

Supplementary information for: Cross-cultural validity of the Nature Relatedness Scale (NR-6) and links with wellbeing

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Table 1. Nature Relatedness Scale means, standard deviations, and Cronbach Alphas found in western samples

Study	N	Participants	Location	Scale	M (SD)	Alpha
Barrable & Lakin (2020)	49	student teachers	United Kingdom	NR-21	3.56 (0.70)	.87
Black et al. (2017)	300	residents	Australia	NR-6	3.77 (0.74)	.82
Cartwright et al. (2017)	179	conservation gardeners	United States	NR-21	4.25 (0.41)	–
Cleary et al. (2018)	1000	residents	Australia	NR-6	3.39 (0.69)	.83
Colléony et al. (2019)	258	dog-, cat-, and non-pet owners	France	NR-6	3.53 (0.77)	.86
	309		United Kingdom	NR-6	3.41 (0.76)	.87
Curll et al. (2022)	3886	residents, 18-89 years	Australia	NR-6*	4.71 (1.27)	.88
Dean et al. (2018)	952	residents < 45 years	Australia	NR-21	3.38 (0.59)	–
	586	residents ≥ 45 years			3.64 (0.59)	–
Desrochers et al. (2022)	559	undergraduate students (urban)	Canada	NR-21	3.52 (0.59)	.87
		undergraduate students (rural)	Canada	NR-21	3.52 (0.58)	.87
Ernst et al. (2012)	110	preservice early childhood educators	United States	NR-21	3.48 (0.48)	–
Flowers et al. (2016)	2079	working age adults	United Kingdom	NR-self and NR-experience	3.29 (0.73)	–
Ghasemi & Kyle (2021)	1594	hunter and non-hunter students	United States	NR-6	3.64 (0.75)	.82
Groulx et al. (2016)	295	visitors to the Churchill Northern Studies Centre	Canada	NR-6	4.20 (0.67)	.84
Groulx et al. (2014)	14	residents	Canada	NR-6	3.98 (0.66)	–

Study	N	Participants	Location	Scale	M (SD)	Alpha
Hammond et al. (2020)						
Howell et al. (2011)	275	undergraduate students	Canada	NR-21	73.59 (11.97) [†]	.87
Howell et al. (2013), Study 1	311	undergraduate students	Canada	NR-21	72.88 (13.13) [†]	.87
Laird et al. (2014)	33	parents and early childhood service workers	Australia	NR-6	3.99 (0.75)	–
Lawton et al. (2017)	262	adults, 18-71 years	United Kingdom / International	NR-21	3.62 (0.62)	.87
Lin et al. (2023)	1050	residents, 18-70+ years	Brisbane, Australia	NR-21	3.54 (0.62)	–
	1034	residents, 18-70+ years	Sydney, Australia	NR-21	3.48 (0.60)	–
Lumber et al. (2017), Study 1	203	residents, 18-66 years	United Kingdom	NR-21	3.80 (0.62)	.87
Lumber et al. (2017), Study 2	118	residents, 18-78 years	United Kingdom	NR-21	3.96 (0.60)	
Lumber et al. (2017), Study 3	72	adults, 18-57 years	United Kingdom	NR-21	3.27 (0.62)	
Luong (2022)	1240	adults	United States / unknown locations	NR-6	4.11 (0.82)	.83
Martyn et al. (2016)	305	university students	Australia	NR-self NR-perspective NR-experience	3.74 (0.80) 3.98 (0.59) 3.70 (0.81)	–
Massingham et al. (2019)	205	rainforest site visitors	Australia	NR-6 (3 items)	4.37 (0.56)	.72
	222	zoological park visitors	Australia	NR-6	4.14 (0.64)	
Niigaaniin & MacNeill (2022)	717	Anishinaabek community	Canada / United States	NR-6	2.68**	–
McFarland et al. (2018)	22	early childhood educators	Australia / United States	NR-6	4.03 (0.61)	–
	112	parents		NR-6	3.63 (0.94)	–
Nisbet et al. (2009), Study 1	831	undergraduate students	Canada	NR-21		.87
Nisbet et al. (2009), Study 2	145	government and private sector executives	Canada	NR-21	3.71	
Nisbet et al. (2011), Study 3	94	students enrolled in environmental courses	Canada	NR-21	3.90/3.94	.89/.91
	76	students not enrolled in environmental courses			3.35/3.21	

Study	N	Participants	Location	Scale	M (SD)	Alpha
Nisbet et al. (2019)	100	university students	Canada	NR-6	–	.71
Nisbet & Zelenski (2013), Study 1	184	undergraduate students	Canada	NR-6/NR-21	3.00 (0.86)/3.28 (0.60)	.83
Nisbet & Zelenski (2013), Study 2	145	middle managers	Canada	NR-6/NR-21	3.39 (0.85)/3.67 (0.58)	.84
Nisbet & Zelenski (2013), Study 3	354	undergraduate students	Canada	NR-6/NR-21	3.34 (0.96)/ 3.65 (0.68)	.86
Sadowski et al. (2020)	250	university students	Canada	NR-21	3.58 (0.54)	.84
Spangenberg et al. (2022)	28	students (video condition) students (pre-manipulation virtual reality vs. video condition)	Germany	NR-6 NR-6	3.30 (0.83)/3.45 (0.85) 3.12 (0.64)/3.30 (0.83)	.78/.85 ^{††}
Sumner & Goodenough (2020)	86	undergraduate students	United Kingdom	NR-21	3.50 (0.49)	.82
Weber et al. (2020)	270	student biology teachers	Germany	NR-6	3.11 (0.75)	.83
Windhorst & Williams (2015)	308	undergraduate students	Canada	NR-6	–	.84
Zelenski & Nisbet (2014), Study 1	331	undergraduate students	Canada	NR-6	3.04 (0.98)	.89
	415	community	Australia / Canada / New Zealand / United Kingdom / United States	NR-6	3.41 (0.93)	.85
Zelenski & Nisbet (2014), Study 2	204	community	United States	NR-6 NR-21 NR-self NR-perspective NR-experience	3.34 (0.91) 3.50 (0.68) 3.47 (0.88) 3.57 (0.73) 3.46 (0.88)	.85 .90 .89 .73 .79

Notes. Means and standard deviations from a 5-point Likert scale unless otherwise noted. NR-21 = 21-item Nature Relatedness Scale; NR-6 = 6-item Nature Relatedness Scale. * Based on a 7-point Likert scale. ** Based on a 4-point Likert scale. † Numbers reflect average scores between 21-105. †† Bentler's Omega

Conflict of interest statement

The authors report no conflicts of interest.

Availability of data and material (data transparency)

Data is available in Figshare: <https://figshare.com/s/bf1ab55e5483dba4b284>

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Author Contributions

Zsuzsanna Kövi contributed the research idea, collected data, conducted analyses, and contributed sections to the manuscript. Hyejeong Kim and Shanmukh Kamble collected data and contributed writing to the manuscript. Veronika Mészáros conducted analyses and contributed writing to the manuscript. Danielle Lachance contributed writing to the manuscript. Elizabeth Nisbet contributed to the research idea, collected data, and contributed writing to the manuscript.

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