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WORKING MEMORY AND ASSOCIATED FACTORS AMONG PHYSICALLY INDEPENDENT ELDERLY PEOPLE LIVING IN INSTITUTIONS IN GALLE DISTRICT, SRI LANKA*Gamage MWK¹, Hewage DC² and Pathirana KD³**¹BSc Nursing Degree Programme, Faculty of Medicine, University of Ruhuna, ²Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, ³Department of Medicine, Faculty of Medicine, University of Ruhuna,*

Background: The proportion of elderly people living in institutions has increased in Sri Lanka during the recent decades as a result of population aging and ongoing sociocultural changes. Thus cognitive functions will be increasingly important for them for independent living. The cognitive processes such as executive functions are important for goal directed behaviour. Working memory (WM) that temporarily holds and manipulates information is one of the core processes of executive functions.

Objectives: Study was conducted to assess working memory and associated factors among elderly people living in institutions in Galle District.

Methods: Study was conducted with 190 elderly people living in institutions. WM was assessed via computerized verbal working memory (VWM) and visuospatial working memory (VSWM) tasks. Group differences were assessed through ANOVA and independent sample t test and significant level was kept at $p < 0.05$.

Results: The sample comprised of 69.5% ($n=132$) females with mean age of 71.78 years (± 6.5). Mean scores of VWM and VSWM tasks were 11.15 (± 6.14) and 11.94 (± 5.09) respectively. Both VWM and VSWM task scores were significantly higher among those who had higher educational status and who had regular health enhancing physical activities ($p < 0.05$). VWM scores were significantly higher among elderly who performed regular exercises ($p < 0.05$) while VSWM scores were significantly higher among who had engaged in an occupation in the past ($p < 0.05$). Both working memory tasks were not significantly associated with gender, marital status, number of sleeping hours and engagement in group and leisure time activities.

Conclusions: Both verbal and visuospatial working memory was significantly associated with their level of physical activities and educational status. VWM alone was positively associated with performance of regular exercise and VSWM with engagement in an occupation in the past. As level of cognition is an important determinant of the quality of life of the elderly people factors that significantly associated with cognitive functions in elderly should be further explored and considered when planning preventive measures to reduce cognitive decline in elderly.