

Determinants of support among older people: A comparative study of Costa Rica, Spain and England

Karen Glaser, Institute of Gerontology, King's College London, Franklin-Wilkins Bldg., Waterloo Bridge Wing, Waterloo Road, London SE1 9NH, Tel: +44 (0)207 8483238, E-mail: <u>karen.glaser@kcl.ac.uk</u>

Luis Rosero, Centro Centroamericano de Población, Universidad de Costa Rica, San José 2060, Costa Rica, Tel: +506 2075693, Email: <u>lrosero@ccp.ucr.ac.cr</u>

- Dolores Puga, Dpto. Demografía, Instituto de Economía y Geogrfaía, CSIC, Pinar 25, 28006 Madrid, España, Tel: +34 91 4111098, Email: <u>dpuga@ieg.csic.es</u>
- Teresa Castro, Dpto. Demografía, Instituto de Economía y Geogrfaía, CSIC, Pinar 25, 28006 Madrid, España, Tel: +34 91 4111098, E-mail: <u>tcastro@ieg.csic.es</u>
- Emily Agree, Department of Population and Family Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA, Tel.: +1 410 9554605, E-mail: <u>eagree@jhsph.edu</u>.

Global population ageing has led to considerable disquiet about future support for frail older people; however, the determinants are poorly understood. It is especially important to investigate the determinants of support in old age in developing societies with little or no government institutional protection for older people, and where current cohorts of older people are survivors of undernourishment, multiple diseases in early life, and have accumulated few savings (Palloni, 2001). Moreover, the developing world has also experienced numerous changes that have profoundly transformed families (e.g. fertility declines and rises in divorce). Unlike the West, which until recently largely conformed to norms concerning marriage and childbearing within marriage, Latin America has been characterized by high levels of consensual unions and childbearing outside of marriage (Castro-Martin, 2001). Given the greater fluidity of consensual unions, rates of family disruption are relatively high, and there is greater heterogeneity in family patterns (Goldman, 1981). Moreover, although information on consensual unions was not widely collected until the censuses in the 1950s, the little trend data there is shows a rise in the prevalence of these union types (Glaser, 1994). An additional consequence of the more fluid and flexible consensual unions are rises in divorce (as in the West), contributing to the greater diversity in family life. To date, the complexity of elder's kin networks in Latin America, and the consequences for support in later life, have been largely unexplored (Saad, 1998).

Moreover, research has called for cross-national comparisons as a means of enhancing our understanding of the underlying processes affecting the relationship between sociodemographic change and support in later life (National Research Council, 2001). Recent data collected in Costa Rica, Spain and England provide a unique opportunity to investigate the relationship between family structure (e.g. number and types of kin), union type, other key socio-demographic determinants (e.g. health) and support (i.e. coresidence, contact, and receipt of help) in later life from a comparative perspective.



Conceptual framework

Figure 1 provides a conceptual framework (adapted from Hermalin 2002) illustrating the interrelationships among major factors influencing support among older people. In this framework support encompasses: living arrangements, resource transfers, and caregiving. These outcomes are influenced by distal societal forces (e.g. demographic, cultural, etc.) that shape two sets of proximate determinants: a) personal and family characteristics and b) systems of social protection and other programmatic influences. We will focus on the influence of the personal and family characteristics of older persons on support in later life (denoted by the bold arrow in Fig 1) across the settings.

Background

A considerable body of evidence has examined the association between support and well-being in later life (House et al., 1988; Bowling and Grundy, 1998). Fewer studies have directly investigated the relationship between family structure and support at older ages, though the availability of children has been shown to influence living arrangements and types of support provided (see Saad, in press for a review). However, critical to understanding the support system and the potential demand for services among older people is a clear picture of the number, types and location of kin (Hermalin et al., 1992).

One of the difficulties in studies of support lies in its conceptualisation and operationalisation (see Barrera 1986, Hermalin 2002, and House 1988). Support is usually defined in terms of: (i) structural characteristics of the support network; (ii) social embeddedness (e.g. the frequency of contact with others); (iii) emotional assistance (e.g. perceived support reflecting subjective evaluations of current and future availability, as well as adequacy, of support); and (iv) instrumental assistance (e.g. transfers of space, time and money) (Barrera, 1986; House et al., 1988; Hermalin, 2002). The networks that provide this support may include family, friends, neighbors, as well as public and private services.

Co-residence is an important source of support in both more and less developed regions (Palloni, 2001; Saad, in press). Studies in the U.S. show that children who live at home provide greater assistance to parents (both financially and with tasks) than non-co-resident children (Hoyert, 1991). In North America and Europe, 5-15% of older people live with their children (Sundström, 1994), a dramatic contrast to Latin America where over half of those aged 65 and over live with an adult child, and where there has been little change over time (Palloni, 2001; Bongaarts and Zimmer, 2002). Despite small changes, there is rising concern that changes in family behaviour (e.g. declines in fertility) will lead to increases in solitary living, thus reducing support for older people. However, a small number of studies have shown that reduced fertility is not necessarily associated with increases in solitary living among older people in either developed or developing countries (Knodel et al., 1992; Tomassini and Wolf, 2000b).

Numerous studies have shown high levels of interaction across generations in the U.S. and Northern Europe, despite low levels of intergenerational co-residence (Tomassini et al., 2004a). Nevertheless, reported contacts between older parents and children, are higher in Southern European countries, Latin America and Asia (Tomassini et al., 2004b). However, only recently have studies investigating contacts with family members taken into account the availability of kin.

Evidence from U.S. and Europe shows little involvement in routine transfers between older parents and adult children (Eggebeen, 1992). However, Spain, like other Southern European countries shows higher levels of transfers such assistance received from family members when compared to their Northern European counterparts (Tomassini et al., 2004b). The availability of public transfer programs (i.e. pension and health care) and the good health of the older population appear to ensure that they are able to meet their own needs. However, once older people experience ill health, family members are the main providers of support and care (Soldo and Hill, 1995). In Latin America, with the exception of recent analyses largely based on the 2001 Pan American Health Organization (PAHO) surveys on Salud, Bienestar y Envejecimiento en América Latina y el Caribe (SABE), there has been little research on family support transfers among large representative samples of older people (Pelaez and Martinez, 2002; Saad, 2003; De Vos et al., 2004; Saad, in press). Studies of the SABE data show high levels of intergenerational support, 85-93% of respondents receive some form of help (Saad, 2003; Glaser et al., 2006).

Our study compares Costa Rica, Spain and England because they provide an opportunity to compare family support for older persons across cultures that have all experienced similar changes in family behaviour (e.g. fertility declines and rises in divorce) yet differ in terms of degree of familism and the prevalence of informal unions. In particular, we aim to examine whether in societies with a strong familistic culture (like Costa Rica and Spain) the older persons' health will show a weaker relationship with support in later life in comparison with a culture like England's, where relations between kin are primarily influenced by individualistic values and characteristics. We also seek to investigate whether the high levels of informal unions in Costa Rica modify the relationship between familism and family support, given the demographic opportunities for help.

Data and Methods

Data

A key issue in cross-national research is to assess to what extent data sets and measures are comparable across countries. We compare newly available data from the 2005-2006 Costa Rican Estudio de Longevidad y Envejecimiento Saludable (CRELES), the 2005 Spanish Procesos de Vulnerabilidad en la Vejez (PVV), and the first wave of the 2002-2003 English Longitudinal Study of Ageing (ELSA). CRELES is based on a nationally representative sample of 3,000 people aged 60 and over, with oversampling for those at the oldest ages. The Spanish survey, Procesos de Vulnerabilidad en al Vejez, is based on a representative sample of 1,244 people aged 70-74 drawn from the metropolitan areas of Madrid and Barcelona. Finally, ELSA is based on a nationally representative sample of 12,000 people aged 50 and over (and their younger partners) in private households in England. The sample was drawn from the Health Survey for England in 1998, 1999 and 2001.

Dependent variables

Comparable measures of support in the three surveys included indicators of: space (i.e. co-residence) and time (i.e. assistance with activities of daily living (ADLs) and instrumental

activities of daily living (IADLs)) transfers, as well as measures of social embeddedness (i.e. contact with children).

Social Embeddedness. All three surveys collected information on frequency of contact with children. In Costa Rica, in the child roster, respondents were asked how frequently they saw or visited each child. Responses were: daily, weekly, every other week, monthly, other or never. Responses referring to the most frequently seen child were selected. In Spain, respondents were asked how frequently they saw the most frequently seen child. Responses were daily, weekly, monthly or less than monthly. In England, in the self-completion questionnaire, respondents who had children were asked on average how often they met up with any of their children (not counting those who lived with them). Responses were three or more times a week; once or twice a week; once or twice a month; every few months; once or twice a year; and less than once a year or never. Information for this item was missing for 14 per cent of the sample who had children living outside of the household. Responses in each survey were grouped into an outcome variable defined as 0=no weekly contact with a child and 1= weekly contact or coresidence with a child.

Help Received. The 'use of help' is difficult to operationalise in a comparative study because of differences in the information collected across countries. For each dataset, a dichotomous dependent variable was created reflecting receipt of help from a child. In Costa Rica, respondents were asked if they had difficulties with a series of ADL/IADL activities such as walking, bathing, and dressing (excluding difficulties expected to last less than three months). Those who reported any of these difficulties were asked to identify the main helper living in or outside of the household. Those who reported a child as the main helper were considered to have received assistance from a child with ADLs and/or IADLs. In Spain, once again respondents were asked a series of questions regarding difficulties with ADLs/IADLs. Those who experienced difficulties were asked who helped them. Respondents were categorized into those who received help with ADLs/IADLs from a child including children-in-law (as in Spain, often those reporting receiving help from sons are in fact receiving assistance from daughters-in-law). For England, respondents were also asked a series of questions about whether they had any difficulties doing a series of ADLs/IADLs (excluding those difficulties expected to last less than three months). If respondents answered yes to any of the ADLs/IADLs they were then asked if anyone ever helped them with these activities, and if yes, they were asked to identify who (respondents were told to include their partner and anyone else in the household). Those who answered that a son or daughter provided assistance were considered to have received help from children with ADLs and/or IADLs.

Co-residence. All three surveys collected a household roster, listing all household members and their relationship to each other. Following Saad (Saad, 2003), separate outcome measures were created for married and unmarried respondents. For unmarried respondents the categories were with child (regardless of whether others were present or not) and with others, with living alone as the reference category. For married respondents, categories were similarly with child and with others with the reference group being living with a spouse only.

Independent Variables

Family structure. Indicators of family structure (e.g. number and types of children) and union type (e.g. separated/divorced). Our analysis used two indicators of family structure: (i)

number of living children and (ii) a measure of whether the children were biological, step or adopted (except in Spain where this information was not collected). In Costa Rica, the household roster collected information on biological and non-biological children and the child roster collected this information for children not living in the household. In England, this information was collected in a similar way from the household and child rosters although respondents were permitted to distinguish between biological, step and adopted children. Union type distinguished those who were (i) widowed, (ii) separated or divorced from the reference category, those with a current partner (whether cohabiting or married).

Other covariates included age, gender, possession of an educational qualification, health, housing tenure and socio-economic background. These socio-economic characteristics have all been identified as key determinants of late-life support in previous studies (Pezzin and Schone, 1999). Age was coded as a dichotomous variable (with those aged 60-74 as the reference category, except in Spain) and sex as a binary indicator with male as the reference group. Following Tomassini and Wolf (2000), in analyses of coresidence age was allowed to exhibit curvilinear effects through the inclusion of the term age squared. In order to retain comparability, given differences in the educational systems across the countries, individuals with higher educational levels were distinguished from those with lower levels. In Costa Rica and Spain those with less than six years of education were compared to those with longer schooling; in England, those with no educational qualifications were distinguished from the reference group, respondents with any of the following: 'O' levels or above, clerical, commercial or trade qualifications. Health status was included in the models as those in need of help are likely to have a higher probability of living with others and of receiving help (Glaser and Tomassini, 2000). A binary variable was created using similar information from the three surveys. This captured whether respondents reported at least one of the following doctor diagnosed chronic health problems: high blood pressure or hypertension; high cholesterol; diabetes, cancer; asthma and/or other respiratory illnesses; stroke and heart problems (the reference group being those reporting no such health problems). Housing tenure was defined as not living in an owner-occupied dwelling (largely private renters in Costa Rica and Spain and social sector tenants in Britain) versus the reference group, owneroccupiers, with or without a mortgage. Finally, a binary variable captured those in manual occupations, with the reference group being non-manual ones. In general this was based on the last or usual occupation held (however, in both Costa Rica and Spain those who neverworked, mainly women, were classified by their partner's occupation).

Analysis

We investigated older people's support using a variety of statistical techniques as appropriate to the outcome. Logistic regression was used to model contact with children (among parents) and help received from children. Following Tomassini et al. 2004, frequency of contact was measured as those reporting at least weekly contact from children (Tomassini et al., 2004b). Analysis of help received was restricted to those who reported difficulties with the ADL and/or IADL measures specified.

The determinants of coresidence were modeled using conditional multinomial logit models that accounted for the opportunity constraints imposed the availability of children. Following Saad (Saad, 2003), separate models were run for unmarried and married respondents. For

coresidence the following outcomes were created living with: spouse only (married persons) or alone (unmarried persons); with child; or with others. For those without children we imposed a constraint to give a zero probability of co-residing or receiving assistance from children (see Tomassini et al., 2000 and Wolf 1994 for a detailed description of the method) (Wolf, 1994; Tomassini and Wolf, 2000a). In this case, for example, the dependent variable for living arrangement includes only the categories 'alone' and 'with others'.

Preliminary Results

Table 1 shows the general characteristics of the samples, confirming wide variation across countries. For example, the percentage of the samples currently married is higher in Spain and England, and lower in Costa Rica, where the percentages cohabiting and divorced/separated are higher. On the other hand, as would be expected, a higher proportion of older persons reported low education and belonging to the manual group in Costa Rica in comparison to their Spanish and English counterparts. In general, older people in England reported fewer health problems.

Preliminary analyses also show variations in family structure (Table 2). The percentage of childless older people is similar in Spain and England (13 per cent) but higher than in Costa Rica (8 per cent). The mean number of living children in Costa Rica is around twice as high when compared with the figures for Spain and England (5.1 compared with 2.3), reflecting differences in the timing of the fertility transition across countries. The cohorts in this analysis would have been born in the 1940s or earlier and would have formed their families through the 1960s, a time of peak fertility in most of the Latin American countries.

Table 3 shows variations across the countries in the three types of support considered here: (i) contact with children, (ii) receipt of help and (i) living arrangements. As expected, the percentage of older people living alone in England is higher than that found in Costa Rica and Spain (33 compared with 23 and 10 per cent respectively). Coresidence with a spouse and children is more prevalent in Costa Rica, as one would expect, given the country's higher fertility levels which mean that young adult children are still at home. The level of weekly contact with children is similar in both Costa Rica and Spain (around 88 per cent) but higher than in England (51 per cent). Finally, receipt of help appears to be lower in Spain even though the Spanish sample comprises an older age group, a finding requiring further investigation.

Table 4 presents the effects of the selected covariates on the odds of frequent contact with children for all parents aged 60 and over. The covariates of interest demonstrate dissimilar relationships with this dependent variable across the countries considered. For example, in England, in contrast to Costa Rica and Spain, the odds of frequent contact with children decrease with age and step and/or adopted children, but increase among parents in the manual group. Widowhood is positively associated with frequent contact with children among older parents in England, and separation or divorce is negatively associated in Costa Rica and Spain. In all countries mothers reported higher odds of frequent contact with children and number of living children is positively associated with frequent contact in Costa Rica and England.

Results from the logistic regression models of help received from children (among parents who reported ADL/IADL difficulties) are shown in Table 4. In contrast to Costa Rica and

Spain, all the effects of the selected covariates on the odds of receiving help from children are significant in England. While in England, being female, older, less educated, in the manual group, a non-homeowner, in poor health (i.e. reporting a chronic health problem), widowed or separated all increased the odds of receiving help with ADLs/IADLs from children. Only having ever lived with a step or adopted child lowered the odds of receiving ADL/IADL assistance from children. There appeared to be a minimal socio-economic gradient in ADL/IADL help received from children in both Costa Rica and Spain. In Costa Rica and Spain there was no significant association between separated or divorce older parents reported higher odds of receiving help with ADLs/IADLs from children.

Table 5 shows the results of the conditional multinomial model for unmarried people aged 60 and over. Most of the selected covariates demonstrated the expected association with living with children. In Costa Rica, the odds of coresiding with children (relative to living alone) fall and then rise with age and the separated/divorced and non-homeowners demonstrate lower odds of coresidence with children relative to living alone. Unpartnered women show higher odds of living with others (than living alone), and number of children and being a renter demonstrate lower odds of living with others relative to living alone. However, only home ownership and educational level are significant in England in analyses of coresidence with children. Moreover, in England the separated/divorced and never-married reported higher odds of living with others relative to living alone.

Table 6 presents results of the conditional multinomial model for married people aged 60 and over. The selected covariates show few significant relationships with living arrangements in Costa Rica and Spain. By contrast, in England, partnered older women reported lower odds of living with children than men, the odds of living with children fell and then rose with age, and those in the manual group were more likely to coreside with children relative to living with a spouse only. In England, partnered renters and those in the younger age group showed higher odds of living with others relative to living with a spouse only.

Discussion

Our results suggest that in England family support may be largely activated in accordance with the older person's needs. This finding supports evidence from the U.S. and northwestern Europe which shows that while there is frequent contact between older parents and adult children there is little involvement in routine transfers (Eggebeen, 1992; Spitze and Logan, 1992; Mcgarry and Schoeni, 1995; Rosenthal et al., 1996). In such societies, the availability of public transfer programs (i.e. pension and health care) and the good health of the older population appear to ensure that they are able to meet their own needs. However, once older people experience ill health or bereavement, family members are the main providers of support and care (Soldo and Hill, 1995).

Earlier comparative work on intergenerational coresidence also showed a stronger relationship between individual need and help received in Britain when compared to Italy (Glaser and Tomassini, 2000). For example, older unmarried women with a limiting long standing illness and those who never worked were more likely to be coresiding with their children in the U.K.;

DRAFT DO NOT CITE

neither of these characteristics was significant in Italy (Glaser and Tomassini, 2000). Moreover, in our current analysis, education, tenure and social class (all proxies for social status) and being separated were significantly related to the receipt of help with ADLs/IADLs (among those who experienced difficulties) in England but not in Costa Rica and Spain. Our finding regarding the lack of significant associations between selected characteristics of need and support in Costa Rica and Spain may suggest that parents and adult children in these societies exchange support irrespective of the older person's characteristics. It has been suggested that in a familistic culture like Costa Rica's and Spain's family members consider their own well-being and their family's well-being to be the same so that support is provided to each member of the network regardless of the individual characteristics of the receiver (Dalla Zuanna, 2001). Having many children or a coresident child may help explain receipt of assistance in Costa Rica and Spain, suggesting more a matter of availability than need.







DRAFT DO NOT CITE

Table 1 Sample Characteristics

	Costa Rica 60+	Spain 70- 74	England 60+
Marital Status			
Never-married	8.0	8.9	5.2
Married	52.3	64.1	51.8
Remarried (2 nd or later)	NA	NA	8.7
Cohabiting	7.8	1.6	1.5
Divorced/Separated	10.3	3.0	6.6
Widowed	21.7	22.4	26.2
Education			
Low education (<6 years)	63.4	30.8	38.9
Social Class			
Manual	72.8	51.0	46.9
Tenure Status			
Not homeowner	14.4	14.6	23.1
Area of residence			
Urban	59.3	100.0	NA
Health			
Self perceived poor/regular health	49.8	45.1	35.1
Chronic health problems	32.1	27.6	30.2
Functional limitations	41.7	17.4	20.0
Depression	15.0	20.7	25.8
IADL	25.6	25.9	14.4
ADL	35.3	12.9	18.5
Cognitive	10.0	4.9	4.7
Base sample size	2826	1244	6957

	Costa Rica 60+	Spain 70- 74	England 60+
% Childless	7.5	13.0	13.0
Mean number of living children	5.20	2.25	2.28
(Range)	(0-20)	(0-10)	(0-13)
% with adopted children	5.1	NA	2.8
% with step children		NA	6.9
% with grandchildren	94.8	76.0	75.7
Base sample size	2826	1244	6957

Table 2: Fertility and Children's Characteristics: Costa Rica, Spain and England

	Costa Rica 60+	Spain 70-74	England 60+
Coresidence			
Alone	10.1	23.0	32.7
With spouse only	18.8	41.5	53.4
With spouse and others (including children)	40.5	21.0	7.8
With children, no spouse	21.6	9.2	4.1
With others (but no children or spouse)	9.0	5.3	2.0
Base sample size	2826	1244	6957
Parents Only			
Contact with children			
Weekly (includes coresident)	94.0	90.0	66.2
Monthly	2.3	5.5	16.9
None (includes infrequent	3.7	4.6	12.6
contact)			
Base sample size	2571	1071	5358+
Receipt of help from child	36.4*	19.2	13.7
(ADL/IADL) among those			
who need assistance			
Base sample size	1360	399	4054

Table 3: Support among older people: Costa Rica, Spain and England

*Main helper is a child

+Excludes those who had children living outside of the household (n=694) and did not respond to self-completion questionnaire

Table 4: Logistic regression models of weekly contact with child and ADL/IADL help from child (among those who reported ADL/IADL difficulties): parents aged 60and over, Costa Rica, Spain and England

				Weekly contact with child			Receive help with ADLs/IADLs from child (parents who need help with			
	% (for all parents)			(including co-resident)			ADLs/IADLs)			
	_			Costa			Costa			
	Costa			Rica	Spain	England	Rica	Spain	England	
	Rica	Spain	England	=94.0%	=90.0%	=66.2%	=36.4%	=19.4%	=20.4%	
Female (ref: male)	52.5	56.4	55.2	1.51*	1.33*	1.24**	1.30	3.60**	1.51**	
Age75 (ref: 60-74)	27.5		33.2	0.90		0.76**	1.34		1.50**	
Low education (ref: any										
educational qualification)	63.0	32.8	38.6	0.59*	1.12	1.21**	1.20	1.46	1.58**	
Manual worker										
(ref: non-manual)	72.2	52.3	47.5	0.88	1.18	1.76**	1.14	1.49	1.47**	
Not homeowner										
(ref: homeowner)	13.2	12.6	22.0	0.68	0.55*	0.98	1.00	1.77*	1.47**	
Chronic health problems										
(ref: no such health										
problem)	32.8	28.9	30.7	1.12	0.71	1.08	0.91	2.43**	1.68**	
Total living children	5.66	2.60	2.60	1.43**	1.19	1.14**	1.12**	1.07	1.16**	
No partner, widowed										
(ref: with partner)	23.5	24.8	26.6	1.19	0.81	1.42**	1.86**	2.43**	3.56**	
No partner, separated or										
divorced (ref: with partner)	11.1	3.1	6.9	0.24**	0.34*	0.88	1.34	2.11	2.08**	
Has step or adopted child										
(ref: no step or adopted										
children)	5.1		11.2	2.35		0.60**	1.10		0.70*	

Table 5: Conditional multinomial model of living arrangements among unpartnered older people (reference is living alone): Costa Rica, Spain and England

				Cost	Costa Rica Spain				England		
				With				With			
				children		With		children			
				(for		children		(for			
				parents	With	(for parents		parents	With		
	Costa			only)	others	only)=24.4	With others	only)	others		
	Rica	Spain	England	=53.1%	=22.2%	%	=14.2%	=10.7%	=5.0%		
Female (ref: male)	71.6	76.3	70.6	2.93**	2.37**	1.36	0.66	1.04	1.63*		
Age	73.2	72.2	76.0	0.70**	0.84	0.00*	0.01	0.85	0.88		
Age squared				1.00**	1.00	1.19*	1.04	1.00	1.00		
No partner, separated (ref: no											
partner, widowed)	24.8	8.0	17.0	0.51**	1.00	0.49	0.36	0.25	2.71**		
Never-married (ref:	10.4		105		1. (0)						
lone, widowed)	19.6	23.7	13.5		1.60		6.41**		4.92**		
Has living children	85.1	73.1	77.3		0.44**		0.83		0.55		
Chronic health problems (ref: no such health problem)	32.7	28.9	31.7	1.12	0.88	1.14	0.90	1.17	0.74		
Low education (ref: any educational	<i></i>					=	4.00				
qualification)	68.4	32.7	48.1	0.87	0.91	1.47	1.89	1.50*	0.83		
Renter (ref:	10.0			0.50.00	0.551	4.074		0.0044	0.40		
homeowner)	19.3	22.4	36.0	0.52**	0.57*	1.97*	1.03	0.80**	0.68		
Manual worker (ref:											
non-manual)	76.1	53.7	49.1	1.41	1.16	0.96	1.49	1.26	1.30		
Ν	1436	460	1830								

Table 6: Conditional multinomial model of living arrangements among married people aged 60 and over (reference living with spouse only): Costa Rica, Spain (70-74) and England

				Cost	a Rica	Sp	ain	Eng	gland
				With		With		With	
				children		children		children	
				(with or		(with or		(with or	
				w / o	With	w / o	With	w / o	With
				others)	others	others)	others	others)	others
				parents	(no	parents	(no	parents	(no
	Costa			only	children)	only =	children)	only	children)
	Rica	Spain	England	=60.3%	=8.1%	28.7%	=4.8%	=11.2%	=1.6%
Female (ref: male)	39.5	45.8	45.7	1.07	1.32	0.86	0.78	0.63**	0.78
Age	68.6	72.1	69.4	0.82	0.83	15.3	0.03	0.57**	4.30*
Age squared				1.00	1.00	0.98	1.02	1.00**	0.99*
Has living children	97.3	93.5	93.1		2.54		1.26	-	0.54
Chronic health problems (ref:									
no such health problem)	31.7	26.8	29.2	1.14	1.32	0.92	1.01	1.05	1.09
Low education (ref: any									
educational qualification)	59.9	29.7	33.0	1.06	0.93	0.94	1.48	1.05	1.01
Renter (ref: homeowner)	11.2	9.9	14.5	0.61**	0.91	1.49	0.91	1.06	2.33**
Manual worker (ref: non-									
manual)	71.0	49.5	45.5	1.00	1.07	1.15	0.96	1.61**	1.48
Ν	1386	776	4333						

References

- Barrera, M., 1986. 'Distinctions between social support concepts, measures, and models'. *American Journal of Community Psychology* 14(4): 413-445.
- Bongaarts, J. and Zimmer, Z., 2002. 'Living arrangements of older adults in the developing world: An analysis of Demographic and Health Survey Household Surveys'. *Journal of Gerontology: Social Sciences* 57B(3): S145-S157.
- Bowling, A. and Grundy, E., 1998. 'The association between social networks and mortality in later life'. *Reviews in Clinical Gerontology* 8: 353-361.
- Castro-Martin, T., 2001. 'Matrimonios sin papeles en Centroamerica: persistencia de un sistema dual de nupcialidad' in Rosero Bixby, L. (ed.) *Población del Istmo 2000: Familia, migración, violencia y medio ambiente*. Oficina de Publicaciones de la Universidade de Costa Rica: San Jose, Costa Rica.
- Dalla Zuanna, G., 2001. 'The banquet of Aeolus: a familistic interpretation of Italy's lowest low fertility'. *Demographic Research* 4: 133-161.
- De Vos, S., Solís, P. and Montes de Oca, V., 2004. 'Receipt of assistance and extended family residence among elderly men in Mexico'. *International Journal of Aging and Human Development* 58(1): 1-27.
- Eggebeen, D.J., 1992. 'Family structure and intergenerational exchanges'. *Research on Aging* 14(4): 427-447.
- Glaser, K. 1994. 'Determinants and fertility consequences of consensual unions in Costa Rica (unpublished dissertation)'. Ann Arbor, Michigan: University of Michigan.
- Glaser, K., Agree, E.M., Costenbader, E., Camargo, A., Trench, B., Natividad, J. and Chuang, Y.L., 2006. 'Fertility decline, family structure, and support for older persons in Latin America and Asia'. *Journal of Aging and Health* 18(2): 259-291.
- Glaser, K. and Tomassini, C., 2000. 'Proximity of older women to their children: A comparison of Britain and Italy'. *The Gerontologist* 40(6): 729-737.
- Goldman, N., 1981. 'Dissolution of First Unions in Colombia, Panama and Peru'. Demography 18(4): 659-679.
- Hermalin, A.I., 2002. 'Theoretical perspectives, measurement issues, and related research' in Hermalin, A.I. (ed.) *The well-being of the elderly in Asia*. University of Michigan Press: Ann Arbor.
- Hermalin, A.I., Ofstedal, M.B. and Chi, L. 1992. 'Kin availability of the elderly in Taiwan: Who is available and where are they?' Ann Arbor, Michigan: Population Studies Center. University of Michigan.
- House, J.S., Landis, K.R. and Umberson, D., 1988. 'Social relationships and health'. *Science* 241(4865): 540-545.
- Hoyert, D.L., 1991. 'Financial and household exchanges between generations'. *Research on Aging* 13(2): 205-225.
- Knodel, J., Chayovan, N. and Siriboon, S., 1992. 'The impact of fertility decline on familial support for the elderly: an illustration from Thailand'. *Population and Development Review* 18(1): 79-103.

- McGarry, K. and Schoeni, R.F., 1995. 'Transfer behavior in the Health and Retirement Study: Measurement and the redistribution of resources within the family'. *The Journal of Human Resources* XXX: S184-S226.
- National Research Council, 2001. Preparing for an Aging World: The case for crossnational research. National Academy Press: Washington, D.C.
- Palloni, A., 2001. 'Living arrangements of older persons' in Nations, U. (ed.) Living arrangements of older persons: Critical issues and policy responses. Population Bulletin of the United Nations, Special Issue Nos. 42/43. United Nations: New York.
- Pelaez, M. and Martinez, I., 2002. 'Equity and systems of intergenerational transfers in Latin America and the Caribbean'. *Revista Panamericana de Salud Pública/ Pan American Journal of Public Health* 11(5-6): 439-443.
- Pezzin, L.E. and Schone, B.S., 1999. 'Parental marital disruption and intergenerational transfers: An analysis of lone elderly parents and their children'. *Demography* 36(3): 287-297.
- Rosenthal, C.J., Martin-Matthews, A. and Matthews, S.H., 1996. 'Caught in the middle? Occupancy in multiple roles and help to parents in a national probability sample of Canadian adults'. *Journal of Gerontology: Social Sciences* 51B(6): S274-S283.
- Saad, P.M. 1998. 'Support transfers between the elderly and the family in southeast and northeast Brazil'. Austin: Submitted to the Graduate School of The University of Texas.
- Saad, P.M., 2003. 'Transferencias informales de apoyo de los adultos mayores en América Latina y el Caribe: Estudio comparativo de encuestas SABE'. Notas de Población, CELADE, Chile 30(175-218).
- Saad, P.M., in press. 'Living arrangements and informal support transfers' in Nations, U. (ed.) Living arrangements of older persons around the world. United Nations: New York.
- Soldo, B.J. and Hill, M., 1995. 'Family structure and transfer measures in the Health and Retirement Survey'. *The Journal of Human Resources* XXX: S108-S137.
- Spitze, G. and Logan, J.R., 1992. 'Helping as a component of parent-adult child relations'. *Research on Aging* 14(3): 291-312.
- Sundström, G., 1994. 'Care by families: An overview of trends' in OECD (ed.) *Caring for frail elderly people. New directions in care.* OECD Social Policy Studies: Paris.
- Tomassini, C., Glaser, K., Wolf, D.A., Broese van Groenou, M.I. and Grundy, E., 2004a. 'Living arrangements among older people: an overview of trends in Europe and the USA'. *Population Trends* 115: 24-34.
- Tomassini, C., Kalogirou, S., Grundy, E., Fokkema, T., Martikainen, P., Broese van Groenou, M.I. and Karisto, A., 2004b. 'Contacts between elderly parents and their children in four European countries: current patterns and future prospects'. *European Journal of Ageing* 1: 54-63.
- Tomassini, C. and Wolf, D., 2000a. 'Stability and change in the living arrangements of older Italian women: 1990-1995'. *Genus* LVI(1-2): 203-219.
- Tomassini, C. and Wolf, D.A., 2000b. 'Shrinking kin networks in Italy due to sustained low fertility.' *European Journal of Population Studies* 16: 353-372.

Wolf, D.A., 1994. 'The elderly and their kin: Patterns of availability and access' in Martin, L.G. and Preston, S.H. (eds.) *Demography of aging*. Academy Press: Washington DC.