Table S1. Search items

PubMed	Gardening OR horticultural therapy AND Cognition OR Cognitive function AND Brain derived neurotrophic factor

Search: Gardening OR horticultural therapy AND Cognition OR Cognitive function AND Brain derived neurotrophic factor

(((("gardener"[All Fields] OR "gardeners"[All Fields] OR "gardening"[MeSH Terms] OR "gardening"[All Fields] OR "gardens"[MeSH Terms] OR "gardens"[All Fields] OR "garden"[All Fields] OR ("horticultural therapy"[MeSH Terms] OR ("horticultural"[All Fields] AND "therapy"[All Fields]) OR "horticultural therapy"[All Fields])) AND ("cognition"[MeSH Terms] OR "cognition"[All Fields] OR "cognitions"[All Fields] OR "cognitive"[All Fields] OR "cognitively"[All Fields] OR "cognitives"[All Fields])) OR ("cognition"[MeSH Terms] OR "cognition"[All Fields] OR ("cognitive"[All Fields] AND "function"[All Fields]) OR "cognitive function"[All Fields])) AND ("brain derived neurotrophic factor"[MeSH Terms] OR ("brain derived"[All Fields] AND "neurotrophic"[All Fields] AND "factor"[All Fields]) OR "brain derived neurotrophic factor"[All Fields] OR ("brain"[All Fields] AND "derived"[All Fields] AND "neurotrophic"[All Fields] AND "factor"[All Fields]) OR "brain derived neurotrophic factor"[All Fields])

Translations

Gardening: "gardener"[All Fields] OR "gardeners"[All Fields] OR "gardening"[MeSH Terms] OR "gardening"[All Fields] OR "gardens"[MeSH Terms] OR "gardens"[All Fields] OR "garden"[All Fields]

horticultural therapy: "horticultural therapy"[MeSH Terms] OR ("horticultural"[All Fields] AND "therapy"[All Fields]) OR "horticultural therapy"[All Fields]

Cognition: "cognition"[MeSH Terms] OR "cognition"[All Fields] OR "cognitions"[All Fields] OR "cognitive"[All Fields] OR "cognitively"[All Fields] OR "cognitives"[All Fields]

Cognitive function: "cognition"[MeSH Terms] OR "cognition"[All Fields] OR ("cognitive"[All Fields] AND "function"[All Fields]) OR "cognitive function"[All Fields]

Brain derived neurotrophic factor: "brain-derived neurotrophic factor"[MeSH Terms] OR ("brain-derived"[All Fields] AND "neurotrophic"[All Fields] AND "factor"[All Fields]) OR "brain-derived neurotrophic factor"[All Fields] OR ("brain"[All Fields] AND "derived"[All Fields] AND "neurotrophic"[All Fields] AND "factor"[All Fields]) OR "brain derived neurotrophic factor"[All Fields] |
| **Scopus** | TITLE-ABS-KEY (gardening OR horticultural AND therapy AND cognition OR cognitive AND function AND brain AND derived AND neurotrophic AND factor) |

Website	Gardening, Cognitive functioning and Neuroplasticity

Table S2. Quality assurance of quantitative studies

First author (year)	Question/objective sufficiently described?	Study design evident and appropriate?	Method of subject and (if applicable) comparison group selection or source of information/input variables described and appropriate?	Subject (and comparison group, if applicable) characteristics sufficiently described?	If interventional and random allocation was possible, was it described?	If interventional and blinding of investigators was possible, was it reported?	If interventional and blinding of subjects was possible, was it reported?	Outcome and (if applicable) exposure measure(s) well defined and robust to measurement/misclassification bias? Means of assessment reported?	Sample size appropriate?	Analytic methods described/justified and appropriate?	Some estimate of variance is reported for the main results?	Controlled for confounding?	Results reported in sufficient detail?	Conclusions supported by the results?	Total quality assurance
Park et al., (2020)	2	2	1	1	N/A	N/A	0	2	2	2	2	1	2	2	79%
Yang et al., (2022)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%
Kim et al., (2021)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%
Park et al., (2019)	1	2	2	2	N/A	N/A	N/A	2	2	2	2	2	2	2	100%
Kotozaki (2020)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%

Study															
Kotozaki (2020)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%
Han et al., (2018)	2	2	1	2	1	0	0	2	2	2	2	2	2	2	79%
Van Den Berg & Custers (2011)	2	2	1	2	1	0	0	2	2	2	2	2	2	2	79%
Widodo et al (2019)	2	2	1	1	1	0	0	2	2	2	2	1	2	2	71%
Hassan et al., (2018)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%
Odeh et al., (2022)	2	2	2	2	2	2	2	2	2	2	2	1	2	2	96%
Makizako et al., (2019)	2	2	2	2	2	2	0	2	2	2	2	2	2	2	93%

Study															
Vujcic et al., (2017)	2	2	2	2	0	0	0	2	2	2	1	2	2	2	75%
Hewitt et al., (2013)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%
Lai et al., (2022)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%
Lee et al., (2021)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	1	2	2	95%
Masuya and Ota (2014)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	2	2	2	100%
Tao et al., (2022)	1	2	1	2	2	2	0	2	2	2	2	2	2	2	86%
Toyoda et al., (2017)	2	2	2	2	N/A	N/A	N/A	2	2	2	2	2	2	2	100%
Ng et al., (2018)	2	2	2	2	1	0	0	2	2	2	2	1	2	2	79%

Table S3. Quality assurance of qualitative studies

First author (year)	Question/objective sufficiently described?	Study design evident and appropriate?	Context for the study clear?	Connection to a theoretical framework/wider body of knowledge?	Sampling strategy described, relevant and justified?	Data collection methods clearly described and systematic?	Data analysis clearly described and systematic?	Use of verification procedure(s) to establish credibility?	Conclusions supported by the results?	Reflexivity of the account?	Total quality assurance
Styck and George (2022)	2	2	2	2	1	2	2	2	2	2	95%
Christie et al., (2016)	2	2	2	2	1	2	2	2	2	1	90%
Smith-Carrier et al., (2021)	2	2	2	2	1	2	2	2	2	2	95%
Hewitti et al., (2013)	2	2	2	2	2	2	2	2	2	2	100%