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Measuring ADL's in elderly in community and institutionalized: preliminary results over a six months period

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INTRODUCTION

Ability to perform basic and instrumental Activities of Daily Living (ADL's) decline in elderly people. This decreasing reduced the autonomy and increase dependence (Huang et al, 2010; Nikolova et al, 2011). Living in institution was revealed an association with high losses in ADL's. Placement in an institution or in nursery homes corresponds to a transition from a model of integration and autonomy in community-dwelling to a model of dependence or lower functionality (Luppa et al, 2011).

The transition-adaptation process is determinant to the maintenance of functionality and has a greater successfully if older people used their reserve capacities (Baltes & Smith, 2003).

OBJECTIVES

The aim of this study is to evaluate the loss in ability to perform basic and instrumental Activities of Daily Living (ADL's) in an elderly population, housed in different contexts, over a period of 7 months. Assess this losses and its progression, after the placement into a institution, was our secondary objective.

METHODOLOGY

This is a comparative and longitudinal study, with a sample of 57 subjects (80.2 ± 7.9 years), living in residential institutions for older people (Group 1; n=27; 47.4%) or in the community (Group 2; n=30; 52.6%) in Portugal. Evaluation of subjects from Group 1 has been done in the first month of the transition from community to the institution.

The Katz Index (bADL's) and Lawton and Brody (iADL's) was applied at three different moments (1st, 4th and 7th months, corresponding to T₀, T₁ and T₂).

Health conditions and consumption were assessed at baseline.

RESULTS

Presented results are the preliminary stage of evaluation at the end of 6 months.

Table 1 - Groups' characteristics (age and health consumption)

	Group 1 (Mean/St.Dev)	Group 2 (Mean/St.Dev)	P
Age (years)	83.59 ± 5.09	77.10 ± 8.81	0.005
Self-reported health problems	2.59 ± 1.08	2.20 ± 1.18	0.204
Medical advice (last month)	0.74 ± 0.90	0.70 ± 0.70	0.902
Numb. of Hospitalization (last month)	0.07 ± 0.26	0.04 ± 0.02	0.133
Numb. of days in hospital (last month)	0.07 ± 0.38	0.043 ± 0.18	0.920
Prescribed drugs (by day)	5.00 ± 2.32	3.40 ± 2.02	0.004

Table 2 - Scores in basic and instrumental ADL's in T₀, T₁ and T₂

	Time	Group 1 (Mean/St.Dev)	Group 2 (Mean/St.Dev)	P
Katz Index (bADL's)	T ₀	7.4 ± 1.6	8.8 ± 1.2	0.101
	T ₁	8.5 ± 2.1	7.1 ± 1.4	0.004
	T ₂	9.3 ± 2.6	7.3 ± 1.5	0.002
Lawton & Brody scale (iADL's)	T ₀	20.96 ± 5.28	14.80 ± 6.68	0.000
	T ₁	23.96 ± 4.81	14.57 ± 6.39	0.000
	T ₂	25.11 ± 4.66	14.90 ± 6.69	0.000

Table 3 - Loss in ability in basic and instrumental ADL's between T₀, T₁ and T₂

	Period	Group 1 (Mean/St.Dev)	P	Group 2 (Mean/St.Dev)	P
Katz Index (bADL's)	T ₀ -T ₁	-1.0 ± 1.5	0.101	-0.27 ± 0.6	0.030
	T ₁ -T ₂	-0.8 ± 1.2	0.004	-0.23 ± 0.6	0.080
	T ₀ -T ₂	-1.8 ± 1.9	0.002	-0.50 ± 0.9	0.005
Lawton & Brody scale (iADL's)	T ₀ -T ₁	-3.0 ± 4.1	0.000	-0.06 ± 1.6	0.098
	T ₁ -T ₂	-1.1 ± 3.3	0.000	-0.33 ± 1.2	0.098
	T ₀ -T ₂	-4.1 ± 4.9	0.000	-0.40 ± 1.1	0.038

DISCUSSION

Between the groups we find significant differences in age (in group 1 subjects are older) and in prescribed drugs (higher in group 1), without significant differences in other health consumptions (Table 1). Scores in bADL's are significantly different in T₁ and T₂; this also happens in the three moments of iADL's (Table 2). However, when we analyzed losses in ability to perform ADL's, Group 1 revealed poor values in basic and instrumental areas. In table 3 we can see, in group 1, significant losses in bADL's between T₂ and T₁ and T₀. In iADL's this losses are continuous during all the study. In Group 2 we only find significant losses in basic and instrumental ADL's when we compared T₀ with T₂.

CONCLUSION

Decreasing ability to perform basic and instrumental ADL's is common in elderly. However this decreasing appears to be more pronounced in people living in institutions. Transition to a residential institution revealed an acceleration of the losses to perform ADL's, basic and instrumental's (Buurman et al, 2011; Vermeulen et al, 2011).

This functional decline should be avoided. Improve the standards of care in institutions can provide better results for older people, and maintained or improved his ability (Ang, Au, Yap, Ee, 2006).

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