



European Network of Economic Policy
Research Institutes

WELLBEING AND DEPENDENCY AMONG THE EUROPEAN ELDERLY

THE ROLE OF SOCIAL INTEGRATION

CORINNE METTE

ENEPRI RESEARCH REPORT NO. 12

JULY 2005



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ISBN 92-9079-580-8

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ENEPRI Research Report No. 12/July 2005

Corinne Mette*

Abstract

This study aims at highlighting the importance of social integration for the wellbeing of dependent elderly persons living at home. This question is pertinent because, as we can observe, social activities are not a priority for social policies regarding the dependent elderly in Europe. Here it is shown that social activities and contacts improve their wellbeing. Therefore, as depression is one of the factors leading to dependency, an emphasis on measures that encourage more social integration of the dependent elderly should stimulate a decrease in their rates of depression, and consequently, allow a reduction in their demand for care. The data used in this study stem from the European Community Household Panel.

The major results of this analysis are: health perception is strongly and positively correlated with satisfaction with one's main activity. The importance of the correlation decreases somewhat, however, when social integration variables are included in the model. Except for 'owning a telephone', these latter variables have equally significant effects on satisfaction with the main activity. Dependent elderly persons who are members of a club, those who often meet their friends and relatives and those who often talk with their neighbours declare a higher satisfaction level than the rest. Satisfaction is largely correlated with the country of residence. Dependent elderly persons from southern countries and from Ireland are less satisfied with their main activity than those from northern or Central Europe. In terms of housing, having a comfortable dwelling leads to higher satisfaction while living in a household consisting of several persons leads to less satisfaction. The standard of living is also linked with satisfaction: both household and personal income have a positive effect. Lastly, dependency-related social benefits have no effect on satisfaction with the main activity.

Key words: dependent elderly, quality of life, satisfaction, wellbeing

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Contents

1. Introduction	1
2. Methodology.....	2
2.1 Sampling	2
2.2 Dependent variable.....	4
2.3 Independent variables.....	5
3. Results	6
3.1 Descriptive results.....	6
3.2 Regression results.....	9
4. Conclusions	12
Bibliography.....	15

List of Tables

1. Comparison between the dependency indicator of the ECHP and the dependency indicator coming from national surveys	3
2. Average satisfaction with the main activity by characteristic of dependent elderly persons over 65, all countries	8
3. OLS regression of satisfaction with the main activity.....	10
4. Elderly participation in the financing of home care	13
5. Number of hours per week spent looking after persons because of old age, illness or disability (other than children), by the population as a whole by country.....	13

List of Figures

1. Distribution of the variable ‘satisfaction with the main activity’, dependent elderly persons over 65, all countries	6
2. Distribution of the living arrangements by country.....	14

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1. Introduction

The current ageing of the European population has revealed other challenges besides the well-known problems of financing pension and health systems. At present, almost 3% of the total European population consists of dependent elderly persons (Pacolet et al., 1998), meaning those who have some difficulties on their own in accomplishing some elementary tasks of daily life. The dependence risk increases strongly at advanced ages. In France for instance, while the proportion of the dependent elderly among persons aged 65 to 69 is only about 2%, the proportion among those aged 85 and over is close to 25% (Badeyan & Colin, 1999). Further, the share of dependent elderly persons aged 80 among those 65 and over is increasing rapidly. Therefore, the rise of the dependent elderly population presents an important problem in terms of care-giving demands.

Indeed, because of the changes in family structures, dependent elderly persons are more frequently finding themselves living alone. As an example, at the beginning of the 1980s, in Belgium, less than 30% of the elderly lived alone; at the beginning of the 1990s, this figure was around 40% (Jacobzone, 1999). Accordingly, the support provided by other household members has reduced. In addition, the increase of the proportion of women having an occupation contributes to reducing the number of potential caregivers for the dependent elderly.

To palliate decreasing family care-giving, the dependent elderly have to turn towards the two other actors in this area, the public and private sectors.

The question of how to appropriately support the elderly is all the more important as demographic projections clearly show an increasing number of elderly persons. While this imbalance is already contributing to a weakening of the financial sustainability of pension and health systems, the question of financing care for dependent elderly persons has also arisen.

In terms of the public sector, European countries offer different answers to the problem of caring for the dependent elderly. Actually, three types of countries can be distinguished in Europe (Assous & Ralle, 2000). In Beveridge-model countries, it largely depends on the community, particularly with the development of community care services. In Bismark-model countries, dependency is considered to be a new 'social risk' to be insured against by the state. In southern European countries, the premise of social help takes precedence over the other, with an important role still to be played by the family. In spite of differences as regards the coverage systems, they converge on the idea that social measures have to allow the dependent elderly to preserve their autonomy and their dignity (Joël, 2003). The predominant view is towards providing dependent elderly persons with the means that enable them to live in their own homes.

The preference for staying at home results from the fact that it is often less expensive than institutionalisation, at least for those with a low level of dependency. But it also stems from a

preference asserted by the elderly themselves. For many of them, entering an institution is synonymous with loss of freedom of movement and loss of familiar company, or even a place where one is waiting to die (Tester et al., 2003). On the other hand, living at home is often the choice most desired by the elderly because it allows them to preserve the environment and social network already established.

Yet staying at home can lead to adverse consequences, such as isolation (Gilroy et al., 2004). As an example, it might be difficult to continue to visit friends or pursue social activities. Nevertheless, as has already been shown (Gabriel & Bowling, 2004; Sharf et al., 2004; Strain et al., 2002), social activities, keeping active and busy, and meeting other people are important for retaining an interest in life, avoiding depression and, consequently, for wellbeing.

As can be observed, current social policy in Europe regarding the dependent elderly aims at making it easier to stay at home, essentially by providing assistance in the elementary activities of daily life. It finances in particular housekeeping, meal deliveries, improvements to the dwelling and technical aids such as tele-alarm. Although this kind of help improves the quality of life of the dependent elderly at home, it does not improve social activities. Actually, some measures favouring social activities at home do exist, but they are not systematic and are far from being a priority (Gabriel & Bowling, 2004). Since social activities and contacts improve the wellbeing of the dependent elderly, the question of how to increase measures encouraging greater social integration appears important. Indeed, as certain studies in gerontology have underlined, feeling bad leads to a depressive state (Badger, 2001). Additionally, depression is one of the factors leading to a situation of dependency. Therefore, increasing depression rates among the elderly contribute to increasing care demands.

Thus, this study aims at highlighting the importance of social integration for the wellbeing of dependent elderly persons and the extent to which current social measures affect it.

Data stem from the European Community Household Panel (ECHP). The analysis is realised using a linear regression model in which the satisfaction with the main activity is used as the dependent elderly wellbeing measure. In what follows, section 2 presents the data, the dependent variable and the independent variables used in the model. Section 3 is related to the results. That section describes satisfaction with the main activity among the dependent elderly. Section 4 presents the regression results and conclusions.

2. Methodology

2.1 Sampling

Data from the ECHP are used for the analysis. The ECHP, which has been created so as to collect and disseminate comparable social statistics across member states and social indicators concerning living conditions of private households and persons, has been conducted each year from 1994 to 2001 on each of the 15 member states. In this paper, however, for methodological reasons only the waves from 1994 to 2000 are used.¹ Moreover, this analysis only concerns 10 of the 15 EU countries, which are Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Greece, Spain and Portugal, and which represent quite well the European variety in terms of the welfare systems for dependent elderly persons.²

¹ For each wave, the personal income reported corresponds to the previous year. Yet in order to be more precise, it has been preferable to work with the personal income corresponding to the year contemporaneous to the wave. For this reason, the 2001 wave has not been included.

² The five other countries have been dropped because some of the questions used in the analysis have not been asked or reported exactly in these countries as in the 10 other countries.

The ECHP allows distinguishing the dependent elderly from the self-sufficient elderly through the following question: “Are you hampered in your daily activities by any physical or mental health problem, illness or disability?”.

Some studies have emphasised the limits of the use of this question in the approach taken towards dependency (Eurostat, 2003). Actually, the state of dependency includes the idea of the intervention of someone else for the fulfilment of daily activities. Yet the previous question does not allow isolating elderly persons with severe limitations who need the intervention of others for the fulfilment of their daily activities from the rest of the respondents. If this question does not correspond exactly to the definition of dependency, it is nevertheless the case that, according to a comparison of the proportion of dependent elderly persons resulting from this question with the proportion of dependent elderly persons resulting from more precise definitions coming from national surveys, it is a good proxy of it (Table 1). As an example, according to the ECHP, 22% of Danes aged 67 or more were severely limited in their daily life in 2000, while a Danish national survey indicates that, among this age bracket, there were 26% who were considered as dependent. The difference between these two figures can be explained by the different populations covered by the two surveys. The Danish national survey includes the population living in both private households and institutions, while the ECHP only interviews those living in private households.

Table 1. Comparison between the dependency indicator of the ECHP and the dependency indicator coming from national surveys

Country	Age	ECHP		National survey ^(a)			
		Year	Share of severely hampered persons ^(b)	Year	Pop.	Measuring instrument of dependency	Share of dependent elderly
Belgium	>=60	1997	12	1997	All	Katz-indicator Classification according to three categories of assistance's need on the daily life activity	17
Denmark	>=67	2000	22	2000	All	Persons with very long-standing illness	26
Greece	>=65	1999	19	1999	All	Number of persons receiving a disability related benefit	14
Spain	>=65	1999	14	1999	Private household	The definition of disability is based on the international classification of impairment, Disabilities and handicaps (ICIDH)	15
France	>=60	1998	25	1998-99	All	Colvez-indicator	12
France	>=60	1999	24	1998-99	All		12
Ireland	>=65	2000	9	2000	Private household	Older people who have difficulties with activities of daily living, which was measured using by the Stanford health assessment Questionnaire	14
Italy	>=65	2000	15	1999-2000	Private household	Use of the International Classification of Impairments	12
Austria	>=65	1996	16	1996	All	Frequency of help provided by	26

						persons	
Portugal	>=65	1995	21	1995	All	Persons with a severe reduction or limitations concerning activities of daily living	14
Finland	65-84	2001	9	2001	All	Persons who feel unable to fulfil the demands of everyday life. Four responses: 'never', 'seldom', 'every now and then' and 'often and most of the time'	12

(a) These data stemmed from Eurostat (2003).

(b) Share of persons who declare that they are severely hampered in daily activities.

Source: Author's calculations based on Eurostat and national surveys.

Another reason explaining the discrepancy is the variation in the definition of dependency in the Danish national survey. As an example, in the French case, according to the ECHP, the ratio of dependent persons among the elderly aged 60 and over was about 24% in 1999. According to the Colvez indicator, calculated from the French national survey "Handicap, Disability, Dependency", this proportion is only about 12% (Colin & Coutton, 2000). The limits of the Colvez indicator can explain some of the difference, even if there is no doubt that the ECHP overestimates the actual situation. Actually, the Colvez indicator does not take into account psychological dependence, so a portion of the dependent elderly are not included in the corresponding figure.

The final sample size was 11,211 dependent elderly persons aged 65 and over, which corresponds to almost a 20% of the elderly aged 65 and over in Europe between 1994 and 2000.

2.2 Dependent variable

One limitation of the ECHP in terms of wellbeing is that it does not contain any questions on general life satisfaction. It contains questions on satisfaction with several domains, such as the person's financial circumstances, housing situation, main activity and the amount of leisure time.

Satisfaction corresponds to the fulfilment of needs (George & Bearon, 1980). The needs linked with the loss of self-sufficiency cover three of the previous domains: the financial circumstances, the housing situation and the main activity. The loss of self-sufficiency leads to the specific inability to fulfil daily activities. For that reason, it involves resorting to other persons for the accomplishment of these tasks, along with improving or changing housing conditions and equipment used in the house. So, it entails a financial cost for the elderly persons concerned. But it can include a change in the housing situation as well. For example, an elderly person who loses his or her self-sufficiency might have to move to another house in which someone would be able to help him or her every day. Finally, the loss of self-sufficiency can induce a decrease in social life. For example, dependent persons are not able to go by themselves to a place in which they used to meet their friends.

Thus, the consequences of the loss of self-sufficiency on the general life satisfaction of the elderly can be defined in terms of financial effects, living arrangements and social participation. As the aim of this work is to highlight the importance of social integration on the wellbeing of the dependent elderly, satisfaction with the main activity is used as a proxy for wellbeing.

Respondents were asked to indicate how well they were satisfied with their main activity using a scale from 1 'not satisfied' to 6 'fully satisfied'.

2.3 Independent variables

Standard socio-demographic variables such as gender, age, marital status, level of education and country are included in the model. Additionally, as some studies have already underlined, the self-perception of health is significantly correlated with wellbeing (Michalos, 2004); for that reason this variable is also included.

The other variables used concern the financial circumstances, the housing situation and social integration.

With regard to the financial circumstances, three alternative measures have been considered:

- the logarithm of the personal annual income of the elderly; the personal income is the sum of all income components, such as capital income, wage and salary earnings and social insurance receipts;
- the logarithm of the annual household income; for this variable, the income components collected at the personal level are aggregated over all the interviewed persons in the household;
- the logarithm amount of social benefit transfers that the dependent elderly person received because of their dependency; this variable allows taking account of the help provided by public authorities. Yet as the ECHP has not been specially designed for studying the dependency of the elderly, it does not provide disaggregated information on social benefits. This quantitative variable is obtained by the sum of the amount received for invalidity or sickness, the amount of assigned for social assistance, the amount assigned for housing allowance and the amount received for other kinds of social benefits not specified.

Further, to exclude the correlation effects between the income variables and the variable on social benefits for dependency status, the latter is not included in the household and personal incomes.

With regard to the housing situation, two types of variables are used. One deals with living arrangements and the other with comfort of accommodation.

- **Living arrangements**

The living arrangement is a predominant factor in the dependent elderly issue. Dependency leads to being accompanied in daily life, but the responses given to this question are quite different among the countries and for that reason it leads to different configurations of dependent elderly households. In some countries, where the help given to the dependent elderly is insufficient, they cannot live alone and are obliged to live with their families. In that way, one variable, composed of three categories covering the different kinds of household arrangements, has been retained. These three categories are as follows: living alone, living with a spouse only or living in another household composition. This latter category includes those living with a person other than a spouse and those living with several persons among whom a spouse can be included.

Another variable, more exhaustive, allows account to be taken of the fact that the elderly person has tried living with his or her child. As this variable contained too small a number of persons in some of its categories (which distorted the results), it was not retained.

- **Comfort of accommodation**

The ECHP does not allow knowing whether the dependent elderly have, in their home, technical aids adapted to their disabilities, such as devices to help mobility (stair rails, canes, etc). But it allows identifying whether the house is equipped to provide the minimum comfort required such as hot water (the installation of which can be financed by public

authorities). To take into account of the concept of accommodation comfort, an aggregate scale is constructed and based upon seven items assuming to have the same weight: 1) Does the dwelling have a bath or shower? 2) An indoor flushing toilet? 3) Hot running water? 4) Heating or electric storage heaters? 5) Enough space? 6) Is there not enough light in the accommodation? and 7) Does the accommodation lack adequate heating facilities? One comfort point was scored for each item, giving a maximum comfort score of seven and a minimum of zero.

A variable referring to the housing tenure has been added. Some studies have already specified that older persons who rent the house they live in are more likely to be dissatisfied concerning their quality of life than owner-occupiers (Joseph Rowntree Foundation, 1995). This finding seems to relate to the poorer housing quality of the rented sector. It may equally stem from the fact that, in a period of a fall in income because of the retired status, to be an owner can be equated with having security, independence from others and freedom of choice (George & Bearon, 1980).

Finally, with regard to social integration, four questions are considered:

- being a member of a club;
- the frequency of talking to the neighbours;
- the frequency of meeting friends or relatives; and
- the possession of a telephone.

Responses to the two ‘frequency’ questions are divided into three categories, 1) often, 2) sometimes and 3) rarely. The two other variables – being a member of a club and possessing a telephone – are dichotomous.

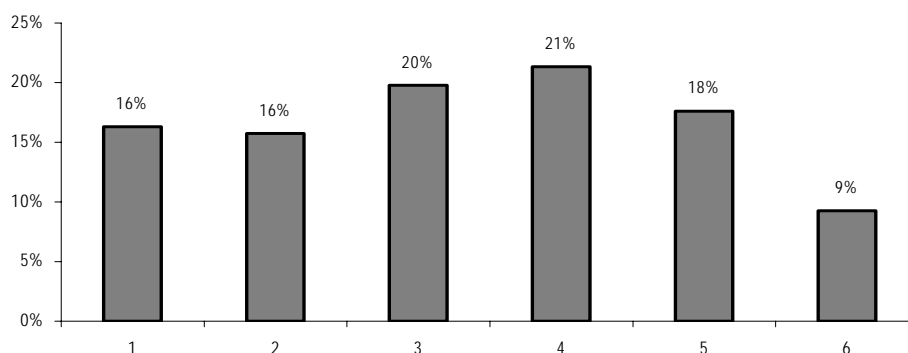
Therefore, two degrees of social integration are captured, social participation with the question on membership of a club and social connections through the other questions.

3. Results

3.1 Descriptive results

The average level of satisfaction with the main activity of the dependent elderly is about 3.35 (not satisfied = 1; fully satisfied = 6). Figure 1 shows that those who declare a score of satisfaction less than or equal to 3 are a slim majority (52%), which means that dependent elderly persons are more inclined to be dissatisfied with their main activity. The concentration is higher, however, for the intermediate scores (3 and 4 with 20% and 21% respectively).

Figure 1. Distribution of the variable ‘satisfaction with the main activity’, dependent elderly persons over 65, all countries



Source: ECHP, from 1994 to 2001.

Table 2 presents the average satisfaction level with the main activity for each category of the socio-demographic characteristics and variables related to the quality of life previously described.

Although satisfaction does not depend on gender or marital status, it is seemingly correlated with age, level of education and country in which the dependent elderly person lives. Therefore, the younger the dependent elderly are or the more educated, the more satisfied they are. Last, the dependent elderly from southern Europe, on average, declare that they are less satisfied than the elderly from northern and Central Europe.

A perception of good health is linked with a higher satisfaction with the main activity. Actually, dependent elderly persons who report a good health status have a satisfaction index of 4.4, while those who declare bad health have an index close to 3.1.

Living arrangements have some impact on the satisfaction levels as well. Indeed, the dependent elderly who live alone or as a single couple show a satisfaction level that is higher than the average satisfaction rate (3.54 and 3.46 respectively against close to 3.35).

Accommodation conditions also seem to have an impact, through the level of comfort of the dwelling: the more comfortable the dwelling is, the more satisfied are the dependent elderly. The satisfaction index difference between the lowest level of comfort and the highest is close to 0.7 points.

Contrary to previous findings (Joseph Rowntree Foundation, 1995), home ownership does not positively affect satisfaction with the main activity. Indeed, while the dependent elderly who are owner-occupiers report an average satisfaction rate of 3.3, those living in a rented house declare, on average, a satisfaction level of 3.4.

The material standard of living additionally appears correlated to satisfaction. Higher income, both household and personal, is associated with being more satisfied. For instance, dependent elderly persons who live in a household with an income below €500 per month have a satisfaction level close to 3, while dependent elderly persons living in household of highest income group (€1,500 or more) have a satisfaction level of 3.7.

Social benefit income received as a result of a dependency situation seems to negatively affect satisfaction with the main activity. This result has to be viewed in perspective, however, insofar as it can be explained by correlation with other variables affecting satisfaction, health status or general economic situation for instance. And indeed, logically, receiving these benefits means having a degree of dependency that should increase in line with the amount of the benefit itself. As we know, the higher the dependency level, the more difficult is it for elderly persons to participate in activities.

Finally, all the variables dealing with social integration seem to positively affect the satisfaction level. Being a member of a club, having a telephone or speaking with neighbours and meeting friends or relatives regularly are associated with higher satisfaction. The difference of between the rates reported is about 0.9 points and 0.4 points respectively in favour of those who are a member of a club and those who have a telephone compared with their counterparts. A similar difference of 0.4 points exists between those who often talk to their neighbours or meet friends or relatives and those who do so rarely.

All the previous results have to be interpreted cautiously. Indeed, as has already been mentioned, the result given for each variable can depend on the correlation with other variables. Therefore, so as to avoid these biases, an OLS regression is used.

Table 2. Average satisfaction with the main activity by characteristic of dependent elderly persons over 65, all countries

		Distribution (%)	Average of satisfaction with the main activity (3.36 on the whole) ^(a)	
Gender	Male	36.74	3.38	
	Female	63.26	3.35	
Age	From 65 to 74	46.16	3.39	
	From 75 to 84	38.41	3.40	
	85 and more	15.43	3.15	
Marital status	Never married	6.68	3.25	
	Widowed	38.94	3.33	
	Separated-divorced	3.09	3.83	
	Married	51.29	3.37	
Education	Less than second stage of secondary education	86.26	3.35	
	Second stage of secondary level education	10.38	3.86	
	Recognised third-level education	3.36	4.06	
Country	Denmark	4.92	4.15	
	Finland	6.13	4.48	
	Belgium	5.32	4.01	
	France	21.23	3.93	
	Austria	5.43	4.30	
	Ireland	2.53	3.53	
	Italy	17.46	2.31	
	Portugal	15.71	3.01	
	Spain	10.08	3.09	
	Greece	11.18	3.02	
Health perception	Good health	2.28	4.42	
	Normal health	19.94	4.15	
	Bad health	77.78	3.13	
Living arrangements	Composition of the household	Alone	28.61	3.54
		Only couple	40.71	3.46
		Other composition	30.68	3.08
Condition of accommodation	Tenure	Owner	71.47	3.33
		Not owner	28.53	3.44
	Comfort indicator	0	1.47	2.81
		1	3.27	3.05
		2	3.95	2.93
		3	7.16	2.80
		4	12.81	2.94
		5	15.75	3.29
6	9.49	3.36		
7	46.11	3.74		

Table 2. Cont.

Standard of living	Household income	Less than €500 per month	23.6	3.03
		€500-999 per month	31.52	3.3
		€1000-1499 per month	20.11	3.5
		€1500 and more	24.78	3.7
	Personal income	Less than €500 per month	53.78	3.06
		€500-999 per month	31.54	3.6
		€1000 and more	14.68	4.07
	Social benefit transfer for a dependence situation	Have not	77.29	3.36
		Less than €250 per month	13.79	3.59
		€250-499 per month	6.58	2.9
€500 and more		2.34	3.2	
Social integration	Member of a club	Yes	17.9	4.09
		No	82.1	3.2
	Possession of a telephone	Yes	89.98	3.41
		No	10.02	2.99
	Frequency of talking to neighbours	Often	59.87	3.4
		Sometimes	18.45	3.56
		Rarely	21.67	2.95
	Frequency of meeting friends and relatives	Often	69.11	3.43
		Sometimes	13.44	3.48
		Rarely	17.45	3

(a) The scale used is ordered from 1 'not satisfied' to 6 'fully satisfied'.

Source: Author's calculations based on the ECHP.

3.2 Regression results

Several regressions are presented in which each group of variables is added successively (Table 3). This method allows studying the importance of each group of variables relative to the others. The first section in Table 3 presents the effects of socio-demographic variables on satisfaction. The second section adds the variable dealing with health perception. The third includes characteristics of the housing situation. The fourth takes into account the standard of living and the fifth includes social integration variables.

Thus the impact of socio-demographic characteristics on satisfaction with the main activity depends on whether other variables are added. To have never been married is associated with less satisfaction with the main activity. The effect of this marital status disappears, however, when social integration variables are added, which means that the marital status and social integration variables are correlated.

When income variables are not included in the model, education has a positive effect on satisfaction. An individual's economic situation and education are also correlated, as is well known.

Table 3. OLS regression of satisfaction with the main activity

R-squared			0,200	0,253	0,265	0,266	0,285	0,286	
Variables			Coef. (Bold faced: P t <0.05)						
Constant			3,335	5,415	2,333	2,053	1,439	1,415	
Demographic Variables	Age		-0,004	<i>-0,004</i>	<i>-0,003</i>	-0,004	<i>0,001</i>	<i>0,001</i>	
	Gender (ref=male)	female	<i>-0,015</i>	<i>0,010</i>	<i>0,012</i>	<i>0,037</i>	<i>0,046</i>	<i>0,047</i>	
		Marital status (ref=married)	widowed	<i>0,034</i>	<i>-0,010</i>	<i>-0,058</i>	<i>-0,082</i>	<i>-0,037</i>	<i>-0,039</i>
			separated	<i>-0,022</i>	<i>-0,044</i>	<i>-0,092</i>	<i>-0,108</i>	<i>-0,005</i>	<i>0,001</i>
	never married		-0,155	-0,212	-0,221	-0,210	<i>-0,110</i>	<i>-0,107</i>	
	Education (ref=Less than second stage of secondary education)	Second stage of secondary level education	0,144	0,135	<i>0,080</i>	<i>0,067</i>	<i>0,075</i>	<i>0,071</i>	
		Recognised third level education	0,303	0,238	0,174	<i>0,140</i>	<i>0,132</i>	<i>0,132</i>	
	Country (ref=Portugal)	Denmark	1,088	0,831	0,486	0,451	0,428	0,415	
		Finland	1,449	1,162	0,823	0,778	0,742	0,734	
		Belgium	0,957	0,577	0,314	0,278	0,335	0,329	
		France	0,896	0,645	0,370	0,325	0,478	0,474	
		Austria	1,258	1,021	0,781	0,738	0,785	0,777	
Ireland		0,507	<i>0,095</i>	<i>-0,189</i>	<i>-0,180</i>	-0,202	-0,217		
Italy		-0,689	-0,719	-0,944	-0,940	-0,835	-0,834		
Spain		<i>0,083</i>	<i>-0,027</i>	-0,164	-0,164	-0,174	-0,172		
Greece	<i>-0,005</i>	-0,132	-0,211	-0,208	-0,229	-0,225			
Health perception				0,479	0,471	0,469	0,423	0,423	
Housing situation	Living arrangements: Composition of the household (ref=Alone)	Couple			-0,140	-0,155	<i>-0,090</i>	<i>-0,095</i>	
		other composition			-0,269	-0,303	-0,210	-0,216	
	Accommodation situation	owner			0,078	0,072	<i>0,054</i>	<i>0,055</i>	
comfort indicator				0,087	0,082	0,082	0,082		
Financial situation	Household income (without social transfer)					0,029	0,037	0,039	
	Personal income (without social transfer)					0,020	0,017	0,017	
	Social transfer					<i>-0,003</i>	<i>-0,002</i>	-0,028	
Social integration	Member of a club	yes					0,210	0,209	
	Possession of a phone	yes					<i>-0,037</i>	<i>-0,040</i>	
	Friend meeting frequency (ref=sometimes)	often					0,171	0,146	
		rarely					<i>-0,062</i>	<i>-0,045</i>	
	Talk with neighbours frequency(ref=sometimes)	often					0,119	0,123	
	rarely					-0,305	-0,297		
ST.SI (Interaction term)								0,012	

Source: Author's calculations based on the ECHP.

Finally, satisfaction is largely correlated with the country of residence. Further, the magnitude of each coefficient increases as other variables are included in the model. Dependent elderly persons in Italy show the lowest levels of satisfaction, while those in Finland and Austria show the highest levels of satisfaction. Generally, dependent elderly persons from southern countries and Ireland are the least satisfied, unlike those from northern and Central European countries, who are the most satisfied. This is also a well-established fact for the population at large, wherein the inclusion of country dummies in the regression helps to control for the fact that satisfaction is subjectively asserted by individuals in the sample and that it perhaps follows a national pattern.

Health perception is strongly correlated with satisfaction with the main activity: the better the status of health perceived, the higher the satisfaction is. Yet the magnitude of the health-perception effect on satisfaction decreases when social integration variables are included (Table 3, column 5). Indeed it is close to 0.48, 0.47, 0.47 and 0.42 for columns 2, 3, 4 and 5 respectively. This highlights the fact that social integration and health perception are correlated. In that way, since health perception depends on psychological wellbeing, at least for a large number of elderly persons, it also indicates that psychological wellbeing and social integration are really linked, as mentioned in the introduction.

Both living arrangements and the accommodation situation affect satisfaction with the main activity. Dependent elderly persons living with a person other than a spouse or living with several persons among whom a spouse can be included show the lowest satisfaction levels.

The more comfortable the dwelling is, the more satisfied are the dependent elderly. In contrast with what the descriptive results suggested, home-ownership is associated with higher satisfaction, unless social integration variables are included in the analysis. In this last case, the housing tenure is not significant. Thus, regarding wellbeing in terms of main activity, the social integration variable appears to be more important than the housing situation. With respect to the financial situation, both household and personal income increase satisfaction. Coefficients corresponding to the logarithm of the income variables are positive and significant.

Moreover, dependency-related social benefit transfers have a negative effect on satisfaction with the main activity, although this effect is not statistically significant.

Lastly, except for the possession of a telephone, the variables of social integration have significant effects on satisfaction with the main activity. Dependent elderly persons who are a member of a club, those who often meet their friends and relatives and those who often talk with their neighbours declare a higher satisfaction rate than the rest.

To see more precisely how the effects of dependency-related social benefit transfers work, an interaction term is constructed and included in the empirical model. This interaction term is made of two components: the social transfer variable (*ST*) times a proxy for social integration (*SI*) chosen as ‘frequency of meeting friends or relatives’ among the several variables of this kind included in the ECHP. Thus, let:

$$Y = a + b_1ST + b_2SI + b_3ST \times SI + b_4X_4 + \dots + b_nX_n$$

be the empirical model previously used, now extended to include the interaction term just described, where:

- Y* = satisfaction with the main activity
- ST* = social transfers
- SI* = frequency of meeting friends or relatives
- ST* × *SI* = social transfers × frequency of meeting friends or relatives

$X_4...X_n =$ other variables included in the model.

Now, $\frac{\partial Y}{\partial ST} = b_1 + b_3 SI$ gives the marginal effect of social transfers on satisfaction with the main activity where b_1 captures the effect of social benefit transfers in the absence of social integration activities by the individual ($SI = 0$) while $b_1 + b_3$ represents the effect of social transfers when social integration activities are being carried out by dependent individuals ($SI = 1$). The results are shown in the last column of Table 3, where it is apparent that the negative effect that receiving dependency-related social benefit transfers has on wellbeing of the dependent person ($\partial Y/\partial ST = -0.028$) reduces considerably if this person actively interacts with relatives or friends ($\partial Y/\partial ST = -0.016$).

As we know, the amount of social benefits is generally adapted to the dependency level. So, we interpret that the negative effect of social benefits on satisfaction comes from this correlation with the latter. Nevertheless, the higher the dependency, the more difficult it is to carry out other social activities.

The results above suggest that if dependency-related social benefit transfers were geared towards enhancing the social activities of the dependent persons, and not just to cope with material needs arising from a given dependency status, wellbeing could increase.

4. Conclusions

The first thing to be noted is the positive effect that social integration variables exert on satisfaction with the main activity. The magnitude of the health-perception effect on satisfaction with the main activity is clear as well. As previously mentioned, however, this effect decreases when social integration variables are inserted in the model. Again, this highlights the link between social integration and psychological wellbeing.

Another point to underline is the magnitude and significance of the country variables. Their effect is quite consistent with the conventional grouping of European countries under different models of care for dependent elderly persons and becomes clearer as other variables are included in the regressions. Countries from southern Europe and Ireland are well known for being less generous to dependent elderly persons than other European countries, as families carry most of the burden. Elderly participation in the financing of home care, for instance, is higher for those living in these countries (Table 4).

Dependent elderly persons from these countries also respond that they are less satisfied with their main activity. Another particularity of these countries is that, because of the insufficiency of public support, the dependent elderly have to rely more on informal help. Table 5 shows that informal help is more widespread in the southern countries and in Ireland. Between 1994 and 2001, the time spent looking after persons (other than children) who need special help because of old age, illness or disability by the population, exceeded 30 hours per week in Spain, Portugal and Ireland. In terms of hours, informal help is far less available in Denmark (15), Finland (16), France (16) and Belgium (18). Moreover, the informal help is often provided by persons living in the same household. That may imply that insufficiencies in public assistance forces dependent elderly persons to live with others. The dependent elderly from southern Europe and those from Ireland more often live with companions than those from northern or Central Europe (Figure 2).

Table 4. Elderly participation in the financing of home care

	Year	Percentage paid by individual
Austria	1994	20-30
Belgium	1995	20
Denmark	1995	0
Finland	1992	7
France	Depends on resources	
Ireland	1996	33 ^(a)
Italy	Depends on local agreements	
Spain	1995	30
Portugal	Depends on resources	

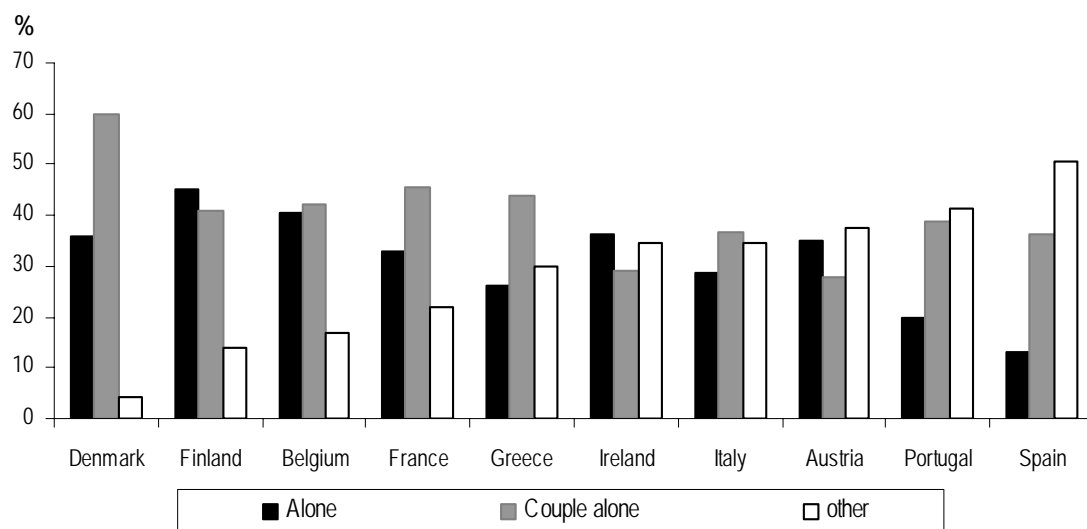
(a) Varies according to the area.

Source: Pacolet et al. (1998).

Table 5. Number of hours per week spent looking after persons because of old age, illness or disability (other than children), by the population as a whole by country.

	Number of hours
Denmark	15
France	16
Finland	16
Belgium	18
Italy	20
Greece	22
Austria	23
Ireland	31
Portugal	32
Spain	39
<i>Average</i>	<i>24</i>

Source: ECHP, from 1994 to 2001.

Figure 2. Distribution of the living arrangements by country

Source: ECHP, from 1994 to 2001.

This tendency can be found in the living-arrangements variable. Actually, living with several persons leads to less satisfaction with the main activity. Although there is no doubt that household members may help dependent elderly persons with the elementary tasks of daily life, they do not make them happier with their main activity. Having a comfortable dwelling contributes to higher levels of satisfaction. This result thus supports the efforts of public authorities towards adapting the homes of dependent elderly persons to their disabilities. Nevertheless, OLS regressions do not reveal a statistically significant influence on satisfaction with the main activity from dependency-related social benefit transfers provided to the elderly, unless this variable interacts with social integration variables. In this case, it has to be specified that the goal of this study is not to question social measures aiming at helping dependent elderly persons to stay at home. It especially does not investigate the fact that social measures enable elderly persons to accomplish the basic tasks of daily life and improve their financial situations. But the results do show that in order to optimise their effects, social policies also have to include measures that encourage the elderly to preserve and enhance their social integration. Such measures could, for example, take the form of financial incentives to set up activities adapted to the dependent elderly or financing the vocational training of community workers to provide social and cultural activities for the dependent elderly.

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This project is coordinated by [Jorgen Mortensen](#), Associate Senior Research Fellow at **CEPS**. For further information, contact him at: jorgen.mortensen@ceps.be.

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