

A Meta-Analysis of Adventure Therapy Outcomes and Moderators

Pre-Post Adventure Therapy Age-Based Benchmarks for Outcome Categories

Using the data collected for and methods described in Bowen and Neill (2013), where available, Pre-Post Adventure Therapy effect sizes by Outcome Categories for a range of age brackets were calculated for benchmarking purposes. Comparisons can be made with age-based Totals or specific Outcome Categories, although this should be done with caution as sub-samples may be small and heterogeneous. Tables 1 to 7 report Pre-Post Adventure Therapy effect sizes by Outcome Categories for the following age brackets: 1) All ages, 2) ≤9 Years Olds, 3) 10-14 Year Olds, 4) 15-17 Year Olds, 5) 10-17 Year Olds, 6) 18+ Year Olds, and 7) Mixed Ages (e.g., Families). Effect sizes for Individual Outcomes by Outcome Category for the Adventure Therapy Treatment Group between Pre and Post are also [available](#) for benchmark purposes.

For information on how to understand the results included in the tables below see the Method section in Bowen and Neill (2013).

Table 1.

Pre-Post Adventure Therapy Effect Sizes by Outcome Categories for All Age Groups

Outcome Category	NSamples	NES	<i>g</i> (<i>V</i>)	SE	95% CI	<i>z</i> (<i>p</i>)	<i>Q</i> (<i>p</i>)	<i>I</i> ²
Academic	61	132	.41 (.00)	.04	.33: .50	9.38 (.000)	214.61 (.000)	72.04
Behaviour	84	223	.41 (.00)	.05	.31: .51	8.38 (.000)	545.87 (.000)	84.80
Clinical	137	595	.50 (.00)	.04	.42: .59	11.73 (.000)	1,274.59 (.000)	89.33
Family Development	33	106	.36 (.01)	.07	.23: .50	5.26 (.000)	173.60 (.000)	81.57
Morality/Spirituality	9	12	.17 (.01)	.09	-.01: .35	1.83 (.067)	15.93 (.043)	49.78
Physical	13	21	.32 (.01)	.11	.10: .55	2.84 (.004)	63.60 (.000)	81.13
Self-Concept	137	391	.43 (.00)	.03	.36: .49	13.60 (.000)	513.76 (.000)	73.53
Social Development	107	305	.42 (.00)	.04	.34: .49	11.03 (.000)	502.68 (.000)	78.91
Total	205	1,785	.47 (.00)	.03	.41: .53	15.11 (.000)	1,293.05 (.000)	84.22

Table 2.

Pre-Post Adventure Therapy Effect Sizes by Outcome Categories for ≤9 Years Olds

Outcome Category	NSamples	NES	<i>g</i> (<i>V</i>)	SE	95% CI	<i>z</i> (<i>p</i>)	<i>Q</i> (<i>p</i>)	<i>I</i> ²
Academic	2	6	.33 (.02)	.14	0.06: 0.61	2.41 (.016)	0.33 (.565)	0.00
Behaviour	2	2	.22 (.03)	.17	-0.12: 0.56	1.26 (.208)	2.11 (.146)	52.66
Clinical	3	15	.84 (.19)	.44	-0.01: 1.70	1.94 (.053)	23.61 (.000)	91.53
Family Development								
Morality/Spirituality								
Physical								
Self-Concept	2	9	.04 (.02)	.15	-0.26: 0.34	0.26 (.795)	0.16 (.686)	0.00
Social Development	2	4	.27 (.01)	.12	0.04: 0.50	2.32 (.020)	0.59 (.443)	0.00
Total	4	36	.24 (.01)	.10	0.04: 0.44	2.38 (.017)	2.08 (.555)	0.00

Table 3.**Pre-Post Adventure Therapy Effect Sizes by Outcome Categories for 10-14 Year Olds**

Outcome Category	N_{Samples}	N_{ES}	<i>g</i> (V)	SE	95% CI	<i>z</i> (p)	<i>Q</i> (p)	<i>I</i>²
Academic	20	62	.35 (.01)	.07	.21: .49	5.00 (.000)	63.41 (.000)	70.04
Behaviour	36	99	.33 (.00)	.06	.21: .45	5.31 (.000)	176.04 (.000)	80.12
Clinical	50	206	.38 (.00)	.05	.28: .49	7.38 (.000)	248.02 (.000)	80.24
Family Development	10	23	.33 (.01)	.07	.19: .47	4.73 (.000)	16.17 (.040)	50.51
Morality/Spirituality	4	5	.07 (.03)	.16	-.25: .39	0.42 (.676)	9.67 (.022)	68.99
Physical	4	7	.18 (.09)	.30	-.41: .77	0.58 (.560)	44.13 (.000)	93.20
Self-Concept	48	142	.34 (.00)	.04	.26: .42	8.24 (.000)	119.01 (.000)	60.51
Social Development	42	142	.40 (.00)	.06	.28: .51	6.70 (.000)	236.59 (.000)	82.67
Total	68	686	.37 (.00)	.04	.30: .44	10.06 (.000)	216.53 (.000)	69.06

Table 4.**Pre-Post Adventure Therapy Effect Sizes by Outcome Categories for 15-17 Year Olds**

Outcome Category	N_{Samples}	N_{ES}	<i>g</i> (V)	SE	95% CI	<i>z</i> (p)	<i>Q</i> (p)	<i>I</i>²
Academic	24	46	.51 (.01)	.07	.38: .65	7.36 (.000)	83.32 (.000)	72.40
Behaviour	33	102	.46 (.01)	.09	.29: .64	5.21 (.000)	255.92 (.000)	87.50
Clinical	52	251	.53 (.00)	.07	.40: .65	8.02 (.000)	418.56 (.000)	87.82
Family Development	12	52	.28 (.02)	.15	-.02: .58	1.86 (.063)	115.08 (.000)	90.44
Morality/Spirituality	4	6	.12 (.01)	.12	-.11: .34	1.00 (.317)	0.97 (.808)	0.00
Physical	3	6	.59 (.00)	.06	.47: .71	9.51 (.000)	1.95 (.378)	0.00
Self-Concept	53	148	.47 (.00)	.05	.37: .57	9.07 (.000)	205.72 (.000)	0.00
Social Development	39	109	.42 (.01)	.07	.28: .55	5.97 (.000)	209.02 (.000)	81.82
Total	80	720	.50 (.00)	.05	.41: .59	10.69 (.000)	416.78 (.000)	81.05

Table 5.**Pre-Post Adventure Therapy Effect Sizes by Outcome Categories for 10-17 Year Olds**

Outcome Category	N_{Samples}	N_{ES}	<i>g</i> (V)	SE	95% CI	<i>z</i> (p)	<i>Q</i> (p)	<i>I</i>²
Academic	44	108	.44 (.00)	.05	.34: .54	8.54 (.000)	164.59 (.000)	73.88
Behaviour	69	201	.39 (.00)	.05	.29: .50	7.32 (.000)	465.43 (.000)	85.39
Clinical	102	457	.46 (.00)	.04	.37: .54	10.55 (.000)	728.74 (.000)	86.14
Family Development	21	75	.31 (.01)	.09	.14: .48	3.54 (.000)	135.06 (.000)	85.19
Morality/Spirituality	8	11	.12 (.01)	.09	-.05: .29	1.36 (.175)	10.74 (.150)	34.81
Physical	7	13	.31 (.03)	.17	-.01: .64	1.89 (.058)	57.08 (.000)	89.49
Self-Concept	101	290	.41 (.00)	.03	.34: .47	12.16 (.000)	335.12 (.000)	70.16
Social Development	81	251	.41 (.00)	.05	.32: .49	9.05 (.000)	445.62 (.000)	82.05
Total	148	1406	.44 (.00)	.03	.38: .50	14.17 (.000)	685.63 (.000)	78.56

Table 6.**Pre-Post Adventure Therapy Effect Sizes by Outcome Categories for 18+ Year Olds**

Outcome Category	N_{Samples}	N_{ES}	g (V)	SE	95% CI	z (p)	Q (p)	I²
Academic	7	9	.51 (.03)	.17	0.19: 0.84	3.10 (.002)	20.05 (.003)	70.08
Behaviour	7	8	.68 (.04)	.20	0.29: 1.08	3.38 (.001)	22.94 (.001)	73.85
Clinical	22	96	.73 (.02)	.15	0.43: 1.02	4.82 (.000)	250.79 (.000)	91.63
Family Development	2	3	.34 (.02)	.15	0.05: 0.63	2.28 (.022)	0.86 (.354)	0.00
Morality/Spirituality								
Physical	5	7	.36 (.02)	.13	0.11: 0.62	2.76 (.006)	5.23 (.265)	23.48
Self-Concept	19	47	.61 (.01)	.12	0.38: 0.83	5.26 (.000)	68.03 (.000)	73.54
Social Development	12	21	.58 (.02)	.13	0.33: 0.83	4.59 (.000)	26.89 (.005)	59.09
Total	28	191	.66 (.02)	.13	0.40: 0.92	5.00 (.000)	317.30 (.000)	91.49

Table 7.**Pre-Post Adventure Therapy Effect Sizes by Outcome Categories for Mixed Ages (e.g., Families)**

Outcome Category	N_{Samples}	N_{ES}	g (V)	SE	95% CI	z (p)	Q (p)	I²
Academic								
Behaviour								
Clinical	2	7	1.04 (.30)	.55	-0.03: 2.11	1.90 (.058)	4.00 (.045)	75.02
Family Development	7	24	0.60 (.05)	.21	0.19: 1.02	2.84 (.004)	31.32 (.000)	80.85
Morality/Spirituality								
Physical	1	1	0.21 (.08)	.28	-0.35: 0.76	0.74 (.461)		
Self-Concept	1	2	1.02 (.06)	.24	0.56: 1.49	4.30 (.000)		
Social Development								
Total	7	34	0.66 (.03)	.18	0.31: 1.00	3.75 (.000)	19.02 (.004)	68.45

Reference

Bowen, D. J., & Neill, J. T. (2013). [A meta-analysis of adventure therapy outcomes and moderators](#). *The Open Psychology Journal*, 6, 28-53. doi: 10.2174/1874350120130802001

