Is Ai Chi beneficial for balance, pain, functional mobility, and quality of life in adults?: A scoping review

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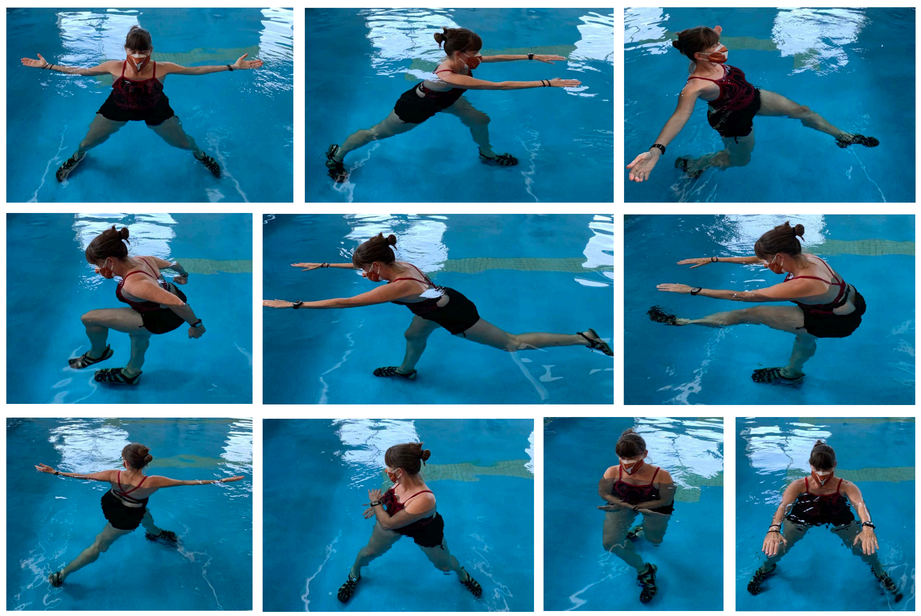
INTRODUCTION

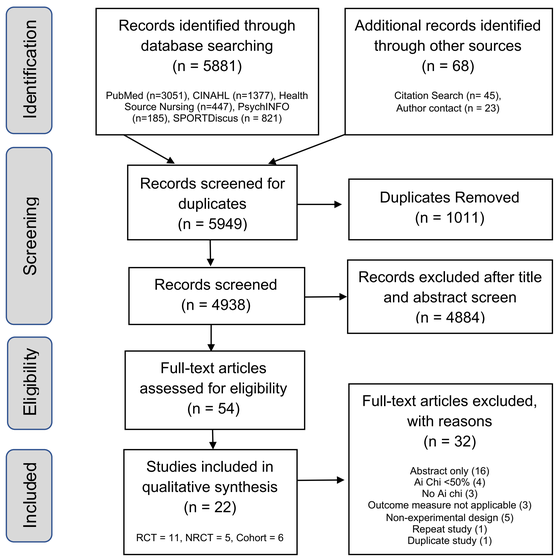
Ai Chi is a form of mindful aquatic intervention related to Qigong and Tai Chi.

The purpose of this scoping review was to summarize available research on Ai Chi for balance, pain, functional mobility and quality of life (QOL) in adults.



METHODS

Figure 1. Flow diagram



RESULTS

Table. Ai Chi between-group comparison

Comparison Group	Study	Population	n	PEDRO score	BALANCE		PAIN		MOBILITY		QUALITY OF LIFE	
					Ai Chi better ^	Groups similar ^^	Ai Chi better ^	Groups similar ^^	Ai Chi better ^	Groups similar ^^	Ai Chi better ^	Groups similar ^^
Land Exercises	Kurt[14]	Parkinson's disease	40	7/10	BBS*** Biodex***				TUG**		PDQ-39*** UPDRS***	
	Pérez-de la Cruz[15]	Parkinson's disease	30	7/10	Tinetti*** BBS***		VAS**		TUG*** FTSST**			
	Pérez-de la Cruz[16]	Parkinson's disease	29	6/10	Single leg stance***		VAS**		TUG*** FTSST**			PDQ-39
	Castro-Sánchez[21]	Multiple sclerosis	71	6/10			VAS*	MPQ-PPI	RMDQ*, MFIS-Ph* MSIS-29-Ph*	Barthel Index	MPQ-PRI*, BDI* MSIS-29-Ps*	FSS, MFIS-Co and Ps
	Bayraktar[27]	Multiple sclerosis	18	3/10	Single leg stance*				TUG*	6MWT		
	Nissim[24]	intellectual disability	41	5/10	Tinetti: balance*					Tinetti: gait		
	Shams-Elden[29]	Healthy young adults	20	2/10	Standing Stork Test				TUG			
	Pérez-de la Cruz[17]	Parkinson disease	30	6/10			VAS**				GDS***	
Alternate Aquatic Intervention	Calandre[18]	Fibromyalgia	81	5/10				VAS				FIQ, BDI STAI, PSQI SF-12
	Covill[26]	Elderly	32	2/10		ABC, BBS		NPRS		TUG		
	So[28]	Low back pain	44	3/10		Single leg stance		VAS		RMDQ		
	Ku[23]	Chronic Stroke	20	8/10	BBS*				Fugl-Meyer Assessment*	gait speed cadence SL, ST		
Usual care	Villegas[25]	Parkinson's disease	15	5/10							UPDRS*	PDQ-39
	Santana[19]	Fibromyalgia	9	4/10				VAS				FIQ
	Camilotti[22]	Back Pain	29	4/10			VAS**				ODI**	

Abbreviations:
6MWT, 6 Minute Walk Test; ABC, Activities-specific Balance Confidence Scale; BBS, Berg Balance Scale; BDI, Beck's Depression Inventory; FIQ, Fibromyalgia Impact Questionnaire; FSS, Fatigue Severity Scale; FTSST, Five Time Sit to Stand Test; GDS, Geriatric Depression Scale; MPQ (PPI/PRI), McGill Pain Questionnaire (PPI, Present Pain Intensity; PRI, Present Rating Index); MFIS (Ph/Co/PS), Modified Fatigue Impact Scale (Ph= physical, Co =-Cognitive, PS=-Psychosocial); MSIS-29-Ps/Ph, Multiple Sclerosis Impact Scale-29 (Ps= Psychological, Ph= Physical); NPRS, Numeric Pain Rating Scale; ODI, Oswestry Disability Index; PDQ-39, Parkinson's Disease Questionnaire-39; PSQI, Pittsburgh Sleep Quality Index; SF-12, 12-Item Short Form Health Survey; SL, Stride length: ST, Stride time; STAI, State and Trait Anxiety Inventory; TUG, Timed Up & Go; UPDRS, Unified Parkinson's Disease Rating Scale; VAS, Visual Analog Scale;

^ Ai Chi group show superior improvement to comparison group, ^^ Ai Chi and comparison group have similar results,
^^^ Comparison group show superior results to Ai chi group, * p<0.5, ** p<0.01, ***p<0.001

CONCLUSIONS

The qualitative analysis revealed favorable results with benefits from Ai Chi in a variety of patient populations. The bulk of the findings found Ai Chi intervention to have superior results for balance, pain, functional mobility, and quality of life compared with land-based intervention and similar results compared with an alternative aquatic intervention. Further study is warranted.