

### Appendix 3 – Quality Appraisal with Mixed Methods Appraisal Tool (MMAT)

SUMMARY			
SCORE	PERCENT	Study design	
		<b>1. Qualitative</b>	
		<b>0</b>	
<b>Score</b>	<b>%</b>	<b>2. Quantitative randomized controlled (trials)</b>	
4	100%	1	Baglio, F., et al. (2015). "Multistimulation group therapy in alzheimer's disease promotes changes in brain functioning." <i>Neurorehabilitation and Neural Repair</i> 29(1): 13-24.
2	50%	1	Burgener, S. C., et al. (2008). "The effects of a multimodal intervention on outcomes of persons with early-stage dementia." <i>American Journal of Alzheimer's Disease and Other Dementias</i> 23(4): 382-394.
3	75%	1	Christofoletti, G., et al. (2008). "A controlled clinical trial on the effects of motor intervention on balance and cognition in institutionalized elderly patients with dementia." <i>Clin Rehabil</i> 22(7): 618-626.
3	75%	1	Graessel, E., et al. (2011). "Non-pharmacological, multicomponent group therapy in patients with degenerative dementia: a 12-month randomized, controlled trial." <i>BMC Med</i> 9: 129-129.
4	100%	1	Han, J. W., et al. (2017). "Multimodal Cognitive Enhancement Therapy for Patients with Mild Cognitive Impairment and Mild Dementia: A Multi-Center, Randomized, Controlled, Double-Blind, Crossover Trial." <i>Journal Of Alzheimer's Disease: JAD</i> 55(2): 787-796.
1	25%	1	Jian, G. (1999). "Treatment of 50 cases of senile dementia by acupuncture combined with inhalation of herbal drugs and oxygen." <i>J Tradit Chin Med</i> 19(4): 287-289.
4	100%	1	Kim, M-J., et al. (2016). "Physical Exercise with Multicomponent Cognitive Intervention for Older Adults with Alzheimer's Disease: A 6-Month Randomized Controlled Trial." <i>Dement Geriatr Cogn Dis Extra</i> 6(2): 222-232.
4	100%	1	Maci, T., et al. (2012). "Physical and cognitive stimulation in Alzheimer Disease. the GAIA Project: a pilot study." <i>American Journal of Alzheimer's Disease and Other Dementias</i> 27(2): 107-113.
3	75%	1	Onor, M. L., et al. (2007). "Impact of a multimodal rehabilitative intervention on demented patients and their caregivers." <i>American Journal of Alzheimer's Disease and Other Dementias</i> 22(4): 261-272.
4	100%	1	Oswald, W. D., et al. (2007). "Effects of a multimodal activation program (SimA-P) in residents of nursing homes." <i>European Review of Aging and Physical Activity</i> 4(2): 91-102.
3	75%	1	Vicente de Sousa, O., et al. (2017). "Impact of Nutritional Supplementation and a Psychomotor Program on Patients With Alzheimer's Disease." <i>Am J Alzheimers Dis Other Demen</i> 32(6): 329-341.
3	75%	1	Yoon, J. E., et al. (2013). "The effects of cognitive activity combined with active extremity exercise on balance, walking activity, memory level and quality of life of an older adult sample with dementia." <i>J Phys Ther Sci</i> 25(12): 1601-1604.
<b>38</b>	<b>79%</b>	<b>12</b>	[Quality percentage without Jian (1999) = 84%]
<b>Score</b>	<b>%</b>	<b>3. Quantitative non-randomized</b>	
4	100%	1	Arkin, S. M. (2007). "Language-Enriched Exercise Plus Socialization Slows Cognitive Decline in Alzheimer's Disease." <i>American Journal of Alzheimer's Disease &amp; Other Dementias</i> 22(1): 62-77.
4	100%	1	Coelho, F. G. d. M., et al. (2013). "Multimodal exercise intervention improves frontal cognitive functions and gait in Alzheimer's disease: a controlled trial." <i>Geriatrics &amp; Gerontology International</i> 13(1): 198-203.
4	100%	1	Kang, H. Y., et al. (2010). "An integrated dementia intervention for Korean older adults." <i>J Psychosoc Nurs Ment Health Serv</i> 48(12): 42-50.

4	100%	1	Li, D. M. and X. X. Li (2017). "The effect of folk recreation program in improving symptoms: a study of Chinese elder dementia patients." <i>Int J Geriatr Psychiatry</i> 32(8): 901-908.
4	100%	1	Viola, L. F., et al. (2011). "Effects of a multidisciplinary cognitive rehabilitation program for patients with mild Alzheimer's disease." <i>Clinics (Sao Paulo)</i> 66(8): 1395-1400.
<b>20</b>	<b>100%</b>	<b>5</b>	
<b>Score</b>	<b>%</b>	<b>4. Quantitative descriptive</b>	
4	100%	1	Bredesen, D. E., et al. (2016). "Reversal of cognitive decline in Alzheimer's disease." <i>Aging (Albany NY)</i> 8(6): 1250-1258. (4 Patients)
4	100%	1	Ibarria, M., et al. (2016). "Beneficial Effects of an Integrated Psychostimulation Program in Patients with Alzheimer's Disease." <i>J Alzheimers Dis</i> 50(2): 559-566.
4	100%	1	La Rue, A., et al. (2015). "Intervention of multi-modal activities for older adults with dementia translation to rural communities." <i>Am J Alzheimers Dis Other Demen</i> 30(5): 468-477.
4	100%	1	Prokopov, A. F. (2010). "A case of recovery from dementia following rejuvenative treatment." <i>Rejuvenation Res</i> 13(2-3): 217-219.
4	100%	1	Raggi, A., et al. (2007). "The effects of a comprehensive rehabilitation program of Alzheimer's Disease in a hospital setting." <i>Behavioural Neurology</i> 18(1): 1-6.
4	100%	1	Serda i Ferrer, B. C. and A. del Valle (2014). "A rehabilitation program for Alzheimer's disease." <i>J Nurs Res</i> 22(3): 192-199.
4	100%	1	Tay, L., et al. (2016). "A combined cognitive stimulation and physical exercise programme (MINDVital) in early dementia: Differential effects on single- and dual-task gait performance." <i>Gerontology</i> 62(6): 604-610.
<b>28</b>	<b>100%</b>	<b>7</b>	
		<b>5. Mixed methods</b>	
		0	
	<b>TOTAL</b>	<b>24</b>	
	<b>INCLUDED</b>	<b>23</b>	Excluding Jian (1999); includes a total of 23 papers (26 studies = 21 group studies and 5 case studies)

Pace, R., Pluye, P., Bartlett, G., Macaulay, A. C., Salsberg, J., Jagosh, J. and Seller, R. (2012) 'Testing the reliability and efficiency of the pilot Mixed Methods Appraisal Tool (MMAT) for systematic mixed studies review', *International Journal of Nursing Studies*, 49(1), pp. 47-53.

Souto, R. Q., Khanassov, V., Hong, Q. N., Bush, P. L., Vedel, I. and Pluye, P. (2015) 'Systematic mixed studies reviews: Updating results on the reliability and efficiency of the mixed methods appraisal tool', *International Journal of Nursing Studies*, 52(1), pp. 500-501.

<http://www.nccmt.ca/knowledge-repositories/search/232>

<http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/84371689/MMAT%202011%20criteria%20and%20tutorial%202011-06-29updated2014.08.21.pdf>

<http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/82542649/Souto%20et%20al.%20MMAT%20testing.%20MMIRA%202014%20conference.pdf>