Journal of
Alzheimer's Disease & Parkinsonism

Research Article Open Access

Statistical analyses

Results

Sample characteristics

3.4 (range 0-12) [illegible] 3 [illegible] 11 [illegible] (range, 4 [illegible]). 11 [illegible] 2 [illegible] 11 [illegible] 4 - 0[illegible] (Table 1).

Intent to treat analyses

Cognitive outcomes: [illegible] (Table 2).

[illegible] (2.1 *vs.* 2.3, 0.0, 0). [illegible] (2. *vs.* 1.3, 0.040) [illegible] (3. *vs.* 44., 0.03). [illegible] 4. [illegible] (42. *vs.* 4.4, 0.0) [illegible] 4 (0.004).

Physical performance outcomes: [illegible] (13. *vs.* 14., 0.043) [illegible] (4.1 *vs.* .0, 0.00), (21. *vs.* 23., 0.04), [illegible] (.3 *vs.* .2, 0.001) [illegible] - (11.4 *vs.* ., 0.021). [illegible] 4 [illegible] (2.4 *vs.* 2., 0.0). [illegible].

Cognitive outcomes: [illegible] 4 [illegible] (2.1 *vs.* 2.1, 0.01). [illegible] (2. *vs.* 1.4, 0.0),

		Time 1 Baseline	Time 2 4 Weeks	Time 3 8 Weeks	p value Time 2-Time 1	p value Time 3-Time 1	p value Time 3-Time 2
Cognitive outcomes	MoCA	25.1 ± 2.6	26.1 ± 2.6	26.3 ± 2.8	0.199	0.090	0.889
	HADS-Anxiety	4.1 ± 3.2	3.8 ± 3.1	2.8 ± 2.0	0.787	0.203	0.314
	HADS-Depression	2.5 ± 2.2	2.2 ± 1.8	1.3 ± 1.3	0.572	**0.040**	**0.016**
	AMPS-Mindfulness	36.9 ± 15.9	45.5 ± 7.9	44.5 ± 11.7	**0.029**	**0.036**	0.654
	QoL-AD	42.9 ± 5.2	46.3 ± 4.2	45.4 ± 4.5	**0.004**	0.080	0.356
Physical function outcomes	mPPT	13.6 ± 1.7	14.0 ± 1.5	14.5 ± 0.8	0.492	**0.043**	0.052
	Berg	54.1 ± 1.8	54.7 ± 1.8	55.0 ± 1.3	**0.011**	**0.005**	0.277
	DGI	21.7 ± 2.8	23.0 ± 1.5	23.7 ± 0.5	**0.046**	**0.045**	0.120
	TUG	7.3 ± 1.2	6.6 ± 0.8	6.2 ± 0.8	**0.022**	**0.001**	0.084
	STS 5	11.4 ± 2.7	10.0 ± 1.8	9.6 ± 1.7	**0.018**	**0.021**	0.081
	Grip strength	25.4 ± 8.5	25.8 ± 10.2	26.5 ± 9.6	0.645	0.162	0.139

*Mean ± Standard Deviation; Significant p-values are in BOLD
MoCA: Montreal Cognitive Assessment; HADS: Hospital Anxiety and Depression Scale; AMPS: Applied Mindfulness Process Scale; QoL-AD: Quality of Life in Alzheimer's Disease; mPPT: Mini Physical Performance Test; DGI: Dynamic Gait Index; TUG: Timed Up and Go; STS5: Five Times Sit to Stand

Table 2: Results from Intent to Treat (ITT) Analyses (n=11).

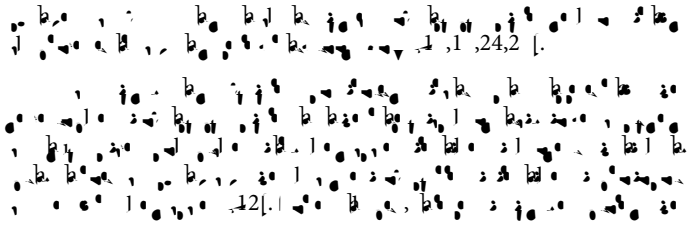
(3 . *vs.* 43. , 0.0), (42. *vs.* 4 .2, 0.04) (3 3).

Physical performance outcomes: (4.1 *vs.* 4. , 0.012), (21. *vs.* 23.4, 0.01), (.3 *vs.* .2, 0.001) - (11.4 *vs.* , , 0.014). 4 (13. *vs.* 14.4, 0.0) (2 .4 *vs.* 2 . , 0.0). ( ). ( ).

Discussion

1- 3[.

4[. 21 22[. 23[. 21[. 21[. 1 [.



cognitive impairment and Alzheimer disease: A functional MRI study. PLoS One 7: e42730.

19. Liu F, Shen C, Yao L, Li Z (2018) Acupoint massage for managing cognitive alterations in older adults: A systematic review and meta-analysis. J Altern Complement Med 24: 532-540.
20. Tu CH, MacDonald I, Chen YH (2019) The effects of acupuncture on glutamatergic neurotransmission in depression, anxiety, schizophrenia and Alzheimer's disease: A review of the literature. Front Psychiatry 10: 14.
21. Jia Y, Zhang X, Yu J, Han J, Yu T, et al. (2017) Acupuncture for patients with mild to moderate Alzheimer's disease: A randomized controlled trial. BMC Complement Altern Med 17: 556.
22. Yang JW, Shi GX, Zhang S, Tu JF, Wang LQ, et al. (2019) Effectiveness of acupuncture for vascular cognitive impairment no dementia: A randomized controlled trial. Clin Rehabil 33: 642-652.
23. Peng WN1, Zhao H, Liu ZS, Wang S (2007) Acupuncture for vascular dementia. Cochrane Database Syst Rev 2: CD004987.
24. Lin R, Yu K, Li X, Tai J, Lin Y, et al. (2016) Electroacupuncture ameliorates post-stroke learning and memory through minimizing ultrastructural brain damage and inhibiting the expression of MMP-2 and MMP-9 in cerebral ischemia-reperfusion injured rats. Mol Med Rep 14: 225-233.
25. Kim JH, Choi KH, Jang YJ, Bae SS, Shin BC, et al. (2013) Electroacupuncture acutely improves cerebral blood flow and attenuates moderate ischemic injury via an endothelial mechanism in mice. PLoS One 8: e56736.
26. Galvin JE, Valois L, Zweig Y (2014) Collaborative transdisciplinary team approach for dementia care Neurodegener Dis Manag 4: 455-469.
27. Morris JC (1993) The Clinical Dementia Rating (CDR): Current version and scoring rules. Neurol 43: 2412-2414.
28. Williams MM, Storandt M, Roe CM, Morris JC (2013) Progression of Alzheimer's disease as measured by clinical dementia rating sum of boxes scores. Alzheimers Dement 9: S39-44.
29. Zhu SP, Luo L, Zhang L, Shen SX, Ren XX, et al. (2013) Acupuncture De-qi: From characterization to underlying mechanism. Evid Based Complement Alternat Med 2013: 518784.
30. Wang KM, Yao SM, Xian YL, Hou ZL (1985) A study on the receptive feld of acupoints and the relationship between characteristics of needling sensation and groups of afferent fbres. Sci Sin B 28: 963-971.
31. Deadman P (2007) A manual of acupuncture. 2nd Edition. Journal of Chinese Medicine, UK, p 675.
32. Ahn AC, Martinsen OG (2007) Electrical characterization of acupuncture points: Technical issues and challenges. J Altern Complement Med 13: 817-824.
33. Nasreddine ZS, Phillips NA, Bédirian V, Charbonneau S, Whitehead V, et al. (2005) The montreal cognitive assessment, MoCA: A brief screening tool for mild cognitive impairment. J Am Geriatr Soc. 53:695-699.
34. Snaith RP (2003) The hospital anxiety and depression scale. Health Qual Life Outcomes 1: 29.
35. Logsdon RG, Gibbons LE, McCurry SM, Teri L (2002) Assessing quality of life in older adults with cognitive impairment. Psychosom Med 64: 510-519.
36. Bárrios H, Narciso S, Guerreiro M, Maroco J, Logsdon R, et al. (2013) Quality of life in patients with mild cognitive impairment. Aging Ment Health 17: 287-292.
37. Li MJ, Black DS, Garland EL (2016) The Applied Mindfulness Process Scale (AMPS): A process measure for evaluating mindfulness-based interventions. Pers Individ Dif 93: 6-15.
38. Berg KO, Wood-Dauphinee SL, Williams JI, Maki B (1992) Measuring balance in the elderly: Validation of an instrument. Can J Pub Health 83: S7-11.
39. Romero S, Bishop MD, Velozo CA, Light K (2011) Minimum detectable change of the berg balance scale and dynamic gait index in older persons at risk for falling. J Geriatr Phys Ther 34: 131-137.
40. Buatois S, Miljkovic D, Manckoundia P,Gueguen R, Miget P, et al. (2008) Five times sit to stand test is a predictor of recurrent falls in healthy community-living subjects aged 65 and older. J Am Geriatr Soc 56: 1575-1577.
41. Mong Y, Teo TW, Ng SS (2010) 5-repetition sit-to-stand test in subjects with chronic stroke: Reliability and validity. Arch Phys Med Rehabil 91: 407-413.
42. Nordin E, Rosendahl E, Lundin-Olsson L (2006) Timed "Up & Go" test: Reliability in older people dependent in activities of daily living--focus on cognitive state. Phys Ther 86: 646-655.
43. Podsiadlo D, Richardson S (1991) The timed "Up & Go": A test of basic functional mobility for frail elderly persons. J Am Geriatr Soc 39: 142-148.
44. Dye DC, Eakman AM, Bolton KM (2013) Assessing the validity of the dynamic gait index in a balance disorders clinic: An application of Rasch analysis. Phys Ther 93: 809-818.
45. Pardasaney PK, Latham NK, Jette AM, Wagenaar RC, Ni P, et al. (2012) Sensitivity to change and responsiveness of four balance measures for community-dwelling older adults. Phys Ther 92: 388-397.
46. Wilkins CH, Roe CM, Morris JC (2010) A brief clinical tool to assess physical balance [illegible]