Old-Age Care Provision in Spain in the Context of a New System of Long-Term Care and a Lingering Economic Crisis

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Abstract

This study analyses whether care providing strategies for non-institutionalized older adults have changed in the context of a new system of long-term care that emanated from the 2006 “Dependency Act”, and a lingering economic crisis. The Spanish sample of the Survey of Health, Ageing and Retirement in Europe (waves 2006 and 2013) is employed to analyse how different individual and household factors affect care strategies, distinguishing between informal (co-resident and non-resident) carers, formal carers and combined formal and informal care, using descriptive statistics and multinomial logit regression. Results show that availability, co-residence and the proximity of children are the main determinants of informal care provision to elders in need. Some externalization of informal care from the domestic domain also took place between 2006 and 2013 as well as an increase in multiple-care arrangements. In the discussion, we comment on why the new Spanish care system that was developed during the economic boom but implemented during the bust years may have consolidated informal care through the economic compensation of mainly family carers. Future research should investigate whether the increase in combined formal and informal care is because of preferences of potential family caregivers or due to a lack of alternatives.

Keywords 2006 Dependency Act · Caregiving · Intergenerational relations · Policy analysis · Spain

Introduction and Background

Between 1999 and 2013, the population aged 65 and older in Spain resident in private households increased by 1.6 million, from 6.4 to 8.0 million people¹ due to declining

¹Own estimates based on data from the 1999 Spanish Survey on Disabilities, Impairments and Health Status (INE 1999) and Wave 5 (2013) of the Survey of Health Age and Retirement in Europe (SHARE) (Börsch-Supan 2016b).

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old-age mortality and larger cohorts entering old age. Nevertheless, as a proportion of the total population, the increase in older people was only modest (from 16% to 17%) due to an influx of immigrants and increase in births until the onset of the financial crisis in 2008. However, despite improving survival rates, the proportion of non-institutionalized disabled population receiving personal care in this age group increased from 17% (1.1 million) to 23% (1.9 million).² Population ageing has therefore created a challenge for policy makers in Spain to create a viable long-term care system.

Perhaps even more affected by demographic change are those families of older people requiring caregiving. In Spain, as is typical in southern Europe, the support and long-term care (LTC) to dependent older people has traditionally been organized within the family, with greater participation of women, and being complementary to casual formal care (Rogero-García 2010). In comparison, in northern and western European countries caregiving is more gender balanced (Huber et al. 2009) as filial responsibility norms become weaker when moving from the south to the north. Expenditure and use of formal LTC also increases, as well as the opportunity cost of time of women. In addition, more women in southern Europe take on the whole caregiving responsibility of dependent elder people, while in northern Europe more women are in the labour force and therefore more likely to share the responsibility with siblings and/or obtain additional help from the formal care sector (Costa-Font et al. 2016).

The organisation of care provision for older adults by family members is managed through different residential strategies ranging from the proximity of residence, and intermittent or permanent co-residence (Tobío and Fernández-Cordón 2013). Co-residence is one of the mechanisms of intergenerational solidarity that is more common in southern European countries (Albertini and Kohli 2012; Bonsang 2009; Sole-Auro and Crimmins 2014), not only due to cultural reasons but also because social policies in the past have made the household rather than the state mainly responsible for the welfare of its members (Flaquer 2004). In addition, the recent financial crisis brought about important cutbacks in health and care services provided by different levels of government, high rates of unemployment (27% in 2014) as well as an increase in the risk of social exclusion (Deusdad et al. 2016). According to Costa-Font et al. (2016), however, the financial crisis did not appear to have affected the number of children available for care in southern Europe (unlike in central and eastern Europe where, especially daughters, moved away for (better) employment). Moreover, the authors suggested that southern European LTC systems are largely isolated from labour market shocks. That said, while a LTC reform in Italy led to only minor changes, the LTC reform in Spain in 2007 completely restructured the funding system (Costa-Font et al. 2016). The intention of the reform was to improve gender equality in employment and develop the care provision sector. Although success was limited, the ensuing economic crisis did lead to more men assuming the role of caregiver (Deusdad et al. 2016).

In the context of this new care system but at the same time a lingering economic crisis the aim of this article is to provide a more detailed study of how care providing strategies have changed.

² Abellán García et al. (2011) and own estimates based on Wave 5 of SHARE.

The Gender Imbalance in Caregiving

Caregiving is still too often seen as “women’s work” (Bauer and Sousa-Poza 2015). At the same time, during the last four decades labor force participation has increased incessantly among successive generations of Spanish women, even during the last economic crisis. While this trend forms part of a social change towards a more gender-equal society that also challenges the traditional and feminized system of care, in reality many women encounter difficulties in reconciling productive work with care duties. For instance, in 2008 there were more than one million informal caregivers of people aged 65 or older, with women providing 75% of the hours of informal care. Moreover, one in five stated that the demands of care work prevented them from working outside the home (Oliva et al. 2011). Legal obligations to provide care for parents further strengthen this gender inequality in intergenerational support due to the greater involvement of daughters in intensive assistance. Conversely, expanded social services in central and northern European countries relieve the care burden of daughters and, consequently, contribute to reducing the gender gap (Schmid et al. 2012). However, this is at the household level, not the societal level, as female family carers tend to be substituted by domestic workers who are also women. In addition, due to higher female survival rates and age difference at marriage, women tend to grow old alone, while men are more likely to do so in companionship with their spouses, who are also their primary caregivers in case of dependency (Delbès et al. 2006; Spijker 2011). Accordingly, older women are more vulnerable and require support from others outside the conjugal nucleus, including descendants, siblings, other family members, friends or professionals. Furthermore, resulting from a strong division of gender roles among past cohorts, today’s older women have fewer economic resources than men as they had either no or short labour careers. This reverberates in the lack of economic independence as they tend to rely on their husband’s pension while he is alive and on a widow’s pension thereafter (Vara 2013).

In making decisions on care provision, having sufficient economic resources can facilitate the acquisition of formal care when there is a lack of alternative options. Besides wealth, recent studies have shown that the likelihood of elderly care being outsourced in Spain also increases with age, having LTC insurance and preference for formal care (García-Gómez et al. 2015; Jiménez-Martín et al. 2016; Jiménez-Martín and Vilaplana-Prieto 2012; Sole-Auro and Crimmins 2014). Moreover, preferences for formal and combined formal and informal care increased incipiently between 1997 and 2009, especially among women and the middle-aged, i.e. those who currently take on the role of caregivers, as well as the higher educated (Fernandez-Carro 2018). A similar study found that among 35–64 year-old men and women, higher educated or economically active women aged 45–54 were least likely to agree with the statement that the family should essentially be responsible for caring for elders who require help in their daily life (Zueras et al. 2018).

Spain’s Dependency Act

There is one other important factor that requires consideration when studying care arrangements. Similar to other European countries (Da Roit and Le Bihan 2010), cultural and structural changes led to state social policy playing an important role in

facilitating the reorganization of family care in Spain. Besides a growing number of older adults with health care needs, fewer potential offspring have become available to care because fertility had dropped significantly and most working-age daughters are now employed (López-Viso and Fernández-Álvarez 2013). An important step towards the reorganization of care was the 39/2006 Act on Promotion of Personal Autonomy and Attention to People in situation of Dependence. Commonly known as the “Dependency Act”, the law entered into force on 1-1-2007 to promote personal autonomy and attention of people who are dependent on others as a result of physical and/or mental limitations, recognizing the universal nature of benefits and the entitlement to access them under equal conditions for all older or dependent people who need help carrying out basic daily living activities (BOE 2006; Martínez-Buján 2011). The law established a new public and universal social scheme for dependent people in need of LTC called the System for Autonomy and Attention to the Dependence (*Sistema para la Autonomía y Atención a la Dependencia*, abbreviated as SAAD). SAAD was designed to reduce the burden of family members who undertake the role of primary caregiver. As carers are predominantly women, the implementation of the law was also a step forward to reducing gender differences in both personal care and employment as it would stimulate women to continue working (full-time) despite having a family member with care needs. It also regulated the employment status of non-professional carers as they had to register with Social Security. The idea behind SAAD was therefore to guarantee an adequate amount of resources and services—including the prevention and the promotion of personal autonomy, remote assistance, home help, day/night centres and residential care—to meet the growing demand due to population ageing (for more detail on the implications of the reform, see PERFAR (2012)).

Unfortunately, the global financial crisis coincided with the initial implementation. Although adverse macroeconomic conditions also affected LTC arrangements in other European countries and the impact of the crisis was harder and lasted longer in southern European countries, the effects of the economic downturn on informal care were stronger in northern countries because of the increase in informal care associated with unemployment (Costa-Font et al. 2016). The explanation of this unexpected result was that LTC systems in southern Europe are much more compartmentalized between formal and informal and less connected to the labour market than in northern European countries. Another study revealed that men residing in the Netherlands, Belgium, France and the German-speaking countries observed a larger negative effect of providing informal care on the probability of being employed than in Greece, Italy and Spain, with no effects found for women (Bolin et al. 2008). However, the cited study was set in 2004, while this article considers changes in care arrangements in Spain between just before and five years into the economic crisis that started in 2008.

Akin to a study conducted by Jiménez-Martín and Vilaplana-Prieto (2012) on the trade-off between formal care (FC) and informal care (IC) in Spain based on data from a large disability survey held in 1999, we consider the relationship between sociodemographic characteristics and the probability of receiving one of three types of care arrangements: exclusively IC, exclusively FC or both formal and informal care (FIC). With IC we mean support given by family members, friends or neighbours, with or without financial compensation from the government, whereas FC refers to assistance provided by private or social actors. In the case of the above mentioned study, the authors found that among dependent people: (1) married men were less likely to receive exclusively FC, whereas

being married was not significant for women; (2) there were different care arrangements and amount of hours of care according to different needs (number and type of limitations in (instrumental) daily activities); (3) there was a negative relationship between education and the use of exclusively IC; (4) exclusively IC reduced and FIC increased as household income increased, making formal care more affordable, whereas exclusively FC was more likely among the poorest households, as this may be socially provided.

Even with the new SAAD, the provision of health care services to dependent people was still considered a family responsibility, with the administration limiting itself to providing LTC services only when household income was insufficient to provide such care and the person requiring care had a high grade of dependence (Gutiérrez et al. 2010). Nevertheless, the initial demand for resources to enable to deal with the loss of autonomy was overwhelming, but most needs were covered with the different services that were offered: by early 2012 close to 1 million (70% of the assessed applications) were accepted (IMSERSO various years). Moreover, according to an evaluation of the law, 45.5% of the benefits received were economic (in the form of cash-for-care) for informal care provided by a relative who was the main carer (Consejo Territorial del SAAD 2012). In other words, although this measure was only supposed to be applied under special circumstances (i.e. similar to the Italian companionship indemnity (IdA) LTC scheme; Da Roit and Le Bihan (2010)), it ended up being extensively employed.

In the same year, the central government introduced adjustments to the SAAD as a way to reduce budget costs to meet public deficit objectives, including postponing the implementation schedule for moderate levels of dependency and reducing benefits for both care receivers and family carers (Deusdad et al. 2016; Genaro-Moya 2014). By mid-2013 the coverage of dependents had reduced to 63% and “dependency funding reached 0.65% of GDP (71% from public resources and 29% from household resources” (Peña-Longobardo et al. 2016)). Overall, regulations included after the crisis meant a contraction of public expenditure and an increase of co-payment per user, cutbacks on the amount of home support, a delay in the assessment of benefit applications concerning moderate and mild levels of dependency, and the so-called “dependency limbo” -i.e. individuals who, although having been officially entitled to benefits were actually not receiving any.

Study Objective and Hypotheses

The objective of our study is to analyse whether care providing strategies for non-institutionalized older adults changed in Spain between 2006 and 2013, i.e. during a period of economic uncertainty and the partial implementation of a new social protection system. Specifically, and based on the results from previous studies, we test the following hypotheses: H1) There has been a diversification of informal caregivers since 2006. H2) As budgets constrains prevented the new SAAD to be fully implemented, the use of formal care (both exclusively FC and combined with informal care (FIC)) compared to exclusively IC only increased among the most dependent elderly. H3) Nevertheless, we hypothesize that the SAAD implementation reduced the household income differences in the use of exclusively FC compared to exclusively IC during the studied period. Moreover, the use of exclusively FC among elderly has become more associated with children unavailability. Therefore, exclusively FC is more likely among the childless (H4), among those who have adult children in paid employment (H5) or without a co-residing child (H6).

Data and Methods

To test our hypotheses, we draw on cross-sectional data from the Spanish samples from Waves 2 (2006) and 5 (2013) of the Survey of Health Age and Retirement in Europe (SHARE) (Börsch-Supan 2016a, b). SHARE is a random sample of the non-institutionalized population aged 50+ from which we select Spanish residents older than 65 years who, at the time of the interview, were dependent and had received care during the last 12 months. One main limitation of using SHARE data is the small sample size, particularly of Wave 2. Another, at least for our purposes, is that it is a panel survey, meaning that the samples are not strictly independent as some individuals were interviewed in both surveys. We identified 66 such individuals, but when removed from the 2013 sample results, their influence on the overall results was minor. The final sample sizes are respectively, 266 (2006) and 787 (2013).

The main advantage of using SHARE data, however, is that it permits the relationship between the dependent person and his or her carer(s) to be identified as it collects details about all sources of support, i.e. whether informal care is provided by a co-resident or from outside the household and/or if formal care is provided. In order to capture all possible care arrangements considering multiple carers involved, we selected individuals by combining information from the questions related to three types of support received during the last 12 months and its frequency: 1) informal care by household members when they received daily or almost daily help with personal care during at least three months from someone in the same household (hereafter referred to as IC from inside the household); 2) informal care by non-household members when they received help with personal care, practical household help or help with paperwork almost daily or almost every week from a family member, friend or neighbour from outside the household (hereafter referred to as IC from outside the household); and 3) formal care when, because of a health problem, they received in their own home any professional or paid help with personal care or with domestic tasks, or meals-on-wheels service (abbreviated as FC). This produced seven mutually exclusive possibilities of care arrangements: IC from inside the household only; IC from outside the household only; IC from both inside and outside the household; FC only; IC from inside the household as well as FC; IC from outside the household as well as FC; and all three simultaneously, IC inside and outside the household and FC.

To examine whether care-providing strategies have changed, we first perform a descriptive analysis of the multiple carers between 2006 and 2013. We then explore changes in care arrangements considering all the possible combinations of informal care from inside and outside the household and formal care to test our first hypothesis on the diversification of care provision. Finally, we conduct a multinomial logit regression analysis to ascertain whether the effect of different personal and household factors changes the relative risk ratio (RRR) of a dependent person aged 65+ receiving personal assistance from exclusively FC or in combination with informal care (FIC) over receiving exclusively IC. We consider someone to be dependent when they report difficulties to carry out Activities of Daily Living (ADL), which are related to everyday personal care (e.g. dressing), and Instrumental Activities of Daily Living (IADL) that have more to do with being able to live independently (e.g. cooking).

With respect to the modelling procedure, our base model contains the variables age, sex interacted with co-resident partner in household, level of dependency, level of

education, household size and survey year. To respond to H2, i.e. whether the effect of the severity of the dependency on the type of personal care assistance received has changed over time, we add the interaction dependency level*year to the model. In Model 3 we take out the interaction dependency level*year due to lack of significance but add household income, and in Model 4 the interaction between household income and year to test H3. We then add the children employed variable and test whether having had children and own children's employment status affects the care strategy (Model 5) and whether this has changed over time (Model 6; H4 and H5). For our last models the latter variable and its interaction with time are substituted with the proximity of own children variable (Model 7) and its interaction with time (Model 8 and H6).³ Finally, we discuss the interaction results in terms of predicted probabilities that are calculated from the models' marginal effects over the remaining covariates.

Results

In general terms, we can say that the period between 2006 and 2013 is characterized by an externalization of care away from the domestic sphere. As Fig. 1 shows, among the young-old (65–79) most care in 2006 is exclusively IC provided within the household (43%). Between 2006 and 2013 a shift takes place in IC provision from within the household to outside the household as by then only 26% receive exclusively IC by household members, compared to 28% (22% in 2006) by non-co-residing informal carers. Additionally, more people appear to be implicated in care than before, since we observe an increasing proportion in all combined care arrangements. Regarding FC, however, this is less exclusively provided in 2013 but more often combined with IC arrangements.

Turning to the 80+ we see a different picture, with fewer changes between the two years. In addition, the weight of formal care is more important than among the younger-old. In 2013, the proportion of exclusively FC is scarcely higher than in 2006, accounting for 19% of all care provision (vs. 18% in 2006). The same applies to IC provided from outside the household (22% vs. 19% in 2006). On the other hand, the complementary care from household members and FC halved to 8%.

The data source also allows the identification of informal carers (Table 1), although due to the small sample size we reduced the number of kinship categories and analysed all ages of the older dependent population together. Results show that the important role of partners does not change when it pertains to IC from inside the household, but increases when FC is also utilized. Partners' help in collaboration with non-domestic care provided by children increases (from 38% in 2006 to 48% in 2013) but remains largely the same when also FC is involved (from 35% to 33%). In contrast, children's presence without the help of the partner increases (from 31% to 35%) but declines (from 28% to 24%) when FC is also provided. Although still marginal, the role of non-residing grandchildren in care also becomes more important in 2013, especially when

³ The employment status of children variable was removed in this step of the modelling procedure to avoid collinearity with the availability of children variable given that it contains one identical category, namely 'childless'.

Fig. 1 Source of provision of personal care (%) among the elderly population with dependency by age group. 2006 and 2013. Notes. The percentages in parentheses refer to 2006. Results are weighted using the individuals' calibrated cross-sectional weights *cciw_w2* and *cciw_w5*

no FC is provided (in 22% of the cases when IC comes from both inside and outside the household). Conversely, siblings and more distant relatives and non-relatives (neighbours and friends) become less important over time. The exception is when IC from within the household is combined with FC (from 16% in 2006 to 22% in 2013) or with non-residential IC (from 31% to 40%). In most cases, this help from 'others' is combined with partners' or children's care.

To ascertain whether different personal and household factors affect the type of a personal assistance a dependent person aged 65+ receives and whether any change in care strategies can be observed over time, we conduct a multinomial logit regression analysis. Starting with the bivariate analysis (Table 2), results show that elderly are slightly but significantly more likely to receive FIC in 2013 than in 2006. Nevertheless, men (68%) and 65–74 year-olds (74%) are most likely to obtain exclusively IC. Even for those older than 85 years of age this is still close to half, although combined FIC is also a frequent strategy (30%) for them. Receiving exclusively IC is also more frequent among those who live in a larger household, co-reside with a child (also included are

Table 1 Provision of personal care among the dependent older population (65+) according to residential status and kinship of carer. Spain 2006 and 2013

Source of care	IC, inside hh only (%)		IC, outside hh only (%)		IC inside & outside hh (%)		IC inside & FC (%)		IC outside & FC (%)		IC inside, outside & FC (%)		FC only (%)	
Year of survey	2006	2013	2006	2013	2006	2013	2006	2013	2006	2013	2006	2013	2006	2013
Percentage of total care	32.3	24.2	20.1	25.1	6.3	8.5	11.5	8.0	9.4	12.5	3.2	6.0	17.3	15.8
Of which														
Partner	47.1	46.6					36.8	52.9						
child ^a	45.5	50.6	70.0	79.6			48.8	30.0	74.0	80.0				
Sibling(s)	5.0	2.4	4.5	3.7			5.1	4.1	0.0	3.6				
Grandchildren	5.7	4.4	2.1	7.8			0.0	1.7	2.6	10.1				
Partner & child ^a					37.9	47.6					35.3	33.3		
Child* & child ^a					30.8	34.9					27.8	22.4		
Incl. grandchildren					12.3	22.4					15.2	13.2		
Includes other ^b	4.0	5.4	23.4	14.8	30.3	22.6	15.7	21.6	26.2	23.2	31.0	40.4		
Total ^c	107.3	109.5	100.0	105.8	111.3	127.5	106.4	110.3	102.8	116.9	109.3	109.3		

Source: SHARE, waves 2 (2006) and 5 (2013). Results are weighted using the individuals' calibrated cross-sectional weights cc1w_w2 and cc1w_w5

IC, Informal care; FC, Formal care

^a Includes the possibility of more than one child or child-in-law

^b Other includes other relatives (mostly siblings), neighbours or acquaintances

^c More than one carer of same source is possible

Table 2 Sample distribution pertaining to the dependent older population (65+). Variables included in the multinomial logit regression models. Spain 2006 and 2013

	<i>P</i> value of Chi ²	Total (%)	EIC(%)	EFC(%)	FIC(%)	Total(%)
Year of survey	0.028					
2006		44.0	58.6	17.3	24.1	100.0
2013		56.0	57.8	15.8	26.5	100.0
Individual characteristics						
Sex	0.019					
Male		30.0	68.3	10.3	21.4	100.0
Female		70.1	53.8	19.1	27.1	100.0
Age	0.000					
65–74		23.2	73.5	9.7	16.8	100.0
75–84		46.3	56.6	17.1	26.3	100.0
85+		30.5	48.8	20.6	30.7	100.0
Completed education	0.057					
None		35.4	64.9	14.0	21.1	100.0
Primary		45.9	56.0	16.2	27.8	100.0
Secondary or higher		14.0	49.0	23.4	27.6	100.0
Other/Missing ^a		4.7	54.9	16.5	28.6	100.0
Dependency	0.000					
IADL only		28.1	66.4	19.1	14.6	100.0
1–2 ADL		32.4	59.4	14.6	26.1	100.0
3–6 ADL		39.6	51.3	16.1	32.6	100.0
Household and children's characteristics						
Partner in household	0.264					
Yes		43.8	63.2	13.0	23.8	100.0
No		56.2	54.2	19.1	26.7	100.0
Household income	0.280					
< 1000		27.2	58.6	19.3	22.1	100.0
1000+		19.1	58.9	16.0	25.1	100.0
missing ^a		53.7	57.6	15.2	27.2	100.0
Household size	0.000					
1		28.0	46.5	27.9	25.6	100.0
2		47.0	56.4	13.7	29.9	100.0
3+		25.0	74.4	8.8	16.8	100.0
Children's employment	0.000					
1 + child is employed		70.8	57.8	15.2	27.0	100.0
1 + child, none employed		15.3	67.7	17.8	14.6	100.0
Childless		12.2	51.3	21.1	27.5	100.0
Missing ^a		1.7	35.6	23.8	40.7	100.0
Children's proximity/availability	0.000					
Nearest child lives in household/same building		30.0	71.6	4.9	23.5	100.0

Table 2 (continued)

	<i>P</i> value of Chi ²	Total (%)	EIC(%)	EFC(%)	FIC(%)	Total(%)
Nearest child lives <25 km away		18.7	50.1	29.1	20.8	100.0
Nearest child lives 25+ km away & other ^b		39.1	53.7	17.8	28.5	100.0
Childless		12.2	51.3	21.1	27.5	100.0
N	1053					

Source: SHARE waves 2 (2006) and 5 (2013). Weighted proportions with calibrated cross-sectional individual weights

EIC refers to exclusively informal care; *EFC* to exclusively formal care; *FIC* to both formal and informal care; *IADL* to Instrumental Activities of Daily Living; *ADL* to Activities of Daily Living

^a Missing categories excluded from the Chi2 test

^b Includes those whose nearest child(ren) live farther than 25 km away (3.5%), have children but missing information on distance (34.3%), and no information on children (1.1%)

those who live in the same building), or has (a) child(ren) but none in paid employment. Conversely, those who receive FIC are more likely to have the highest level of dependency. Exclusively FC is the least common strategy (17% in 2006 and 16% in 2013), although more frequent among elderly whose nearest child does not co-reside but lives less than 25 km away (29%), followed by those living alone (28%).

Turning to the model results (Table 3), the base model (Model 1) tests whether time, age, sex and partner status, level of dependency, education and household size are associated with the likelihood of receiving care from different sources or different care arrangements (results are expressed in relative risk ratios, RRR). In line with the earlier descriptive results, an increase in FIC is observed, but this becomes statistically insignificant after controlling for the co-variables (mainly due to age and household size). In terms of age, it is perhaps not surprising that the older the person the higher the RRR of receiving formal care exclusively or combined with IC, compared to exclusively IC. Education has a similar effect on both care arrangements: dependent older persons with completed secondary or higher education are about twice more likely to be cared for by formal carers, either exclusively (EFC, RRR = 2.33) or together with informal caregivers (FIC, RRR = 1.92). Other individual factors that make a difference between the RRR of receiving exclusively FC or FIC are dependency level, gender according to the presence of a partner in the household, as well as household size. Dependency levels in the model intend to capture different needs in terms of personal assistance that could be related to different care arrangements. However, compared to exclusively IC, only the RRR of FIC exhibits a positive and progressive association with dependency levels. Finally, household size is, together with age, the variable that has the strongest effect on care arrangements: the smallest the household the more likely to receive formal care, especially exclusively FC (fivefold for those living alone compared to those living in households that are composed of three or more members). However, the composition of households is also relevant, as there are significant differences of care provision regarding the partner status of men and women. Compared to men who live with a partner, women in the same situation have more than twice the RRR of receiving exclusively FC compared to exclusively IC. Likewise, the

Table 3 Multinomial logit regression models. Relative-risk ratios (RRR) of receiving only formal care (EFC) or informal and formal combined (FIC) over receiving informal care only (EIC) in Spain

	M1		M2		M3		M4		M5		M6		M7		M8	
	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC
	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR
Age (Ref.: 65–74)																
75–84	2.42***	1.90**	2.40**	1.90**	2.44***	1.91**	2.49***	1.91**	2.57***	1.94**	2.63***	1.97**	2.70***	2.01**	2.81***	2.01**
85+	3.18***	3.93***	3.21***	3.93***	3.20***	3.97***	3.30***	4.03***	3.47***	4.28***	3.43***	4.27***	3.68***	4.25***	3.71***	4.22***
Sex*Partner in household (Ref.: Male with partner)																
Male without partner	0.98	0.47*	1.02	0.47*	0.91	0.43*	0.93	0.43*	0.77	0.37**	0.74	0.35**	1.05	0.40*	1.04	0.40*
Female with partner	2.16**	1.49*	2.18**	1.49*	2.20**	1.52*	2.35***	1.58*	2.36***	1.63*	2.37***	1.62*	2.44***	1.61*	2.39***	1.63*
Female without partner	1.02	0.84	1.04	0.84	1.03	0.84	1.08	0.87	1.02	0.85	0.98	0.83	1.41	0.93	1.38	0.94
Dependency (Ref.: IADL only)																
1–2 ADL	0.85	1.58*	0.57	1.67	0.83	1.55*	0.84	1.57*	0.89	1.68*	0.89	1.71*	0.92	1.68*	0.97	1.78**
3–6 ADL	1.12	2.46***	0.57	2.55*	1.08	2.37***	1.06	2.34***	1.09	2.48***	1.10	2.49***	1.17	2.49***	1.23	2.58***
Education (Ref.: <Prim)																
Primary	0.98	1.19	0.99	1.19	0.98	1.18	1.01	1.17	0.98	1.14	0.97	1.13	1.04	1.16	1.06	1.21
Secondary +	2.33**	1.92**	2.33**	1.92**	2.31**	1.89**	2.32**	1.85*	2.23**	1.75*	2.16**	1.73*	2.24**	1.78*	2.24**	1.84*
Household size (Ref.: 3+)																
2	2.17**	2.28***	2.16**	2.28***	2.25**	2.38***	2.17**	2.37***	2.02**	2.13***	2.08**	2.16***	1.53	1.96***	1.55	2.04***
1	4.96***	3.06***	4.87***	3.06***	5.90***	3.79***	5.65***	3.79***	5.38***	3.41***	5.61***	3.53***	3.07**	2.83***	3.10**	2.93***
Year (Ref.: 2006)																
2013	0.97	1.26	0.63	1.32	0.94	1.21	0.37*	0.69	0.37*	0.76	0.35**	0.79	0.43*	0.72	0.61	0.65
Year * Dependency																
2013 * 1–2 ADL			1.71	0.95												
2013 * 3–6 ADL			2.34	0.97												
Household income (Ref.: <€1000)																
€1000+					1.59	1.79*	0.93	0.62	0.88	0.61	0.86	0.64	0.99	0.63	1.24	0.67
Year*Household income																
2013 * €1000+							2.21	3.68*	2.22	3.42+	2.24	3.26+	2.07	3.56+	1.58	3.34+

Table 3 (continued)

M1	M2		M3		M4		M5		M6		M7		M8	
EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	EFC	FIC	FIC
RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR	RRR
Children employed (Ref.: 1+ child employed)														
1+ children, none employed														
Childless														
Year * Children employed														
2013 * 1+ children, none employed														
2013 * Childless														
Children's proximity (Ref.: Nearest child in hh/building)														
Nearest child lives <25 km away														
Childless														
Year * Children's proximity														
2013 * Nearest child <25 km away														
2013 * Childless														
Constant	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***	0.05***
Observations	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053	1053
Log likelihood	-973.6	-972.0	-969.7	-963.3	-963.3	-963.3	-951.8	-945.3	-945.3	-945.3	-948.5	-939.2	-939.2	-939.2
R2	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.10	0.10	0.10	0.09	0.10	0.10	0.10
Chi2	142.7	145.9	150.5	163.2	163.2	163.2	186.2	199.3	199.3	199.3	192.8	211.4	211.4	211.4
d.f.	26	30	30	34	34	34	40	46	46	46	40	46	46	46
Compared with Model	1	1	1	3	3	3	4	5	5	5	4	7	7	7
Change Chi2 / d.f. / Sig.	3.2/4/n.s.	3.2/4/n.s.	7.8/4/*	12.7/4/*	12.7/4/*	12.7/4/*	23.6/4***	13.1/6/*	13.1/6/*	13.1/6/*	29.6/6***	18.6/6***	18.6/6***	18.6/6***

Source: SHARE, waves 2 (2006) and 5 (2013). Not shown are the results for missing information on education, household income, parental status, employment status, number of children and distance from children, as well as when the distance from children was more than 25 km due to the low number of cases

***, $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$

RRR of receiving FIC is 1.5 times higher for women who live with a partner compared to partnered men, while it is half for men without a partner ($RRR = 0.47$).

In Model 2 the interaction year*level of dependency is added to the base model to test our second hypothesis that only expects an increase of formal care between 2006 and 2013 among the most dependent older persons. Although the coefficients of the interaction between year and dependency are in the expected direction (H2), there is no significant evidence to confirm this. This is despite observing a minor rise in FIC within all levels of dependency between 2006 and 2013 and exclusively FC among the most dependent according to the predicted probabilities (Fig. 2a).

In general, living in a household that earns under €1000 per month does not reduce the relative risk of exclusively FC as much as it does for FIC (Model 3). In Model 4 we add the interaction between year and income to test the third hypothesis. Contrary to what we expected, differences in the use of any formal assistance according to the level of household income widened between 2006 and 2013. This is despite the implementation of SAAD designed to compensate for the use of private formal care among low-income households. Only for this subcategory the use of exclusively FC compared to exclusively IC significantly reduced over the period: the predicted probabilities of exclusively FC among low income households halved from 0.23 in 2006 to 0.12 in 2013 (Fig. 2b). Conversely, the crisis years substantially increased the probability of FIC among the wealthiest, doubling from 0.18 to 0.36, and thereby widening the difference with low-income households.

In Model 5 we test the additional effect of own children's employment status during the economic boom and bust. Older people with at least one child employed (the reference category) have a higher RRR of obtaining FIC than elderly parents without children in paid employment. In contrast, being childless is, as expected, associated with a higher relative risk of formal care arrangements, including both exclusively FC and FIC ($RRR \approx 2.2$). To check whether the different time periods has any influence we add its interaction with time (Model 6; Fig. 2c). As one could expect, elderly parents without children in employment were in 2013, a time of high unemployment, less likely to receive exclusively FC or FIC compared to exclusively IC than in 2006. A likely explanation is that the economic crisis left more adult children without employment but therefore available to care for their parents. Between 2006 and 2013 the predicted probability that elderly with no children in employment receive exclusively IC increases, although not statistically significant, from 0.50 to 0.65, albeit that the latter is significantly higher than the proportion of elderly (0.54) with at least one child employed who received exclusively IC in the same year. It is therefore worthy to note that the employment status of children does not discriminate between the types of care during the economic boom but becomes more relevant during the crisis when both exclusively IC and FIC are less likely among elderly without children who are employed. If we consider those elderly without children altogether, we observe that between 2006 and 2013 the proportion receiving exclusively IC reduces sharply while both exclusively FC and FIC increase.

The last variable, and related to the previous one, that we test is the proximity rather than the employment status of children (Model 7). As expected, assistance from formal

Fig. 2 Predicted probabilities of the interacted variables in the multinomial logit regression. Notes: Predicted probabilities are calculated over the remaining covariates out of the interaction coefficients from Models 2, 4, 6 and 8 in Table 3 by using the margins command in Stata

caregivers (exclusively FC or FIC) is much more likely for those dependent elders who are childless or do not live with children in the same household or building. Differences are less important when we consider FIC. Also noteworthy is the sizeable reduction of the RRR of household size in exclusively FC when proximity of children is considered. All other things being equal, the risk of receiving any formal assistance increases about three times for those dependent older persons living alone. Lastly, we check whether the association of the child proximity variable changes over time (Model 8; Fig. 2d). Although in 2013 the predicted probability of obtaining exclusively FC is greatest among childless elderly, in 2006 this is the case for those with only non-co-residing children. Results for FIC show that childless elderly have the highest predicted probabilities in both years.

Discussion

The aim of our study was to ascertain whether care providing strategies changed between 2006 and 2013 in Spain in the context of a new system of LTC and an enduring economic crisis. Results showed that during the studied period multiple-care strategies have become more common and care has become more externalised from the domestic domain in several ways. First, among the young-old (65–79 year olds) both complementary care from multiple sources and informal care from exclusively non-household members grew in importance. This suggests that especially spouses of either sex (usually the main carers in this age group) are being aided by social services and other workers and alludes to a possible effect of SAAD, the LTC system that had been implemented in 2007. Secondly, a different trend seems to have emerged among care arrangements of the oldest-old as informal care from outside the household and formal care, either exclusively or combined, gained ground.

While the SAAD facilitated the greater use of formal care, when interpreting the results we also need to consider that the economic crisis had hit Spain harder than most other European countries: in 2013 half of its Autonomous Regions had unemployment levels above 25% and youth unemployment exceeded 50% (INE 2017). This lack of jobs seemed to have caused families to take on more of the care responsibilities, as our results showed that more children and grandchildren became involved in elderly care, particularly for the oldest-old, which supports our first hypothesis. Moreover, the reprivatisation and refamiliarisation of care was further exacerbated by several austerity measures implemented by the government concerning health care provisions that had been stipulated by the SAAD. In particular, the envisaged government assistance for dependent persons with lower levels of severity was postponed, waiting lists for those eligible for assistance were long and the amount of welfare provided to beneficiaries reduced. All this compelled family members to care for their ailing relative(s) (Correa and Jiménez-Aguilera 2016; Deusdad et al. 2016). Also, partners were more likely in 2013 to take care of their dependent husband or wife than before. Although we leave the required projections for future research to confirm this, we expect this trend to continue in years to come irrespective of policy or economic changes as increasing life expectancy has led to marriages that end in widowhood to last longer (De Jong Gierveld et al. 2001; Myers 1986). Concurrently, and not to be overlooked, is an opposite trend, namely that future elderly cohorts will have experienced a union dissolution through

separation or divorce more often than current cohorts⁴ and, *ceteris paribus*, leading to a greater need for carers from outside the household (De Jong Gierveld et al. 2001).

Older people's individual, family and household characteristics also shape the way they are cared for, either by exclusively informal, exclusively formal or by both formal and informal carers (FIC), as our analysis showed. While it may not be surprising that the older the dependent person, the more likely FC is provided, less obvious is that while dependency level is positively associated with FIC—responding to increasing needs of the older person—it is not related to exclusively FC. However, this result is consistent with findings from elsewhere regarding the complementarity of informal care provided by children and formal services when the level of dependency of elderly parents increases (Bonsang 2009).

The interaction between dependency level and time was not significant in the models that compared exclusively IC with exclusively FC and FIC, debunking therefore our second hypothesis (H2) that predicted that the SAAD would change the care arrangements of the most dependent between 2006 and 2013. Instead, in 2013 exclusively FC is associated to being childless, therefore lending support to H4, as the proportion is higher than observed for those with children, regardless of their employment status. On the other hand, H5 is rejected as the probability of exclusively FC for elderly without children in employment is at the same level as for elderly with children in employment. Regarding H6, the probability in the use of exclusively FC among elderly who did not co-reside with their children is significantly higher in 2006 than that observed for those who did co-reside. However, by 2013 this probability had reduced for the non-co-residing elderly to the extent that the difference became insignificant.

Regarding the other variables tested in the models, elderly household income variable was positively associated with the higher proportion of FIC in 2013. A plausible explanation is that in 2006, when there was almost full-employment, more adult children could afford formal care for their needy older parents as a way to compensate for distance or unavailability than in 2013, when it was more up to the elderly parents themselves. It is perhaps therefore that the income gap in the use of exclusively FC and FIC increased rather than decreased over time (i.e. invalidating H3).

The fact that the RRR of women living with a partner receiving exclusively FC was twice as high compared to those without a partner could reflect affordability if we consider the higher economic capacity of men in the male breadwinner model that was particularly customary among the older Spanish cohorts that we studied. Moreover, this result also suggests gender differences in the division of work, as the participation of formal carers is higher among dependent women who live with a partner, even though the husband would be a potential caregiver if his health status would allow it. Our results, therefore, differ from Sole-Auro and Crimmins (2014) who found that neither gender nor being married reduced the likelihood of an incapacitated person receiving formal care in Spain. While their results were based on the 2006 wave of the SHARE and studied the 50+ rather than the 65+ sample, we think that the discrepancy exists because the authors did not analyse the interaction between marital/relationship status and gender. On the other hand, we observed that when dependent older men have no

⁴ Although being divorced or separated is still rare among the Spanish elderly, its proportion rose from 1.4% in 2001 to 3.2% in 2011 (INE 2004; 2013).

living partner, the likelihood of being simultaneously cared for by formal and informal carers compared to informal only notably reduces.

Overall, there is little evidence of a crowding-out effect of exclusively FC on exclusively IC: exclusively FC only marginally increased among the oldest-old and even declined among the younger elderly, although the use of formal caregivers increased substantially in combination with informal carers. However, we can state that a crowding-out effect took place of informal non-household member carers on exclusively informal co-resident carers, particularly with regard to dependent 65–79 year-olds. All the same, in 2013 47% of all dependent elderly living in a private home still received care from a co-resident, suggesting that co-residence remains an important safety net for the more vulnerable elderly in Spain. Indeed, according to Costa-Font (2010) existing familistic cultural norms are partly to blame for an underdeveloped public and private LTC insurances. Moreover, public LTC programmes focus mainly on correcting the failures of private insurance markets in providing coverage and pursuing equity rather than replacing informal carers.

Not surprisingly, the multinomial regression analysis showed that co-residence and the proximity of children remained the main determinants of informal care provision to elderly in need (i.e. akin to results obtained by Solsona and Treviño (1990) and Tobío and Fernández-Cordón (2013)). As mentioned before, apart from old age, the lack of children (close by) is a clear determinant of care arrangements that involve formal carers, but it is also more common among dependent elders living alone or in a two-person household. This appears contrary to Sole-Auro and Crimmins (2014), who found no reduction in the likelihood for incapacitated persons receiving exclusively FC when they have child(ren) outside the household, although the authors did not consider the physical distance between the children and the parents. While our results did not show significant differences in 2006 among elderly receiving exclusively FC and exclusively IC when comparing those co-residing with own child(ren) and childless elderly, predicted probabilities of exclusively FC were much higher when the nearest child did not co-reside. In 2013, however, and perhaps because of the economic crisis, the latter differences reduced (H6 is therefore only supported by the results for 2006).

Regarding the effects of employment status of children and household income in 2013 compared to 2006, there are also several results worth commenting. First, the employment status of children made a difference in care arrangements in 2013: Exclusively IC was more likely than FIC among those whose children were out of employment. However, there is a lack of support for H5 as the probability of receiving exclusively FC did not significantly change among older people who had at least one child employed. Conversely, among those with only non-employed children, the predicted probabilities of being cared for by exclusively FC in 2013 was 0.14, i.e. much lower than the probability of being cared for by exclusively IC (0.65). One probable factor behind this trend is the financial crisis, as unemployed child(ren) are more likely to be available to provide care to their parents and less able to afford to pay for formal care. Regarding household income, the crisis had varying effects on caring arrangements during the crisis. Based on the marginal effects from Model 4, in 2013, elderly living in the poorest households had a lower predicted probability of receiving exclusively FC (0.12) than in 2006 (0.23), while those living in the wealthiest households were about twice more likely to obtain FIC in 2013 (0.36) than in 2006 (0.18). However,

according to the model, household income is only significant when formal care is combined with informal care (FIC), thus only partially supporting previous results (Jiménez-Martín and Vilaplana-Prieto 2012).

We think that, overall, our results reflect changes related to *formalized* IC rather than to FC provided by social services under the SAAD due to the lack of significance of time as a single effect in the results for exclusively FC. An explanation could be because close to half of the benefits received had been used to compensate the indispensable informal carers. This would suggest that the new Spanish care system, rather unexpectedly, *consolidated* informal care through the economic compensation of mainly family carers. It would therefore be interesting to see if this proportion will change once unemployment levels have dropped significantly. However, while the purpose of cash benefits is to allow caregivers to reduce employment to provide sufficient care and keep income at an acceptable level (Bauer and Sousa-Poza 2015), we doubt that a substantial number of caregivers have made use of the benefit for this purpose due to the low levels of benefits, high rates of unemployment and precarious employment conditions in Spain.

To conclude, families in Spain remain highly implicated in elderly care. The right to contribute to the Social Security System, just as SAAD originally permitted but was later revoked, would benefit the labour careers of mainly female carers who decide to formalise their services (Zueras et al. 2018) and ameliorate the pension penalty that carers face (Evandrou and Glaser 2003). Finally, future research should investigate whether the increase in combined formal and informal care occurred because of the changes in the preferences of potential family caregivers and of the care receivers (Fernandez-Carro 2018; Zueras et al. 2018) or lack of alternatives. For instance, we know that when an informal caregiver is employed, formal care can complement informal care with the aim of reducing the care burden to a reasonable level for the informal carer (Bauer and Sousa-Poza 2015). However, despite complimentary care arrangements increasing in Spain, it did not do so for the most dependent elderly. We are aware of the fact that the new SAAD could not be fully implemented because budgets were cut due to the financial crisis and that formal care is expensive and public money is short. Yet, although fostering informal care arrangements is tempting from a public deficit point of view (*ibid.*), the Spanish government really needs to step up and respond to the often dramatic situations that family members face in caring for older dependent relatives (Deusdad et al. 2016).

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Compliance with Ethical Standards

Conflict of Interest Both authors declare no conflict of interest.

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