



## Combined physical and cognitive exercises to improve cognitive functions in elderly with dementia: a systematic review

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The Brazilian population started in 1970 a transition process in their aged structure that induced the increase of the aged population. So, it's frequent the dementia diagnosis and the increase of frailty that directly affect the cognitive and functional autonomy of the elderly. It's known, however, that the physical activity is inversely proportional to cognitive decline. The study's objective was to investigate the possible associations between cognitive and physical training and their effects under different cognitive variables in the elderly with dementia. The adopted methodology was PRISMA model, including eligibility criteria clinical trials, with a sample composed of individuals with age upper than 60 years diagnosed with dementia. Besides, showing as intervention, the physical exercises practice added to cognitive training. Were excluded, the researches evaluated other issues besides dementia that didn't show the association between physical and cognitive stimulus and systematic review studies. The included investigations were selected in electronic databases PubMed, Scielo e BVS in the least ten years. Due to the different made searches were applied specific search equations for each database. From the made searches we had was results 24 occurrences in the Pubmed, six occurrences in the Scielo and 13 occurrences in the BVS, being excluded 38 researches and at the end, was selected five investigations to qualitative synthesis. The filtering of investigations was made from title analysis, followed by abstract analysis, and finally of the whole paper. Two researchers created the evaluation, and if they had discordance between them, it was consulted one more researcher. We concluded that had improved both the participants' physical and cognitive performance in most of the selected research. However, it is not possible to conclude which combination of physical and cognitive training could be better because it hadn't a pattern between the methodologies. Probably, the significant number of combination possibilities between physical and cognitive training can be a limitation to find one perfect combination to promote more gains in the elderly with dementia. However, the combined training is probably more efficient in improving cognitive variables in patients with dementia when it's compared to the isolated practices. We suggest that new combinations be tested using different types and intensity of physical training combined with cognitive tasks training.

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