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# Life satisfaction and quality of life amongst elderly Portuguese living in the community[1]

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## Abstract
*The aim of this paper is to study the difference between life satisfaction and quality of life as general measures of wellbeing among older people and how both variables relate differently to individual, social, relational and instrumental determinants. A group of 234 elderly Portuguese living in their own homes in rural and urban areas were studied. The results obtained identify a group of individuals with low levels of schooling and possessing reduced income, which seems to influence the evaluation of the quality of life but not the life satisfaction. Life satisfaction, seen as a psychological dimension, appears as a variable associated more with personality characteristics and less with external variables, regardless of whether they are physical, social or environmental. The perception of quality of life seems to be clearly associated not only with socio-demographic variables but also with physical and contextual variables.*

## Keywords
life satisfaction
quality of life
ageing-in-place
gerontology
Portugal

## Introduction
The last Portuguese population census (INE 2002) shows that older people represent 16.4 per cent (1,702,120 people) of the national population. The majority of old people are female (59 per cent).[2] The average age of life expectancy is 79.4 for women and 72.4 for men. The illiteracy rate amongst older people, while declining due to generation renovation, continues to be very high (55.1 per cent), being more considerable in women (64.7 per cent) than in men (41.3 per cent). The percentage of families with at least one elderly person is 32.5 per cent with 50.5 per cent of these being elderly living alone and 48.1 per cent being elderly married couples, reducing the household – that is, the number of older families is increasing and multi-generational families are decreasing.

The majority (81 per cent) of older people do not work, and many of those who continue to do so work in agriculture. Domestic activities, such as cooking, cleaning and doing the laundry, are mainly done by women, while gardening, shopping and administrative work is shared by both sexes. Older people state that their most important social activity is talking with neighbours (68 per cent do so daily), while 96 per cent indicate that watching television is their most frequent leisure activity. The level of

1. This project was supported by the Fundação para a Ciência e a Tecnologia – POCTI/33341/PSI/2000, Community resources for the elders: Formal and informal care.

2. Old people are defined, for the purpose of this paper, as those aged 65 and over.

community activity and involvement is very low: on average, less than five per cent of the individuals refer to participating in some community service or organisation. The majority of older people stay at home all day. Portuguese older people are disadvantaged: one third of all persons can be considered poor – not only as far as the type of home and equipment they possess is concerned, but also as far as their income is concerned. This is especially seen with those who live alone.

The aim of this paper is to study the difference between life satisfaction and quality of life, as general measures of wellbeing among older people, and how both variables relate differently to individual, social, relational and instrumental determinants. To develop this study, we start from a perspective that values successful ageing, where the criteria of success are, in the most basic version, the physical, psychological and social autonomy of older people.

## Life satisfaction and quality of life

Both the concept of successful ageing (Baltes and Baltes 1990; Depp and Jeste 2006; Rowe and Khan 1998; Schulz and Heckhausen 1996) and the concept of active ageing (WHO 2002) are central to gerontology: they both mean being competent and involved in life. According to Fonseca (2005), active ageing completes the ageing process in the area of culture and gender, underlining the importance of the following determinants: social and health services, behavioural and personal characteristics, the physical surrounding area, and social and economic characteristics. Active ageing is supported essentially through social participation, in health and security. It is expected that these aspects vary and carry different weights for satisfaction and the quality of life of the older people, in different contexts.

Psychological wellbeing has as underlying dimensions: the congruency between aspirations and realisations; the affect (positive and negative); and happiness (Lawton, Kleban and diCarlo 1984). According to these authors, psychological wellbeing is one of the four components of subjective wellbeing, which also includes behavioural competence, perceived quality of life and the objective environment. Novo (2003) – based on the studies of Ryff (1989) – considers psychological wellbeing as the quality of psychological functioning, including autonomy, environmental control, positive relationships with others, objectives in life, personal growth and acceptance of self. In the context of this research, psychological wellbeing is seen as an indicator of adaptation to the ageing process, with variations associated with physical and environmental factors.

Broadening the scope of adaptation indicators to ageing, we attain the concept of quality of life. The comprehension of quality of life is represented as a phenomenological (Hendry and McVittie 2004) and multidimensional (Bowling, Banister and Sutton 2002) experience. Bowling et al. (2003) start with data analysis of a sample on quality of life of the ageing population of the United Kingdom to conclude that the aspects most valued by the older persons living in the community are: (i) having good relationships with family and friends; (ii) performing social roles, such as voluntary work and hobbies; (iii) having good health and being useful; (iv) living in a good house in a nice area with good neighbours; and (v) having a positive outlook on life and maintaining control and independency.

Nevertheless, health continues to be a key component of quality of life. The growing importance of health is due to the model change of the approach of health questions, in which a shift was made from biomedical emphasis to a more holistic and bio-psychosocial emphasis. Medical interventions are no longer evaluated exclusively from the point of view of the results, in terms of mortality and morbidity, but changing to include the improvement of wellbeing in general (Paúl and Fonseca 2001). In the 1990s, with the support of the World Health Organisation (WHO), a group was formed assuming the Quality of Life study, defining it as 'an individual's perception of his position in life in the context of culture and value systems in which his objectives, expectations, patterns and worries are included' (WHOQOL Group 1994). In the WHO model we adopt, quality of life includes physical, psychological, social and environmental dimensions, introducing diversified variables that do not overlap with life satisfaction, in the comprehension of the ageing process.

However, the weight of health, more precisely the perception of health in quality of life, remains a controversial question. Albrecht and Devlieger (1998) name the apparent contradiction between the level of an older person's disability and perception of high wellbeing and quality of life, as 'the disability paradox'. According to Rothermund and Brandtstadter (2003), the difficulties of older people in relation to health and behavioural performance, associated with irreversible illnesses and losses, do not have a large negative impact on the quality of life perceived. This statement could be explained by a dual process of coping, used by older persons to adjust to difficulties (Brandtstadter 1989): *assimilative coping*, which corresponds to an attempt to decrease recent or anticipated losses through compensatory actions; and *accommodative coping,* which relates to the change of goals and patterns of the lowest level or demand, therefore allowing the older person to maintain a sense of self-efficacy and control over his life.

Rothermund and Brandtstadter (2003) note that compensatory efforts increase up to the age of 70, noticing from this point (because efforts become less efficient) a readjustment of expectations as to the possible performance. Therefore, accommodation strategies begin to predominate, which allow confirmation of the positive perception of quality of life. As a result, this perception will also be dependent on the existence and availability of external resources (equipment and services).

This theoretical model is confirmed by an evaluation of abilities of life autonomy and satisfaction and perception of quality of life, as well as by the association between diverse measures, preferentially over time, in order to assess the stability of association and possible effects of causality. The evaluation of behavioural abilities of older people is normally effected by use of daily life activities scales: the Barthel index (Mahoney and Barthel 1965) for the 'activities of daily life' (ADL), and the Lawton and Brody (1969) 'instrumental activities of daily life' (IADL) scale.

## *Participants*

The population studied (Table 1) is a convenience sample with a total of 234 individuals (90 men and 143 women) from both rural and urban areas. The average age is 75 (standard deviation 6.4). Most of the individuals

| | Number | % |
|---|---|---|
| Male | 91 | 39.0 |
| Female | 143 | 61.0 |
| Average age | 75 (sd 6.4) | |
| Marital status | | |
| Single | 17 | 7.3 |
| Married | 149 | 63.7 |
| Widowed | 68 | 23.0 |
| Community | | |
| Rural | 117 | 50.0 |
| Urban | 117 | 50.0 |
| Living | | |
| Alone | 54 | 23.1 |
| With spouse | 149 | 63.7 |
| With siblings | 12 | 5.1 |
| With others | 28 | 12.0 |
| Education | | |
| Illiterate | 129 | 55.1 |
| Primary | 71 | 30.4 |
| Secondary | 34 | 14.5 |
| Monthly income | | |
| Less than €250 | 174 | 74.4 |
| €250–500 | 39 | 16.6 |
| More than €500 | 21 | 9.0 |

*Table 1: Details of survey sample (N = 234).*

are married (63.7 per cent) and live with their spouse. The rural respondents were accessed through personal door-to-door contact and the urban respondents through community services. The majority of individuals (55.1 per cent) are literate and a large percentage live in the rural areas (76.9 per cent). Their monthly income is very low, with 74.4 per cent receiving less than 250 euro per month. The money respondents receive is mainly their state pension.

## *Procedures*

The instruments used were:

(i) A socio-demographic questionnaire (age, gender, education and income);
(ii) Social network scale (Lubben 1988), which has ten items divided into four areas (family, friends, confidants and care provided) to assess the existence and frequency of social relationships;
(iii) IADL scale, which presents eight items with three, four or five possible answers that correspond to different levels of autonomy;
(iv) Morale scale (Lawton 1975), a dichotomy scale used in the Portuguese version of 14 items distributed between three sub-scales (Paúl 1992): Loneliness/Dissatisfaction, Attitude Towards Own Ageing, Agitation/Anxiety;
(v) Quality of life WHOQOL scale–Bref, which contains 26 items distributed across four domains: quality of physical life; quality of psychological

life; quality of social life;[3] and quality of environmental life – and that is presented in the form of a five-point Likert scale, of which an adapted Brazilian version was used (Fleck et al. 1999).

In the rural area, the interviews – which lasted approximately one hour each – were conducted in the older people's homes, over a period of two weeks, without anyone refusing to be interviewed. The collection of data concerning the older people in urban areas took much more time and followed different approach strategies, given the difficulty in obtaining people's collaboration. Contacts were made by mail and telephone; some participants were approached in commercial establishments and services areas (e.g. health centres). Most of the interviews were conducted, at the request of the participants, in a room in the town hall made available for this purpose.

3. In relation to the quality of social life domain, it was decided to remove the questions concerning the quality of the respondents' sex lives after it became apparent many respondents felt uncomfortable and refused to answer the questions.

## *Results and discussion*

### Social network

The 'social network scale' (Lubben 1988) indicates that the average related to the family networks is ten, with a standard deviation of three. The average of the friends network is 12, with a standard deviation of five. In the category of mutual confidence, the average is five with a standard deviation of three. The population in study, made up of only older people, seems to possess a large network as far as friends and family are concerned and less related to confidants. This fact reinforces the idea of the importance of family in the networks of social support in Portugal and accentuates the extension of the friends network among the older population. If we compare the rural and urban sub-samples, we notice that there are significant differences in the following three aspects: family ($F(1, 233) = 5.149$, $p < 0.05$), friends ($F(1, 233) = 132.964$, $p < 0.000$) and confidants ($F(1, 233) = 43.413$, $p < 0.000$). While the older people from the rural areas have a wider network of family and friends, they have a restricted network of confidants. These differences show the diverse cultural practices of sociability in the two contexts: in the village intimacy is more limited than in the city.

### Instrumental Abilities

Given that our sample is only made up of older people living independently in the community, we did not evaluate basic abilities but only the instrumental activities that are indirectly related to them, as can be seen in the following example: buying or cooking food (IADL) versus eating (ADL). The evaluation of the instrumental activities is fundamental because it allows us to know their possibility of life autonomy, even when big dependencies are not registered and before they become bound to daily life activities. In the IADL scale (Lawton and Brody 1969), if we consider the maximum autonomy as well as the performance, at the highest level, in each one of the eight activities, we obtain the maximum score of eight. The average obtained in our study was 6.3 with a standard deviation of 2.7. Therefore, we can verify that these people are very autonomous, but their instrumental ability declines significantly with the age group, mainly when we compare the

| | Loneliness | Attitudes towards ageing | Agitation |
|---|---|---|---|
| **Age group** | n.s. | n.s. | n.s. |
| **Sex** | $F(1, 233) = 9.626^{*}$ | n.s | $F(1, 233) = 16.325^{**}$ |
| **Marital status** | $F(3, 233) = 5.181^{*}$ | n.s | $F(3, 233) = 3.441^{*}$ |
| **Rural/urban** | n.s. | $F(1, 233) = 14.227^{**}$ | n.s. |
| **Education** | $F(5, 233) = 3.542^{*}$ | n.s. | n.s. |
| **Income** | $F(3, 233) = 6.025^{*}$ | n.s. | n.s. |
| **IADL** | n.s. | n.s. | n.s. |
| **Family** | n.s. | n.s. | n.s. |
| **Friends** | n.s. | n.s. | $F(14, 233) = 1.871$ |
| **Confidants** | $F(9, 233) = 2.390^{*}$ | n.s. | $F(9, 233) = 2.224^{*}$ |
| **Health perception** | $F(4, 233) = 16.581^{**}$ | n.s. | $F(4, 233) = 12.865^{**}$ |

$^{*}p < 0.05$
$^{**}p < 0.00$

*Table 2: Variation of sub-scales of the Life Satisfaction Scale with the characteristics of the subjects.*

older group of 65–74 with the 85 or older age group: ($F(2, 233) = 28.843$, $p < 0.000$). The rural elderly differ from the urban, ($F(2, 233) = 8.664$, $p < 0.05$), in that the former have a higher level of autonomy, possibly due to the fact that they have a more active life in agriculture and raising animals.

**Life satisfaction**

The psychological state of the older people – measured by the morale category – is an important indicator of their wellbeing. The global analysis of the results shows that these people feel some loneliness/dissatisfaction, have negative attitudes towards their own ageing and are agitated/anxious. When we study the relationship between life satisfaction and other revealing variables (Table 2), we see that there are no significant differences in the age group, but that there are in gender, with women showing that they feel more loneliness/dissatisfaction and greater agitation. Marital status also seems to be associated with life satisfaction (loneliness and agitation sub-scales), favouring married couples. The rural condition versus the urban only seems to be related to attitude towards own ageing, being more negative in the urban dwellers. The level of schooling and income are related to the feeling of loneliness, which is greater for those who have less schooling and a lower income level. The ability for the performance of instrumental activities of daily life does not appear to be associated with life satisfaction, possibly due to high levels of autonomy in the older people studied. Family is not associated with life satisfaction, and friends seem only to be associated with the level of agitation/anxiety, while the existence of mutual confidence is associated with both the feeling of loneliness and with agitation. The self-evaluation of health appears associated with life satisfaction.

Linear regression models (stepwise method) were applied to each of the life satisfaction domains seen as a dependent variable (Table 3) and using

| Loneliness | | | | | Attitude ageing | | | | | Agitation | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | | B | SE | β | Model | | B | SE | β | Model | | B | SE | β |
| 1 | Satisfied with health | –0.532 | 0.064 | –0.479** | 1 | Friends | –0.032 | 0.012 | –0.176* | 1 | Satisfied with health | –0.559 | 0.067 | –0.478** |
| 2 | Satisfied with health | –0.491 | 0.065 | –0.442** | 2 | Friends | –0.033 | 0.012 | –0.184* | 2 | Satisfied with health | –0.530 | 0.066 | –0.453** |
| | Income | –0.315 | 0.121 | 0.153* | | Income | 0.212 | 0.091 | 0.150* | | Sex | –0.601 | 0.169 | –0.202** |
| 3 | Satisfied with health | –0.450 | 0.066 | –0.405** | 3 | Friends | –0.026 | 0.012 | –0.142* | 3 | Satisfied with health | –0.489 | 0.067 | –0.418** |
| | Income | –0.318 | 0.120 | –0.154* | | Income | 0.240 | 0.091 | 0.169* | | Sex | –0.632 | 0.166 | –0.212** |
| | Friends | –0.039 | 0.015 | –0.148* | | Family | –0.040 | 0.018 | –0.148* | | Family | –0.067 | 0.023 | –0.163* |
| 4 | Satisfied with health | –0.420 | 0.067 | –0.378** | | | | | | | | | | |
| | Income | –0.261 | 0.121 | –0.126* | | | | | | | | | | |
| | Friends | –0.046 | 0.015 | –0.177* | | | | | | | | | | |
| | Confidants | –0.067 | 0.027 | –0.147* | | | | | | | | | | |
| 5 | Satisfied with health | –0.413 | 0.066 | –0.371** | | | | | | | | | | |
| | Income | –0.214 | 0.122 | –0.103 | | | | | | | | | | |
| | Friends | –0.041 | 0.015 | –0.158* | | | | | | | | | | |
| | Confidants | –0.074 | 0.027 | –0.161* | | | | | | | | | | |
| | Sex | –0.336 | 0.163 | –0.119* | | | | | | | | | | |

*$R^2$ = 0,23 step 1; $\Delta R^2$ = 0.02 step 2; $\Delta R^2$ = 0.02 step 3; $\Delta R^2$ 0.02 step 4; $\Delta R^2$ = 0.01 step 5*

*$R^2$ = 0.03; $\Delta R^2$ = 0.02 step 2; $\Delta R^2$ = 0.02 step 3;*

*$R^2$ = ,23 step 1; $\Delta R^2$ = .04 step 2; $\Delta R^2$ = .03 step 3;*

*$^*p < 0.05$*

*$^{**}p < 0.000$*

*Table 3: Summary of the analysis of hierarchical regression for the variables that indicate loneliness, attitude towards own ageing and agitation.*

age, gender, marital status, level of schooling, income, health perception, level of autonomy (IADL) and social support network (family, friends, confidants) as independent variables.

Therefore:

- For the Loneliness/Dissatisfaction, the predictors are the health perception, income, friends, confidants and gender, explaining the 41 per cent of the variation;
- In relation to the Attitude Towards Own Ageing, the predictor variables are friends, income and family, which explain only 7 per cent of the variation;
- Finally, as far as Agitation/Anxiety is concerned, the predictor variables are health perception, gender and family which together explain 29 per cent of the variation.

In general, the percentage of variation explained is low, especially as far as attitude towards own ageing is concerned. Life satisfaction can be predicted from social support networks (friends – for loneliness and attitude towards own ageing; family – for attitude towards own ageing and agitation; confidants – for loneliness). The health and gender perceptions are predictors of loneliness and agitation; income is associated with loneliness and with attitude towards own ageing. Age, schooling, marital status and level of autonomy do not appear associated with any domain of life satisfaction.

**Quality of Life**

The WHOQOL-Bref includes two general questions that are not considered in the domains: one related to the global evaluation of quality of life and the other to satisfaction with health. The results show that 3 per cent of people rate their quality of life as 'very good', 24 per cent as 'good', 41 per cent as 'neither good nor bad', 21 per cent as 'bad' and 11 per cent as 'very bad'. This variable does not seem to be associated with the rural/urban condition, gender, marital status or attitude towards own ageing, but appears strongly associated with age ($F(4, 233) = 5.469$; $p < 0.000$), schooling ($F(4, 233) = 6.595$; $p < 0.000$), income ($F(4, 233) = 10.648$; $p < 0.000$), autonomy ($F(4, 233) = 26{,}328$; $p < 0.000$), family ($F(4, 233) = 7.954$; $p < 0.000$), friends ($F(4, 233) = 5.855$; $p < 0.000$), confidants ($F(4, 233) = 5.035$; $p < 0.000$), loneliness/dissatisfaction ($F(4, 233) = 12.129$; $p < 0.000$) and agitation/anxiety ($F(4, 233) = 8.669$; $p < 0.000$).

The viewpoint related to satisfaction with health is more negative: 'very dissatisfied' – 37 per cent; 'dissatisfied' – 21 per cent; 'neither satisfied nor dissatisfied' – 22 per cent; 'satisfied' – 15 per cent; and 'very satisfied' – 5 per cent. Satisfaction with health appears significantly associated with age ($F(4, 233) = 4.301$; $p < 0.05$), schooling ($F(4, 233) = 3.917$; $p < 0.05$), income ($F(4, 233) = 4.176$; $p < 0.05$), autonomy in terms of IADL ($F(4, 233) = 18.864$; $p < 0.000$), family ($F(4, 233) = 3.116$; $p < 0.05$), friends ($F(4, 233) = 4.704$; $p < 0.05$), loneliness/dissatisfaction ($F(4, 233) = 17.414$; $p < 0.000$) and agitation/anxiety ($F(4, 233) = 17{,}827$; $p < 0.000$). Statistically, the rural/urban, gender, marital status, confidants and attitude towards own ageing variables do not appear significantly associated with satisfaction with

health. The performance ability of daily life activities, loneliness and agitation are the variables more significantly associated with health perception.

As far as the domains of quality of life are concerned, we proceeded to analyse the association between these and the explanatory variables. We can observe (Table 4) that all four quality of life domains (physical, psychological, social and environmental) vary with age group. Gender is only associated with the physical quality of life and marital status is associated with the physical, psychological and social quality of life. To be from a rural or urban area appears associated with psychological and social quality of life, while the level of schooling is globally associated with the quality of life except in the social domain. The income variables, IADL, self-evaluation of health and the three aspects of social support network (family, friends and confidants), are all associated with the quality of life group domains. All the explanatory variables considered, when associated with quality of life, vary in the predictable sense: that is, when the indicators are more positive, the quality of life is perceived to be better. The attitude towards own ageing does not significantly associate itself with the quality of life and seems independent of the social quality of life.

Let it be clear that not only the socio-demographic variables (above all the level of schooling and income), but also the instrumental autonomy level and the variables related to social support network and life satisfaction, appear associated with the quality of life as perceived by these older people in their diverse domains.

We will continue (Table 5) with the multivariable analysis through the linear regression models (stepwise method), taking each one of the quality of life domains as a dependent variable and using age, gender, marital status, level of schooling, income, perception of health, level of autonomy (IADL), social support network (family, friends and confidants) and the life satisfaction domains (loneliness, attitude towards own ageing and agitation) as independent variables. Therefore:

- Quality of physical life has the perception of health, the level of autonomy (IADL), age, schooling and loneliness as its predictors, which together explain 71 per cent of the variance;
- Quality of psychological life has the perception of health, loneliness, the level of autonomy (IADL), confidants, schooling, age and attitude towards own ageing as its predictor variables, which explain 62 per cent of the variance;
- Quality of social life has friends, level of autonomy (IADL), confidants and loneliness as its predictors, which explain 50 per cent of the variance;
- Finally, the predictor variables of quality of environmental life are the level of autonomy (IADL), income, perception of health, friends and confidants, which explain 41 per cent of the variance.

Briefly analysing these results, we verify that the level of autonomy is the best predictor of quality of life, given that – although with different weights – it is associated with all the domains considered. The perception of health indicates quality of physical, psychological and environmental life. Age is a predictor variable of quality of physical and psychological life. In relation to

| | Physical QL | Psychological QL | Social QL | Environmental QL |
|---|---|---|---|---|
| **Age group** | $F$ (2, 233) = 20.063** | $F$ (2, 233) = 14.637** | $F$ (2, 233) = 11.429** | $F$ (2, 233) = 12.918** |
| **Gender** | $F$ (1, 233) = 4.257* | n.s. | n.s. | n.s. |
| **Marital status** | $F$ (3, 233) = 3.020* | $F$ (3, 233)=3.947* | $F$ (3, 233) = 5.067* | n.s. |
| **Rural/ urban** | n.s. | $F$ (1, 233) = 5.852* | $F$ (1, 233) = 17.322** | n.s. |
| **Level of schooling** | $F$ (5, 233) = 4.164* | $F$ (5, 233) = 7.409** | n.s. | $F$ (5, 233) = 4.201* |
| **Income** | $F$ (3, 233) = 7.434** | $F$ (3, 233) = 10.738** | $F$ (3, 233) = 4.933* | $F$ (3, 233) = 13.907** |
| **IADL** | $F$ (23, 233) = 6.462** | $F$ (23, 233) = 4.975** | $F$ (23, 233) = 6.125** | $F$ (23, 233) = 4.338** |
| **Family** | $F$ (15, 233) = 1.999* | $F$ (15, 233) = 2.023* | $F$ (15, 233) = 2.619* | $F$ (15, 233) = 2.018* |
| **Friends** | $F$ (15, 233) = 1.851* | $F$ (15, 233) = 2.083* | $F$ (15, 233) = 7.310** | $F$ (15, 233) = 2.494* |
| **Confidants** | $F$ (15, 233) = 2.079* | $F$ (15, 233) = 5.207** | $F$ (15, 233) = 3.002* | $F$ (15, 233) = 4.738** |
| **Health perception** | $F$ (3, 233) = 83.506** | $F$ (3, 233) = 34.063** | $F$ (3, 233) = 18.745** | $F$ (3, 233) = 14.969** |
| **Solitude** | $F$ (5, 233) = 14,225** | $F$ (5, 233) = 23,566** | $F$ (5, 233) = 7,093** | $F$ (5, 233) = 8,621** |
| **Attitudes towards ageing** | $F$ (5, 233) = 3.827* | $F$ (5, 233) = 4.774** | n.s. | $F$ (5, 233) = 2.382* |
| **Agitation** | $F$ (4, 233) = 16.453** | $F$ (4, 233) = 29.930** | $F$ (4, 233) = 10.924** | $F$ (4, 233) = 9.240** |

*$p < 0.05$
**$p < 0.000$

*Table 4: Variation of Quality of Life with the characteristics of the subjects.*

| QL Physical | | | | | QL psychological | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Model | | B | SE | β | Model | | B | SE | β |
| 1 | Satisfied with health | 4.371 | 0.237 | 0.771** | 1 | Satisfied with health | 2.698 | 0.206 | 0.652** |
| 2 | Satisfied with health | 3.560 | 0.240 | 0.628** | 2 | Satisfied with health | 2.077 | 0.219 | 0.502** |
| | IADL | –0.371 | 0.050 | –0.315** | | Loneliness | –1.167 | 0.197 | –0.313** |
| 3 | Satisfied with health | 3.530 | 0.236 | 0.623** | 3 | Satisfied with health | 1.632 | 0.229 | 0.394** |
| | IADL | –0.301 | 0.054 | –0.255** | | Loneliness | –1.152 | 0.189 | –0.309** |
| | Age | –0.136 | 0.046 | –0.126* | | IADL | –0.207 | 0.043 | –0.240** |
| 4 | Satisfied with health | 3.182 | 0.257 | 0.562** | 4 | Satisfied with health | 1.554 | 0.220 | 0.375** |
| | IADL | –0.290 | 0.054 | –0.246** | | Loneliness | –1.023 | 0.183 | –0.274** |
| | Age | –0.153 | 0.045 | –0.141* | | IADL | –0.205 | 0.041 | –0.237** |
| | Loneliness | –0.663 | 0.212 | –0.130* | | Confidants | 0.348 | 0.075 | 0.204** |
| 5 | Satisfied with health | 3.067 | 0.258 | 0.541** | 5 | Satisfied with health | 1.436 | 0.219 | 0.347** |
| | IADL | –0.296 | 0.053 | –0.251** | | Loneliness | –1.002 | 0.179 | –0.269** |
| | Age | –0.151 | 0.045 | –0.140* | | IADL | –0.211 | 0.041 | –0.244** |
| | Loneliness | –0.624 | 0.210 | –0.122* | | Confidants | 0.292 | 0.075 | 0.171** |
| | Schooling | 0.499 | 0.200 | 0.093* | | Schooling | 0.569 | 0.174 | 0.144* |
| | | | | | 6 | Satisfied with health | 1.397 | 0.218 | 0.338** |
| | | | | | | Loneliness | –1.044 | 0.179 | –0.280** |
| | | | | | | IADL | –0.170 | 0.045 | –0.197** |
| | | | | | | Confidants | 0.295 | 0.075 | 0.173** |
| | | | | | | Schooling | 0.562 | 0.173 | 0.142* |
| | | | | | | Age | –0.078 | 0.038 | –0.099* |
| | | | | | 7 | Satisfied with health | 1.419 | 0.216 | 0.343** |
| | | | | | | Loneliness | –1.051 | 0.178 | –0.282** |
| | | | | | | IADL | –0.171 | 0.044 | –0.197** |
| | | | | | | Confidants | 0.287 | 0.074 | 0.168** |
| | | | | | | Schooling | 0.522 | 0.173 | 0.132** |
| | | | | | | Age | –0.083 | 0.038 | –0.105* |
| | | | | | | Attitude towards ageing | 0.473 | 0.226 | 0.087* |

*$R^2 = 0.59$ step 1; $\Delta R^2 = 0.07$ step 2; $\Delta R^2 = 0.01$ step 3; $\Delta R^2 = 0.01$ step 4; $\Delta R^2 = 0.01$ step 5*
*$^*p < 0.05$; $^{**}p < 0{,}000$*

*$R^2 = 0.42$ step 1; $\Delta R^2 = 0.25$ step 2; $\Delta R^2 = 0.04$ step 3; $\Delta R^2 = 0.03$ step 4; $\Delta R^2 = 0.02$ step 5; $\Delta R^2 = 0.01$ step 6; $\Delta R^2 = 0.01$ step 7*

*Table 5: Summary of the analysis of hierarchical regression for the variables that indicate quality of life: physical, psychological, social and environmental (N = 324).*

| QL Social | | | | | QL Environmental | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Model** | | **B** | **SE** | **β** | **Model** | | **B** | **SE** | **β** |
| 1 | Friends | 0.174 | 0.019 | 0.506** | 1 | IADL | –0.320 | 0.039 | –0.470** |
| 2 | Friends | 0.141 | 0.018 | 0.409** | 2 | IADL | –0.293 | 0.037 | –0.431** |
| | IADL | –0.118 | 0.016 | –0.388** | | Income | 2.028 | 0.328 | 0.335** |
| 3 | Friends | 0.156 | 0.018 | 0.454** | 3 | IADL | –0.231 | 0.040 | –0.339** |
| | IADL | –0.107 | 0.015 | –0.353** | | Income | 1.783 | 0.328 | 0.294** |
| | Confidants | 0.151 | 0.030 | 0.252** | | Satisfied with health | 0.685 | 0.197 | 0.210** |
| 4 | Friends | 0.143 | 0.017 | 0.415** | 4 | IADL | –0.212 | 0.040 | –0.312** |
| | IADL | –0.101 | 0.015 | –0.333** | | Income | 1.792 | 0.323 | 0.296** |
| | Confidants | 0.132 | 0.030 | 0.220** | | Satisfied with health | 0.597 | 0.196 | 0.183* |
| | Loneliness | –0.175 | 0.068 | –0.134* | | Friends | 0.120 | 0.042 | 0.156* |
| | | | | | 5 | IADL | –0.207 | 0.039 | –0.304** |
| | | | | | | Income | 1.593 | 0.322 | 0.263** |
| | | | | | | Satisfied with health | 0.505 | 0.194 | 0.155* |
| | | | | | | Friends | 0.148 | 0.042 | 0.192** |
| | | | | | | Confidants | 0.233 | 0.072 | 0.174* |

*$R^2 = 0.27$ step 1; $\Delta R^2 = 0.14$ step 2; $\Delta R^2 = 0.06$ step 3; $\Delta R^2 = 0.02$ step 4*

*$R^2 = 0.22$ step 1; $\Delta R^2 = 0.11$ step 2; $\Delta R^2 = 0.03$ step 3; $\Delta R^2 = 0.02$ step 4; $\Delta R^2 = 0.03$ step 5*

**$p < 0.05$*
***$p < 0.000$*

*Table 5: (continued)*

the elements of social support network, the confidants represent a variable that is associated with all the domains of quality of life (except the physical one), while friends indicate quality of social and environmental life. The level of schooling appears as a predictor of quality of physical and psychological life, while income is a good indicator of quality of environmental life. Loneliness is the only life satisfaction domain that appears as an indicator of quality of life (with the environmental domain as the exception).

## Conclusions

The portrait of these older people residing in the community shows us a group of individuals with low levels of schooling (some of whom are even illiterate) and very reduced incomes, which has an evident weight – not so much in psychological life satisfaction, but in the evaluation of quality of life. Their social support network is vast and made up of family, friends, neighbours and some confidants. The level of autonomy, in relation to instrumental abilities, is high, especially amongst the rural elderly, which allows them – even those who live alone – to remain in their homes. Age does not seem associated with life satisfaction, even if it is clearly associated with the perception of quality of life. The majority feel very dissatisfied with their health (58 per cent are either 'very dissatisfied' or 'dissatisfied'). In addition to their current health, the perception of health emerges as an important aspect of life satisfaction and quality of life, reinforcing Bowling's findings (Bowling 1995; Bowling et al. 2003) where health was extremely important and the lack of health decisively contributed to lowering quality of life in older people.

The general quality of life for 27 per cent is either 'good' or 'very good', for 41 per cent it is 'neither good nor bad' and for one third of the participants it is 'bad' or 'very bad'. We note that according to this relevant aspect, statistically significant differences between rural and urban people are verified.

Apparently, the rural/urban condition of these people (generally disadvantaged) – although they permit various specific differences, namely as far as the social support network as well as the level of autonomy are concerned – does not seem to introduce profound differences in the psychological (life satisfaction) or psychosocial (quality of life) results, accentuating the possibility of the existence of some 'universal' aspects of life related to the process of ageing. This data reinforces the results obtained by Fernández-Ballesteros et al. (2003), in a study performed in various European countries, including Portugal, which confirmed that comparisons between older people in rural and urban areas result in few differences.

Nor do the satisfaction and quality of life indicators reveal big differences in gender, with the exception of the feelings of loneliness and perception of quality of psychological life. In our opinion, a very interesting research question to explore in the future emerges from this: are we faced with reduced gender with age differences? And if so, how can it be explained?

The social support networks do not appear to be associated with life satisfaction amongst older people, but are clearly associated with quality of life, reinforcing the review of literature data (Bosworth and Schaie 1997; Krause 1997), not only in its entirety, but also according to its various domains. Life satisfaction, seen as a psychological dimension, appears as an intra-psychic variable, probably associated with personality characteristics

and less associated with external variables, whether they are physical, social or environmental. Yet the quality of life perception clearly appears associated with socio-demographic variables as well as with physical and contextual variables.

The limitations of this study – (i) the sample size, (ii) its transversal character, (iii) the generally high level of autonomy amongst the persons studied and (iv) the absence of Portuguese normative data about quality of life – does not allow us to prove Brandtstadter's 1989 theory about the adaptation of older people to their difficulties, and that manifests itself in a perceived high quality of life. Nevertheless, the analysis of the data obtained, which indicates low perceived health and high quality of life, as well as the association between level of autonomy and the quality of life, points towards a confirmation of the existence of a dual coping process, which requires further detailed investigation. The most negative evaluation made of the respective life satisfaction appears, on the other hand, to be that on the psychological level there are some difficulties associated with ageing, which are more difficult to overcome.

If the effective change in the life satisfaction of these people seems more difficult to promote (in the sense of its improvement), the associations verified between contextual variables (physical and social) and the quality of life, point in the direction of promising pathways in its promotion from a community perspective. Increasing the level of schooling and income, improving access to health and to services, as well as social integration, can be clear responses in the sense of implementing active ageing and quality of life.

In addition to the difficulties felt by the elderly people we studied, all manifested a wish and an intention to continue to live in their own homes, similar to that which is found in a number of earlier studies (Hinck 2004). The will to *ageing in place* is a preserved value, and we have to distinguish between psychological living related to life satisfaction – that frequently is painful and negative – and the more positive social living and its beneficial effects, although these seem not to be enough to change negative attitudes towards ageing and overcome the anxiety and loneliness that accompanies it.

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