Original Article

Time trends in health inequalities due to care in the context of the Spanish Dependency Law

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\textbf{A B S T R A C T}

\textbf{Objective:} In Spain, responsibility for care of old people and those in situations of dependency is assumed by families, and has an unequal social distribution according to gender and socioeconomic level. This responsibility has negative health effects on the carer. In 2006, the Dependency Law recognised the obligation of the State to provide support. This study analyses time trends in health inequalities attributable to caregiving under this new law.

\textbf{Methods:} Study of trends using two cross-sectional samples from the 2006 and 2012 editions of the Spanish National Health Survey (27,922 and 19,995 people, respectively). We compared fair/poor self-rated health, poor mental health (GHQ-12 $>2$), back pain, and the use of psychotropic drugs between non-carers, carers sharing care with other persons, and those providing care alone. We obtain prevalence ratios by fitting robust Poisson regression models.

\textbf{Results:} We observed no change in the social profile of carers according to gender or social class. Among women, the difference in all health indicators between carers and non-carers tended to decrease among those sharing care but not among lone carers. Inequalities tend to decrease slightly in both groups of men carers.

\textbf{Conclusions:} Between 2006 and 2012, trends in health inequalities attributable to informal care show different trends according to gender and share of responsibility. It is necessary to redesign and implement policies to reduce inequalities that take into account the most affected groups, such as women lone carers. Policies that strengthen the fair social distribution of care should also be adopted.

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\textbf{Evolución de las desigualdades en salud debidas al cuidado en el contexto de la Ley de Dependencia española}

\textbf{R E S U M E N}

\textbf{Objetivo:} En España, el cuidado de las personas mayores o en situación de dependencia es desempeñado por las familias, con desigual distribución social según género y nivel socioeconómico. Esta responsabilidad afecta negativamente a la salud de quienes cuidan. En 2006, la Ley de Dependencia reconoció la obligación del Estado de atender esta situación. Este estudio analiza la evolución de las desigualdades en salud atribuibles al cuidado en el contexto de la ley.

\textbf{Método:} Estudio de tendencias basado en las ediciones de 2006 y 2012 de la Encuesta Nacional de Salud de España (27,922 y 19,995 personas, respectivamente). Se obtuvieron razones de prevalencia robusta mediante modelos de Poisson para comparar mala salud autopercibida, mala salud mental (GHQ-12 $>2$), lumbalgia crónica y uso de psicofármacos entre quienes no cuidaban, quienes compartían con alguien el cuidado y quienes cuidaban en solitario.

\textbf{Resultados:} El perfil de las personas cuidadoras permaneció invariable según género y nivel socioeconómico. Entre las mujeres, las desigualdades en salud, respecto a las que no cuidaban, se redujeron para aquellas que compartían el cuidado, manteniéndose para las que cuidaban en solitario. En los hombres, las desigualdades disminuyeron para ambos grupos de cuidadores respecto a no cuidadores.

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Introducción

La organización de cuidado para personas mayores o individuos con funciones diversas es uno de los desafíos principales que enfrentan las sociedades occidentales en la primera mitad del siglo XX. Los “crisis” de cuidado han intensificado como consecuencia del crecimiento de la fuerza de trabajo y de la tasa de nacimientos, aunque la esperanza de vida ha aumentado en muchos países. Estos desafíos han resultado en una presión incierta en familias y en el cuidado prestado por personas en situación de dependencia.1

La oferta de cuidado varía en los países de Europa Occidental y en los países emergentes. Las sociedades de países del occidente forman un entramado económico único donde el cuidado es delegado del estado a la familia y a la vida privada.2 El cuidado es normalmente proporcionado por mujeres, basado en la norma del género y el trabajo de la mujer.3 La responsabilidad de cuidado también está vinculada a una disminución en el control de salud, dolor, depresión.4 Cuidar de otros también afecta otras cuestiones de vida, disminuyendo oportunidades personales y de empleo para disfrutar de tiempo libre y un estilo de vida sano.5 Las condiciones de vida afectan a las personas que están en situación de dependencia, que son cuidadas por un cuidador principal, usualmente una mujer que vive con la misma persona.6 El cuidado puede ser proporcionado por una esposa, una hija o una hija que reciben el cuidado de la persona que depende de un cuidador principal, y que no está en la misma casa como el cuidador principal, y que no está en el trabajo.7,8 Debido a esta desigual distribución del cuidado, se considera que sobreviven a la desigualdad de salud.8

España tiene uno de los niveles más altos de personas mayores de 65 años, con un 17,6% de la población mayor de 65 años. En 2008, había más de 3.850.000 personas con funcionalidad diversa (8,5% de la población), de las cuales más de la mitad eran en una situación de dependencia, es decir, necesitando asistencia personal para llevar a cabo sus actividades diarias.9 El estudio de dependencia pasó en 2006 (Ley 39/2006, LAPAD, en su nombre en español) fue un punto de referencia porque introdujo la idea de que todos los ciudadanos tienen derecho a ser cuidados, y que el Estado es obligado a proporcionar el cuidado para personas en situación de dependencia. LAPAD contempla los beneficios sociales de los servicios y economía del cuidado de la persona con dependencia, con los que la mayor importancia en julio 2012 debido a necesidades de la economía y la crisis de los estados.10 Algunos autores han argumentado que LAPAD no es suficientemente inclusivo para abarcar todos los aspectos de la economía y la seguridad social de los diversos factores participantes, y que este es un aspecto que podría fortalecer la economía social más equitativa del cuidado.

Conclusiones: Entre 2006 y 2012, la evolución de las desigualdades en salud atribuibles al cuidado informal muestra diferentes tendencias según género y reparto de responsabilidad. Son necesarias políticas dirigidas a reducir estas desigualdades valorando los grupos más afectados, como las mujeres que cuidan solas. Además, deben adoptarse políticas que fortalezcan una distribución social más equitativa del cuidado.

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M. Salvador-Piedrafita et al. / Gac Sanit. 2017;31(1):11–17
needs care? If yes, who mainly takes care of this person?”. ENS 2012 used one question: “Is there anyone in your home that, due to any limitation or disability, is unable take care of themselves and needs someone to take care of them? If yes, who generally spends more time caring for this person?”. We assume that the question used in 2012 was broad enough to identify the same caregivers as the two questions used in 2006. Consequently, we considered caregivers to be those who identified themselves as someone cohabiting with one person in need of care, and who mainly undertook this responsibility according to any of the previous questions. Samples were categorized in three groups according to caregiver status: those who were not cohabiting with someone needing care or were not responsible for their care (non-caregivers), those who provided care and shared this responsibility with other persons (sharing care), and finally those who provided care alone (lone carers).

3) Other independent variables

Other covariables used in the analysis were: age (15-44, 45-64, ≥65 years); highest level of education completed (no education, primary, secondary, university); social class, based on the current or last occupation of the person, or the head of the household in the case of never-employed respondents, categorized according to the Spanish Society of Epidemiology’s proposal (social class I-II: professionals, managers, directors; social class III: administrative workers, clerks, safety/security workers and self-employed individuals; social class IV: skilled and semi-skilled manual occupations; social class V: unskilled manual occupations); employment status (working, unemployed, homemaker, retired, other), marital status (single, married, other), urban or rural setting (urban, living in a municipality with >20,000 inhabitants), social support (assessed using the Duke-UNC functional Social Support Questionnaire, considering scores below the 15% percentile as indicating poor social support) and household size (2 or >2 persons).

Data analysis

All analyses were conducted separately for men and women, and were adjusted for sampling weights. Analyses were performed using the STATA statistical package, version 13.

We first described socio-demographic characteristics and age-standardized proportions of health indicators stratified by caregiver status, sex and survey year. For standardization, we used the direct method, taking the lone carers group in ENS-2006 as the reference group. We fit robust Poisson regression models to obtain prevalence ratios (PR) with 95% confidence interval for health outcomes of caregivers who shared care and lone carers with respect to non-caregivers, adjusting for age and then sequentially adding educational level, household size, employment status and social support as explanatory factors. Finally, household size, employment status and social support did not substantially modify the association between caregiving status and health outcomes, either individually or through multiplicative interaction, so we report only the results for models adjusted for age and educational level.

Results

The proportion of caregivers decreased slightly between 2006 and 2012; however, there were only minor changes in their socio-demographic characteristics. In both surveys, the largest group of caregivers was that of women who provided care alone (Table 1).

Caregivers who give care alone were generally older than non-caregivers and the differences were greater among men. In both surveys and for both sexes, caregivers were less generally well educated and more likely to belong to more disadvantaged social classes (IV and V) than non-caregivers.

We observed a change in employment status between the surveys, with a generalized increase in unemployment in 2012. Those who provided care alone were more likely to be homemakers or retired (women and men, respectively) than non-caregivers, with differences decreasing in 2012. The percentage of women lone caregivers who were in paid employment increased in 2012, and was also greater (29.6%) than for women who shared caregiving (27.7%), but was still lower than that among non-caregivers (41.4%). In both editions of the survey, caregivers were more likely to be married and to live in urban areas. Caregivers were more likely to have poor social support, especially among men who provided care alone, with all proportions decreased in 2012 with respect to 2006, except for women who provided care alone.

In both surveys, men tended to present better health indicators than women. Between 2006 and 2012, women showed a decrease in the age-standardized proportion of illness for all four health indicators (Fig. 1). Only the proportion of lower back pain increased slightly among those who provided care alone (39.1% to 42.0%). The decrease in poor health was more pronounced among women who shared caregiving, in whom self-rated poor health decreased from 61.0% in 2006 to 42.3% in 2012, poor mental health decreased from 44.2% to 29.5%, and the use of psychotropic drugs decreased from 32.2% to 21.2%. The decrease in poor health indicators was less remarkable among men, except for self-rated poor health in lone carers, which decreased from 59.1% to 42.3%.

Notably, we observed an increase in the proportion of poor mental health among men who were non-caregivers (14.2% in 2006, 16.7% in 2012) and those who shared caregiving (21.7% to 27.1%), but a decrease among men who were lone caregivers (from 29.4% to 27.3%).

In 2006, the likelihood of poor self-rated health was higher among caregiving than non-caregiving women (PR = 1.29 and 1.19 for those giving shared and lone care, respectively) (Fig. 2). In 2012, this gap disappeared among those giving shared care (PR = 0.89) but increased among lone caregivers (PR = 1.26). The greatest difference between caregiving and non-caregiving women in 2006 was in the proportion of poor mental health (PR = 1.69 and 1.51 for those giving shared and lone care, respectively). These differences decreased considerably in 2012 among individuals providing shared care (PR = 1.04), but not among lone carers (PR = 1.54). According to the adjusted models, the other health indicators, lower back pain and use of psychotropic drugs, followed the same pattern. In both surveys, men lone carers showed a higher probability of poor health than other groups, except in terms of the use of psychotropic drugs. The only significant differences in the 2006 survey were between lone carers and non-caregivers for poor self-rated health (PR = 1.43) and poor mental health (PR = 2.00). All inequalities tended to decrease for both groups of caregivers in the 2012 survey, and none of were statistically significant.

Discussion

This study shows that the social profile of caregivers in Spain has remained largely unchanged in recent years, and caregiving continues to be linked to gender and social class. Between 2006 and 2012, there was a decrease in health inequalities between individuals providing shared care and non-caregivers, and an increase in inequalities among the largest group of caregivers, women who provide care alone.

Our results show that caregiving is mostly undertaken by women, with similar percentages to those from previous studies in our context. Also consistent with these studies, caregiving women and men generally tend to have a low educational level.
Table 1
Socioeconomic description of the study population by distribution of care, sex and year of the survey. Residents in Spain aged 16 or more.

<table>
<thead>
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<th></th>
<th>2006</th>
<th>2012</th>
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<td>Men</td>
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<td>Share care %</td>
<td>Care alone %</td>
<td>No care %</td>
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<td>Total (n, %)*</td>
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<td>229 (1.6%)</td>
<td>585 (4.1%)</td>
<td>9739 (95.9%)</td>
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<td>85.2</td>
<td>64.1</td>
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* The percentage is referring to the total sample of women or men in every ENS edition.
Poor self-rated health

Poor mental health

Low back pain

Use of psychotropic drugs

**Figure 1.** Age-standardized prevalences of health outcomes by caregiver status, sex and survey year. Residents in Spain aged 16 or more.

**Figure 2.** Multivariate-adjusted Prevalence Ratio (PR) and 95% confidence interval for health outcomes for persons who share the care and persons who care alone with respect to persons who don't care by sex and survey year. Residents in Spain aged 16 or more. PR are adjusted by age and educational level. PR = 1 No caregiving. WOMEN 3.0.
These data indicate the persistence of social inequalities in the system of informal care.

Stratifying our analysis by gender allow us to interpret the poorer health indicators among caregiving women than caregiving men in a gender based framework. Differences between caregiving men and women could be explained in terms not only of the higher proportion of women, but also of the types of tasks and time devoted to caregiving, which disrupt women’s daily life much more than that of men, thus affecting their health.\textsuperscript{14} Women more often care for psychological and physical needs, such as assistance with personal hygiene, in contrast to men who have a greater tendency to perform activities in the public sphere.\textsuperscript{9} Previous research also shows that men faced with a highly demanding caregiving situation are more likely to seek external support, thus experiencing lower stress levels than women.\textsuperscript{24}

In contrast with previous studies,\textsuperscript{10} we found that social support does not appear to be a main modulator of the burden of care and health problems. One explanation for this could be the fact that we stratified our analysis according to whether care was shared or undertaken alone, where shared care partly accounts for this support.

The difference in time trends in health inequalities between the two groups of caregiving women may be due to differences in how they use the economic compensation offered for providing care at home. This economic benefit becomes the rule, 54% of the total benefits in 2012, and 93% of the caregivers who received it were women.\textsuperscript{22} As some authors have suggested,\textsuperscript{18} the economic benefit for women who provide care alone may condemn them to take a role that excludes them socially. Literature shows that economic benefits in Mediterranean countries may allow families to hire non-professional caregivers,\textsuperscript{26} many of whom are immigrant women.\textsuperscript{27,28} This situation may reduce the burden of care on those who share caregiving, as they feel accompanied and relieved.\textsuperscript{12,29}

Receiving help from someone outside the family is associated not only with a reduced burden, but also with a less negative reaction to care,\textsuperscript{28} which may also explain the health improvement, but maybe moving health inequalities to immigrant caregivers. Notably, the decrease in mental health inequalities in men is also due to the increased prevalence of poor mental health in non-caregiving men. This is consistent with previous analyses of the same surveys, which showed that the prevalence of poor mental health has increased among men during the economic crisis, especially among middle-aged male main-earners due to their change in employment status.\textsuperscript{31} The economic crisis in Spain has affected mental health more than other health indicators, such as self-rated health or all-cause mortality.\textsuperscript{32,33}

Finally, implementation of the Law has faced significant budget difficulties. Nonetheless, the most drastic budget cuts probably did not affect the 2012 edition of the survey because the data were collected before they took place.

This is the first study to analyse time trends in health inequalities associated with caring for people in situations of dependence in the context of the Spanish Law of Dependency. One strength of this study is that it provides quantitative information at the population level, with quite consistent findings across a range of reliable health indicators, including self-rated health, which reflects a global evaluation of disease, symptoms, functional abilities and overall well-being,\textsuperscript{34} chronic back pain, a very frequent affliction among caregivers,\textsuperscript{35} and mental health evaluated using both a standardised questionnaire, and in terms of current use of psychotropic drugs.

Another strength is that we have been able to distinguish between caregivers according to whether they share the responsibility of care, which reveals the most affected groups and a difference in time trends. This helps to discover the mechanisms through which the LAPAD and other contextual factors may influence health inequalities according to how care is provided.

**Conclusions**

According to our results, the general structure of the care model, characterised by gender and class division, remains largely unaltered. We observed different trends according to gender and care-sharing, with the health of women who provide care alone remaining the most markedly affected by caregiving.

Based on the findings of the current study, we believe that it is necessary to redesign and implement policies to reduce inequalities related to caregiving that take into account the most affected groups, such as female lone caregivers. It is important to improve the implementation of LAPAD, and in parallel to invest in new solutions that promote a fairer social distribution of care.

**What is known about the topic?**

Care for people in situation of dependence is a determinant of health inequalities. In 2006, in Spain, the Dependency Law introduced the universal right to public benefits in a in a context of scarce development of welfare policies for caregiving.

**What does this study add to the literature?**

In the Law’s context, health inequalities due to care diminished especially for those who shared the care. However, health inequalities remained for lone caring women, the largest caregivers’ group. Dependency Law needs to be improved to reduce health inequalities in groups that could be more affected. Besides this enhancement, it is required to promote a fairer social distribution of care.

**Editor in charge**

M.a Feliztás Domínguez Berjón.

**Transparency declaration**

The corresponding author on behalf of the other authors guarantee the accuracy, transparency and honesty of the data and information contained in the study, that no relevant information
has been omitted and that all discrepancies between authors have been adequately resolved and described.

**Authorship contributions**

M. Salvador-Piedrafita, D. Malmusi and C. Borrell were involved in the conception and design of the work, carried out the analysis and interpretation of data. The first version of the manuscript was written by M. Salvador-Piedrafita and was subsequently improved by all authors, with important intellectual contributions. All authors have approved the final version and are jointly responsible for adequate revision and discussion of all aspects included in the manuscript.

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**Conflicts of interest**

C. Borrell belongs to the GACETA SANITARIA editorial committee, but was not involved in the editorial process of the manuscript.

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