REFERENCES

1. Cohen H, Heaton LG, Congdon SL, Jenkins HA. Changes in sensory organization test scores with age. *Age Ageing*. 1996;25:39-44
2. Baloh RW, Jacobson KM, Enrietto JA, Corona S, Honrubia V. Balance disorders in older persons: Quantification with posturography. *Otolaryngol Head Neck Surg*. 1998;119:89-92
3. Nitz JC, Choy NL, Isles RC. Medial-lateral postural stability in community-dwelling women over 40 years of age. *Clinical Rehabilitation*. 2003;17:765-767
4. Cipriany-Dacko LM, Innerst D, Johannsen J, Rude V. Interrater reliability of the Tinetti balance scores in novice and experienced physical therapy clinicians. *Archives of Physical Medicine & Rehabilitation*. 1997;78:1160-1164
5. Portney LG, Watkins MP. *Foundations of clinical research: Applications to practice*. Norwalk, Connecticut: Appleton & Lange; 1993.

Commentary

A comparative analysis of the cognitive functioning of community dwelling and institution based well elderly in Manila

Guerrero JR; Aguirre JM; Carpio AD; Dalupang RG; Nicolas LA

ABSTRACT

Objectives: The Mini Mental State Examination (MMSE) is the most widely used instrument for quantitative assessment of cognitive function. This study tested the face validity, internal consistency, test-retest reliability and sensitivity of a Filipino translation of the MMSE (F-MMSE). Sensitivity was tested in terms of the instrument's capacity to detect differences in cognitive function related to living environments, gender, age, civil status, and educational attainment of the respondents. **Methodology:** To test for face validity, the MMSE and F-MMSE were sent to three experts, who commented on the F-MMSE translation and whether it reflected the content and construct of the MMSE. To test for internal consistency, 48 subjects (21 community dwelling and 27 institution-based elderly in the City of Manila) were selected through convenience sampling. The F-MMSE was administered once to all 48 respondents. For test-retest reliability, F-MMSE was re-administered five days later to 20 of the 48 subjects (conveniently sampled). Internal consistency of the F-MMSE was established on all 48 initial responses using Cochran Q analysis of Variance, and test-retest reliability was established on the 20 repeated scores using Pearson correlations. The sensitivity of the F-MMSE in detecting differences in cognitive function in institution and community-dwelling groups, age, gender, civil status, and educational attainment was calculated using the Wilcoxon Rank Sum W Test and chi-square tests for independence. **Results:** The experts decided that the F-MMSE had face validity, in that the translation adequately reflected the original instrument. The F-MMSE was strongly internally consistent (Cochran Q 0.9), and was reliable on test-retest (Pearson r=0.96). The F-MMSE was sensitive in that it detected significant differences in scores (community-dwelling adults cognitive status was higher than institution-based participants (25.3, SD=4.6) and (21.9, SD= 4.6), respectively *($p<0.05$)*. The F-MMSE did not distinguish between gender and civil status. However, it was sensitive to age and educational attainment of the respondents. **Conclusion:** The F-MMSE had acceptable face validity, internal consistency, and test-retest reliability. The F-MMSE is sensitive in detecting cognitive functioning differences related to environment, age, and educational status. The F-MMSE is therefore appropriate for studies in the Philippines on older adults' cognition.

***Key words**: elderly, cognitive function, Mini Mental State Examination (non-MeSH)*

In recognition of the increasing population of the Filipino elderly, this article raises important issues among allied healthcare professionals. Understanding the elderly population and factors that affect their physical and mental health pose a challenge in the future of our profession. The translation of the Mini Mental State Examination (MMSE) into the Filipino language is a significant step in creating a more suitable and relevant screening or evaluation process. Firstly, careful methodology was employed in establishing its validity and reliability. Secondly, the article looks at a macroscopic view of aging. Looking beyond the elderly person, the study takes into account various factors that can influence the aging process. Aside from biological changes that occur naturally among the elderly, it is important to recognize the role of the physical and social environment in influencing positively or negatively the aging process. To a certain extent, we could agree with most researches done about institutionalized elderly having more cognitive impairment than community dwelling elderly people[1]. However, these researches were mostly based in Western countries. There are limited studies on Asian elderly population. The cultural difference may play a role rather than the physical environment per se. In comparison with the United States, the Philippines does not have nursing homes or "long-term care" facilities that offer extensive care for patients over a lengthy period of time. Rather, the Philippines has facilities or institutions that take care of elderly people who were neglected by their families. However, this comprises only a small percentage of the elderly. In a study by Knodel, 82% of the Filipino elderly live with families, either with a spouse or with their children[2]. This reflects the Filipino's filial piety culture. An operational definition of community dwelling and institutionalized elderly would be essential. The article could have included this factor in the study. For community dwellers, the presence or absence of caregivers / family members may affect their cognitive status[3,4]. In the same way, the limited interaction among institutionalized elderly may be similar to a community dwelling elderly who has disengaged socially by being bed-bound and cared for by private nurses[1]. Although correlation of some factors was made in this study, a more scrutinized delineation in accordance to the Filipino culture would make the study more relevant to our practice. These factors include occupational performance, level of physical activity, and diet among others.

The study also presented a wide age gap between the two groups. The institutionalized elderly had a higher mean age compared to the community dwelling elderly. It would be difficult to conclude that it is the difference in the environment, rather than age, that accounts for the decline in cognitive status among institutionalized elderly. Studies have shown that elderly people tend to decline cognitively as part of the aging process[5-7].

The sample was also limited to city of Manila, which makes it difficult to generalize among the Filipino elderly. A well-represented sample from various cities would be more ideal. A longitudinal study among these elderly will likewise help enhance our knowledge in helping this population.

The study presents a good springboard for potential identification for occupational therapy referral for promotion of health and wellness as well as prevention of possible risk factors in occupational performance decline among the elderly.

Sally Uy, OTR
College of Rehabilitation Sciences
University of Santo Tomas

REFERENCES

1. Borrowiak E, Kostka T, Predictors of quality of life in older people living at home and in institutions.*Aging Clin Exp Res.* 2004 Jun; 16(3): 212-20.
2. Knodel J, Devalya N, Social and Economic Support Systems for the Elderly in Asia: An Introduction, *Asia Pacific Population Journal*, 1992, 7:5-12
3. Bassuk SS, GlassTA, Berkman LF, Social Disengagement and Incident Cognitive Decline in Community-Dwelling Elderly Persons, *Annals of Internal Medicine*, 1999:131; 165-173
4. Blazer DG, Social Support and Mortality in an Elderly Community Population, *Am J Epidemiology*, 1982, 115, 5: 684-694
5. Laurin D, Verrevault R, Lindsay J, Macpherson K, Rockwood K, Physical Activity and Risk of Cognitive Impairment and Dementia in Elderly Persons, *Arch Neurol.* 2001; 58:498-504.
6. Scherr PA, Albert MS, Funkenstein HH, et al, Correlates of Cognitive Function in an Elderly Community Population, *Am J Epidemiology*, 1998: 128,1084-1011.
7. Yaffe K, Barnes D, Nevitt M, Lui L, Covinsky K, A Prospective Study of Physical Activity and Cognitive Decline in Elderly Women, *Arch Intern Med.* 2001; 161:1703-1708