOI: 10.1016/j.jenvp.2024.102361](https://doi.org/10.1016/j.jenvp.2024.102361)

Provided by University of Edinburgh

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