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REFERENCES

- Chandra RK. Effect of vitamin and trace-element supplementation on immune responses and infection in elderly subjects. *Lancet* 1992;340:1124–1127.
- Barringer TA, Kirk JK, Santaniello AC et al. Effect of a multivitamin and mineral supplement on infection and quality of life. *Ann Intern Med* 2003;138:365–371.
- Chavance M, Herbeth B, Lemoine A et al. Does multivitamin supplementation prevent infections in healthy elderly subjects? A controlled trial. *Int J Vitam Nutr Res* 1993;63:11–16.
- Avenell A, Campbell MK, Cook JA et al. Effect of multivitamin and multi-mineral supplements on morbidity from infections in older people (Mavis Trial): Pragmatic, randomised, double blind, placebo controlled trial. *BMJ* 2005; 331:324–329.
- Hennekens CH, Buring JE, Manson JE et al. Lack of effect of long-term supplementation with beta carotene on the incidence of malignant neoplasms and cardiovascular disease. *N Engl J Med* 1996;334:1145–1149.
- The Alpha-Tocopherol, Beta-Carotene Cancer Prevention Study Group. The effect of vitamin E and beta carotene on the incidence of lung cancer and other cancers in male smokers. *N Engl J Med* 1994;330:1029–1035.
- Graat JM, Schouten EG, Kok FJ. Effect of daily vitamin E and multivitamin-mineral supplementation on acute respiratory tract infections in elderly persons: A randomized controlled trial. *JAMA* 2002;288:715–721.
- Meydani SN, Leka LS, Fine BC et al. Vitamin E and respiratory tract infections in elderly nursing home residents. *JAMA* 2004;292:828–836.
- Bjelakovic G, Nikolova D, Gluud LL et al. Mortality in randomized trials of antioxidant supplements for primary and secondary prevention. *JAMA* 2007;297:842–857.
- Liu BA, McGeer A, McArthur MA et al. Effect of multivitamin and mineral supplementation on episodes of infection in nursing home residents: A randomized, placebo-controlled study. *J Am Geriatr Soc* 2007;55:35–42.
- Stephen AI, Avenell A. A systematic review of multivitamin and multiminerals supplementation for infection. *J Hum Nutr Diet* 2006;19:179–190.
- El-Kadiki A, Sutton AJ. Role of multivitamins and mineral supplements in preventing infections in elderly people: Systematic review and meta-analysis of randomised controlled trials. *BMJ* 2005;330:871.
- Sutton AJ, El-Kadiki A. Assessing concerns regarding the validity of three trials included in "Role of multivitamins and mineral supplements in preventing infection in elderly people: Systematic review and meta-analysis of randomised controlled trials." *BMJ* 2005;331:142.

CONCERNS OF THE SPANISH SOCIETY OF GERIATRICS AND GERONTOLOGY REGARDING CARE RECEIVED BY PATIENTS WITH DEMENTIA

To the Editor: Dementia is a clinical syndrome that has multiple etiologies and is characterized by a progressive loss of cognitive and emotional function. Because the disease is chronic and debilitating, the therapies are not curative and are, at best, palliative. The degenerative nature of these diseases produces a decline in the patient's quality of life¹ and becomes a problem of considerable economic and social importance. The Dementia en España: Calidad Asistencial y Demanda Atendida por la Geriátria Study was performed during 2004 in 2,319 Spanish patients with dementia who were admitted to 119 specialized centers.

A cross-sectional descriptive assessment of the centers and the patients with dementia receiving attention was conducted. The study focused on the nonpharmacological therapy provided for the patients, as well as the suitability of the therapeutic measures adopted.

In general, the profile of the Spanish patient with dementia is similar to that observed in other European countries.^{2,3} Dementia is typically a disease associated with aging, and the increase in the life expectancy of populations leads to an increase in the prevalence of these pathologies and in the social and economic consequences. A brief description of the profile of the Spanish patient with dementia is a woman (71% of cases) aged 80 and older with a low educational-cultural level and usually with Alzheimer's disease. Of the patients studied, 66% were aged 80 and older. In 82% of the cases, the age range was 75 to 95. The educational-cultural level of the patients with dementia was low with, 60% having only primary school level and 11% illiterate. In general, in more than half of the patients, the pathology had been diagnosed between 1 and 5 years previously. The incidence of other kinds of dementia showed similar values with respect to gender.

The referrals of patients with dementia to the specialized centers were from a variety of sources and conditions (25% from primary care and 21% from specialized care).

Diagnosis of dementia had been performed using several different techniques and evaluations with, in some cases, the diagnosis being confirmed post mortem.^{4,5} More than half of the patients with dementia had been evaluated using psychometric and functional tests; the most-frequently used being the Mini-Examen Cognoscitivo (MEC)⁶ and

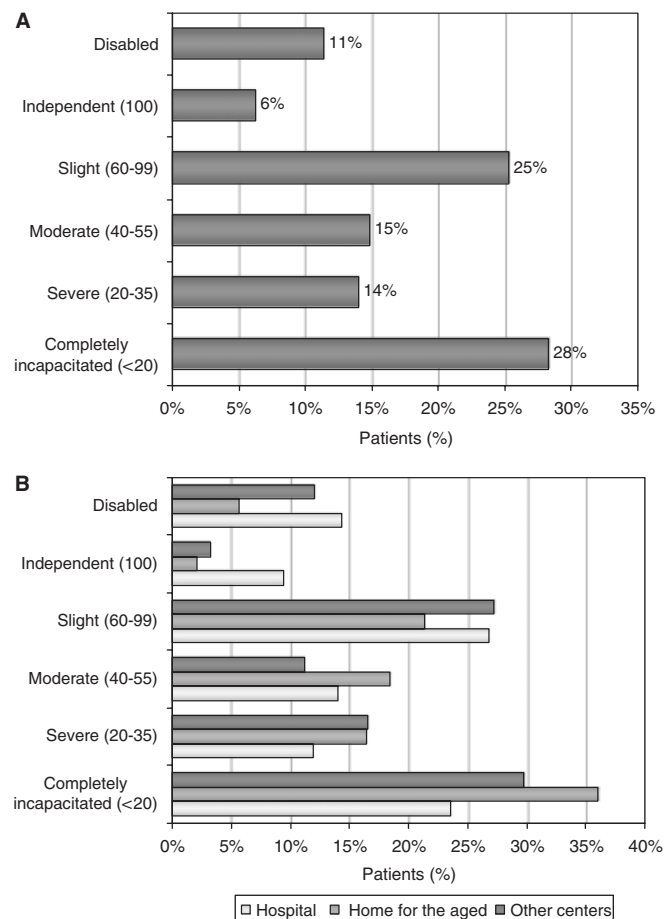


Figure 1. Degree of deterioration in Spanish patients with dementia according to the Barthel Index. (A) General population; (B) distribution according to care-providing center.

the Barthel Index.⁷ The MEC is a scale that is widely used in Spain and is, with some variations, in accordance with the well-documented Mini-Mental State Examination.⁸ The main classification of the patients was severe decline. The Barthel Index showed that 42% of the studied patients had severe or complete dependency (Figure 1). Although most patients with dementia have a high degree of dependency, the percentage of caregivers receiving remuneration is low (22%). A high proportion of patients with dementia are completely dependent on their relatives and, in most cases, without any kind of external help. Furthermore, in Spain, there are few specialized-care centers,¹¹ and those that exist have long waiting lists (data not shown). Together with the lack of administrative aid for relatives of patients with dementia, this has become a serious problem that the Spanish Society of Geriatrics and Gerontology (SEGG) has long been aware of and has campaigned about for a considerable period of time.^{9,10} Because concomitant pathologies such as hypertension and diabetes mellitus usually affect patients with dementia, the difficulties of care provision are further exacerbated.

In conclusion, the care of patients with dementia is an onerous task that requires the total attention of the caregiver. In most cases in Spain, the responsibility for care devolves on to a relative, and this impinges on the social and economic quality of life of the patient as well as that of the caregiver. State and local government agencies have few aid programs designed for these patients. The SEGG has been involved in strong representation to the relevant authorities for more investigation into the needs of the psychogeriatric patient, together with a greater awareness of the social and economic effect of the problems that, because of a progressively aging population, are bound to increase.

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REFERENCES

1. Rayuela Rico A, Macias Fernandez JA. Gerontopsiquiatria (knowledge area 11). In: Cervera Enguix S, Conde Lopez V, Espino Granado A et al. Manual del Residente de Psiquiatria. Sociedad Espanola de Psiquiatria [on-line]. Available at: <http://sepsiq.org/> Accessed on October 10, 2006.
2. Hofman A, Rocca WA, Brayne C et al. The prevalence of dementia in Europe: A collaborative study of 1980–1990 findings. Eurodem Prevalence Research Group. *Int J Epidemiol* 1991;20:736–748.
3. Lobo A, Saz P, Marcos G et al. Prevalence of “organic brain syndrome” in a Southern European population in two different time periods. The ZARA-DEMP project. *Eur J Psychiatr* 2005;19:112–119.
4. Snowden DA, Greiner LH, Mortimer JA et al. Brain infarction and the clinical expression of Alzheimer disease. The Nun Study. *JAMA* 1997;227:813–817.
5. Petrovitch H, White LR, Izmirlian G et al. Midlife blood pressure and neuritic plaques, neurofibrillary tangles, and brain weight at death: The HAAS. *Neurobiol Aging* 2000;21:57–62.
6. Lobo A, Ezquerro J, Gomez F et al. El “Mini-examen Cognoscitivo”, un test sencillo, practico, para detectar alteraciones intelectivas en pacientes medicos. *Actas Luso Esp Neurol Psiquiatr* 1979;3:189–202.
7. Mahoney F, Barthel D. Functional evaluation: The Barthel Index. *Md Med J* 1965;14:61–65.
8. Folstein MF, Folstein SE, McHugh PR. ‘Mini mental state’: A practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975;12:189–198.
9. Ruiperez I, Midon J, Gomez-Pavon J et al. Nivel de adecuacion de los recursos geriaticos en los hospitales generales espanoles. *Rev Esp Geriatr Gerontol* 2003;38:281–287.
10. Gil Gregorio P, Arriola Manchola E, Regidor Garcia J et al. Presencia de especialista en geriatría en los centros que atienden a pacientes con demencia. *Rev Esp Geriatr Gerontol* 2006;41:378–379.

EFFECT SIZE UNDERESTIMATES THE EFFECTS OF INTERVENTIONS AMONG OLDER PEOPLE WITH SEVERE PHYSICAL OR COGNITIVE IMPAIRMENTS?

To the Editor: The use of effect sizes for comparison of the effects of various studies could potentially underestimate the effect among older people with severe physical or cognitive impairment. In a Cochrane Review about strength training in older adults, Standardized Mean Difference (SMD) was used to estimate the effect on lower-limb strength, calculated as the difference in means (between the intervention and the control group) of the outcome divided by the standard deviation of the outcome.¹ Using a calculation where the effect is divided by the variation in ability between participants may underestimate the effect in studies which have broad inclusion criteria (often the case in studies on older people with severe impairments) since the same change over time in the absolute value of an outcome will produce a higher effect size in a more homogeneous group, as is to be expected if the participants are more healthy. This may, in the worst case, lead to incorrect treatment recommendations for older people with physical and cognitive impairments. In addition, differences in baseline