

ORIGINAL ARTICLE

The importance of social participation for life satisfaction among spouse caregivers aged 65 and over

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Funding information

DG Employment, Social Affairs and Inclusion; FCT/MCTES through National Funds (PIDDAC); Calouste Gulbenkian Foundation; Horizon 2020 (SHAREDEV3: GA N°676536, SERISS: GA N°654221); U.S. National Institute on Aging (U01_AG09740-13S2, P01_AG005842, P01_AG08291, P30_AG12815, R21_AG025169, Y1-AG-4553-01, IAG_BSR06-11, OGH04-064, HHSN271201300071C); European Commission through FP5 (QLK6-CT-2001-00360), FP6 (SHARE-I3: RII-CT-2006-062193, COMPARE: CIT5-CT-2005-028857, SHARELIFE: CIT4-CT-2006-028812), FP7 (SHARE-PREP: GA N°211909, SHARE-LEAP: GA N°227822, SHARE M4: GA N°261982); German Ministry of Education and Research, the Max Planck Society for the Advancement of Science; European Regional Development Fund (ERDF) through the Operational Program PORNorte and PORLisboa, AACN°01/SAICT/2016, Application n°022209 –DATA LAB

Abstract

Spouse caregivers report lower levels of life satisfaction. However, social participation generates life satisfaction. The main goal of this study is to analyse the contribution of social participation to the life satisfaction of European and Israeli spouse caregivers aged 65 plus. The study uses cross-sectional data from 17 European countries, plus Israel, which are part of wave 6 of the Survey of Health, Ageing and Retirement in Europe (SHARE). The sample was limited to individuals aged 65+, who were classified as non-caregivers ($N = 25,313$) or spouse caregivers ($N = 1977$). The mean scores of life satisfaction by country and caregiver status were calculated and tests for a two-group comparison and multilevel logistic regressions were performed. The spouse caregiver group reported lower levels of satisfaction with life. Tests for a two-group comparison show that the group of spouse caregivers reports fewer social activities than the non-caregivers group. Moreover, multilevel linear regressions allowed us to conclude that providing spousal care at older ages (65+) is related to lower life satisfaction but that providing spousal care and reporting having social participation is related to higher life satisfaction than in the group of spouse caregivers who are not involved in social activities, and non-caregivers.

Social participation is a key issue in the life satisfaction of spouse caregivers aged 65 years and older. The social participation of spouse caregivers should be a concern to relatives, communities, social and health professionals, as well as public policymakers.

KEYWORDS

65 plus, Europe, life satisfaction, SHARE, social participation, spouse caregivers

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1 | INTRODUCTION

Individuals aged 65 plus are the main providers of informal support for their spouses (Bertogg & Strauss, 2020). The downward trend in male mortality rates, the likely decline in the number of those widowed, as well as the limited availability, ability, or willingness of children to provide care, tend to contribute to an escalation of informal care by spouses in the future decades (Zigante, 2018). Furthermore, the rising costs of long-term care in European countries (Deusdad et al., 2016), as well as individuals' preference for ageing in their own homes (Costa-Font et al., 2009; Stones & Gullifer, 2016) are leading countries to increasingly focus on family care and on spouses as caregivers.

The concept of life satisfaction is central to ageing research (Lohmann, 1989). Life satisfaction is a crucial and strong predictor of a person's well-being (Arpino et al., 2018a; Yang & Srinivasan, 2016) and represents a reliable cognitive assessment of an individual's own life (Yang & Srinivasan, 2016). Nonetheless, some studies have recognised that spousal care is linked to worse life satisfaction (Langner & Furstenberg, 2019; Wagner & Brandt, 2018). The higher degree of personal care provided, the poorer health, as well the lower respite care of spouse caregivers (Barbosa et al., 2021; Pinquart & Sorensen, 2011; de Zwart et al., 2017), can lead to a decrease in life satisfaction. Moreover, in Europe, the life satisfaction of spouse caregivers is related to more provision of formal care (Wagner & Brandt, 2018). Social participation, conversely, is positively associated with life satisfaction (Lee & Choi, 2020; Li et al., 2018; Li et al., 2016). Social participation has been conceptualised in several ways. In the current investigation, social participation implies engagement in social or community activities that promote exchanges with others (Levasseur et al., 2010). According to Levasseur et al. (2010), social participation includes "(...) *interacting with others without doing a specific activity with them, doing an activity with others, helping others, and contributing to society*".

Moreover, social participation is a main basic right (Gordon & Bickenbach, 2013) and is regarded to be a modifiable determinant of well-being and health (Dawson-Townsend, 2019), which is capable of promoting successful, active, and healthy ageing (Douglas et al., 2016; Hsu, 2007; Levasseur et al., 2010; Turcotte et al., 2018). The existing literature shows that social participation reduces the risk of disability (Okada et al., 2017), rises cognitive function, decreases mortality rates (Hsu, 2007), and promotes quality of life (Feng et al., 2020). Conversely, the lack of social participation leads to a deterioration in health (Marmot, 2015) and is a modifiable risk factor for social isolation (Pinto, 2016). Taking part in social activities is related to greater interaction with others and with better caregiver mental health, especially among caregivers who provide informal care at home (Oshio & Kan, 2016). Social participation contributes to preserving the mental health of caregivers (Sibaliija et al., 2020). In line with Zhao et al. (2020), ongoing social participation prevents spouse caregivers from suffering the negative psychological consequences of starting to provide more intensive spousal care. Furthermore, social participation creates new opportunities to

What is known about this topic?

- Spousal care is linked to worse life satisfaction.
- The lack of social participation leads to a deterioration in health.

What this paper adds?

- Spouse caregivers report fewer social activities than non-caregivers.
- Spouse caregivers who participate in social activities have higher life satisfaction.
- Social participation is a key issue in the life satisfaction of spouse caregivers.

benefit from different kinds of support by meeting others and developing relationships (Sibaliija et al., 2020).

Nevertheless, the literature reveals mixed findings regarding the social participation of informal caregivers. On the one hand, the literature shows (Pinto, 2016) that informal caregivers experience several barriers to social participation. Pinto (2016) found that the features of the informal caregivers (older ages, more precarious physical and mental health, lower levels of education, less social support, lower financial situation, and lower quality of life) can prevent their social participation. On the other hand, Sibaliija et al. (2020) found that informal caregivers participate more frequently in community-related activities than non-caregivers.

Despite the relevance of social participation for well-being, health, and successful ageing, this topic has, to the best of our knowledge, never been analysed for older European spouse caregivers.

Given that spousal care is highly prevalent among the population aged 65 plus and that social participation is a modifiable determinant of well-being and health, the main goal of this study is to analyse the extent to which social participation increases the life satisfaction of European and Israeli spouses caregivers aged 65+, and use this information to contribute to public policies.

2 | MATERIALS AND METHODS

2.1 | Setting and study population

We use data from wave 6 (2015) of the SHARE survey, release 7.1.0. (10.6103/SHARE.w6.710) (Börsch-supan, 2020). SHARE is a multi-disciplinary, longitudinal and cross-national survey of a number of European countries, plus Israel, which provides microdata on health, socio-economic status and social and family networks of persons aged 50 and over who have their legal residence in a particular SHARE country (Börsch-Supan et al., 2013a).

The SHARE study is guided by international research ethics principles, such as the Respect Code of Practice for Socio-Economic Research and the 'Declaration of Helsinki'. SHARE was reviewed and

approved by the Ethics Council of the Max Planck Society and the Ethics Councils of the participating countries.

For this cross-sectional study, we firstly limited our sample to wave 6 SHARE respondents aged 65 plus at the time of the interview from 17 European countries, plus Israel, and to respondents who simultaneously answered co-residential informal care questions, which are applied only to respondents who reported not living alone ($N = 28,981$) (Barbosa et al., 2021). Furthermore, as in a previous study where we aimed to compare spousal caregivers providing informal care within the household with non-caregivers (Barbosa et al., 2021), we removed individuals providing care to people other than their spouse within the household, and also individuals providing informal care outside the household ($N = 1691$). As a result, a total of 27,290 individuals were taken into account in the analysis. The sample distribution among the countries is as follows: Austria (1376), Germany (1675), Sweden (1969), Spain (2802), Italy (2231), France (1357), Denmark (1239), Greece (1917), Switzerland (1181), Belgium (1832), Czech Republic (1947), Poland (714), Luxembourg (504), Portugal (779), Slovenia (1697), Estonia (2208) and Croatia (872), and Israel (990).

2.2 | Variables

Our outcome variable is life satisfaction, which is rated 0 to 10, where 0 denotes completely dissatisfied with life and 10 completely satisfied with life (Tomini et al., 2016).

Informal spousal caregiving is our independent variable and was constructed using the same procedures used in a previous study (Barbosa et al., 2021). The following SHARE questions were used: "Is there someone living in this household whom you have helped regularly (daily or almost daily) during the last twelve months with personal care, such as washing, getting out of bed, or dressing?"; and "To whom do you give help in this household?" (Barbosa et al., 2021).

To compare those individuals providing informal spousal care in the household with those not providing any informal care, the following people were excluded from this study: individuals providing informal care within their household to persons other than their spouse; and individuals providing informal care outside the household (such as dressing, bathing or showering, helping other(s) with eating, getting in or out of bed or using the toilet) and answered Yes to the following question: "In the last twelve months, have you personally given any kind of help listed on this card to a family member from outside the household, a friend or neighbour?" (Barbosa et al., 2021).

As a result, approximately 6% of our sample was excluded and individuals who provide care to a spouse inside the household and no one else were coded as 1, and non-caregivers were coded as 0 (Barbosa et al., 2021).

Social participation is our mediator variable and was built based on Bourassa et al. (2015) procedures. This indicator includes a SHARE question about whether respondents had participated in

three common types of social activities over the past 12 months (voluntary or charity work; sport, social or other kinds of club; and political or a community organisation) and a subsequent question about the frequency of participation in each activity (1-almost daily; 2-almost every week; 3-almost every month; 4-less often) (Bourassa et al., 2015). Contrary to the Bourassa et al. (2015) scale, our indicator does not include participation in a religious organisation, as this activity was not considered in the SHARE questionnaire of wave 6. The two questions were gathered creating a continuous variable ranging from 0 to 9, with higher scores indicating greater social participation. Since score 0 has 68% of the responses, a dichotomy variable was created (score 0 as no social participation (0) and scores 1 to 9 as social participation (1)).

Following the literature review, several important control variables were also considered in our analysis. Gender and age were included as covariates. Education was evaluated in terms of the highest degree of education obtained, using the International Standard Classification of Education (ISCED-97) (Barbosa et al., 2021). ISCED-97 codes were classified into three groups: low level of education (including individuals who reported having no education, primary education or lower secondary education); medium level of education (including individuals who reported having completed secondary or post-secondary non-tertiary education); and high level of education (including individuals who reported having completed the first stage of tertiary education or the second stage of tertiary education) (Arpino et al., 2018b; Barbosa et al., 2021).

The financial distress variable (Börsch-Supan et al., 2013b) was created from the question: "Thinking of your household's total monthly income, would you say that your household is able to make ends meet?". Four answer categories are available: 1-with great difficulty; 2-with some difficulty; 3-fairly easily; and 4-easily. A dichotomous variable was constructed with the respondents who reported difficulty making ends meet being those who reported great difficulty or some difficulty, and the respondents who reported fairly easily or easily being those who did not report difficulty making ends meet.

Through a Confirmatory Factor Analysis (CFA), a latent continuous physical health measure was constructed (Delerue Matos et al., 2021; Di Gessa et al., 2016; Ploubidis & Grundy, 2011). This physical health measure includes one objective health indicator, plus six subjective ones. Maximum grip strength using one or both hands is the objective health indicator used, while self-perceived health (poor (1), fair (2), good (3), very good (4) or excellent (5)); having a long-term illness; reporting limited activities because of health (1 - severely limited, 2 - limited, but not severely; and 3 - not limited); having had a heart attack; having had a stroke; and having had chronic lung disease are the subjective ones (Delerue Matos et al., 2021). Our F-score varies from -1.89 to 1.32, meaning that higher scores indicate better physical health. MPLUS, version 7, WLSMV estimator were used. The following values were found: 0.032 for Root Mean Square Error of Approximation (RMSEA); 0.984 for Comparative Fit Index (CFI); and 0.976 for Tucker-Lewis Index (TLI).

To assess mental health, the EURO-D 12-item scale (Prince et al., 1999) was used. This scale includes 12 questions about

feelings of depression, pessimism, wishing death, guilt, irritability, tearfulness, fatigue, sleeping troubles, loss of interest, loss of appetite, reduction in concentration, and loss of enjoyment over the last month (Prince et al., 1999). This scale varies from 0 to 12, with 0 representing not being depressed and 12 being very depressed.

According to Dewey and Prince (2005) EURO-D score higher than three means clinically significant depression symptoms and score equal to or lower than three, means no clinically significant depression symptoms.

2.3 | Statistical analysis

We first conducted an analysis of the missing data. Economic and health variables were found to have missing values above 5%. In order to optimise the number of observations, SHARE multiple imputations were used (Barbosa et al., 2021; Jakobsen et al., 2017). Besides, considering that SHARE sample design is not consistent between the SHARE countries, we used calibrated individual weights in all the descriptive statistical analysis (Barbosa et al., 2021) (Figure 1 and in the percentages/means in Table 1). The mean scores of life satisfaction were also estimated by country and caregiver status.

The sociodemographic, economic and health differences between the group of non-caregivers and the spouse caregiver group were also examined using the T-test (t), chi-square (χ^2) test, and effect size measures (Cohen's d/Phi with a 95% confidence interval). Finally, multilevel linear regressions (individual-level as level 1 and country as level 2) were applied to explore the relationship between providing spousal care and life satisfaction, as well as the role of social participation in this relationship. Then a null model (Model 0) was considered to analyse the change of life satisfaction as a result of country differences (Barbosa et al., 2021). Since the intra-class correlation coefficient (ICC) of the null model is 10.6%—greater than 5% (Heck et al., 2013; LeBreton & Senter, 2008)—Multilevel Modelling was recommended. In Model 1, the individual-level indicators (age, gender, education, financial distress, physical health, depression, social participation, and spousal care) were included. In Model 2, an interaction term between spousal care and social participation was inserted. In addition, in all models, continuous indicators were centred. Finally, Coefficient (β), Standard Error (SE), *p*-value (*p*), intra-class correlation coefficient (ICC_{country}), between-country variance, and deviance of the statistical model were shown.

In addition, classical standard errors and robust standard errors were used. Considering that no differences were found, classical

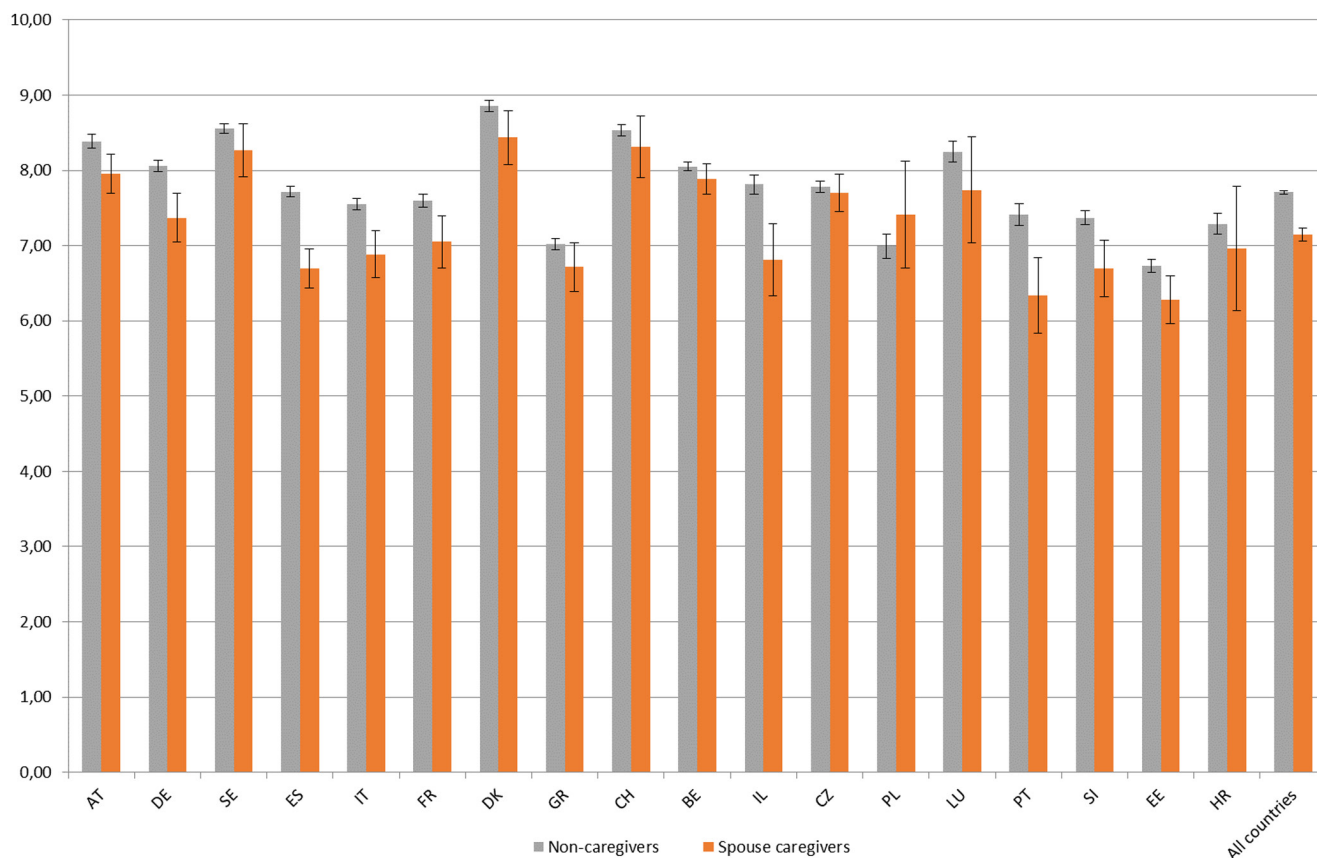


FIGURE 1 Mean life satisfaction by people aged 65+, by country and caregiver condition. Source: SHARE, release 7.1.0., wave 6, weighted data, $N = 27,290$. Notes: Brackets denote 95% confidence intervals. Countries: Austria (AT); Germany (DE); Sweden (SE); Spain (ES); Italy (IT); France (FR); Denmark (DK); Greece (GR); Switzerland (CH); Belgium (BE); Israel (IL); Czech Republic (CZ); Poland (PL); Luxembourg (LU); Portugal (PT); Slovenia (SI); Estonia (EE); Croatia (HR)

TABLE 1 Descriptive statistics of the study population, by caregiver condition

	N	Non-caregivers (N = 25,313)	Spouse caregivers (N = 1977)	t/χ^2	p-value	Cohen's <i>d</i> / <i>phi</i>	CI 95%
Age, mean (SD)	27,290	73.98 (6.90)	76.05 (6.88)	-9.768	<0.001	-0.23*	-0.27- -0.18
Female (%)	27,290	48.81	53.97	27.642	<0.001	0.03	0.02-0.04
Education (%)	27,290			44.793	<0.001	0.04	0.02-0.05
Low		51.18	57.31				
Medium		29.38	28.55				
High		19.43	14.15				
Financial distress (yes) (%)	27,149	34.5	38.46	41.169	<0.001	0.04	0.03-0.05
Physical health, mean (SD)	27,290	-0.15 (0.71)	-0.40 (0.71)	14.64	<0.001	0.34*	0.30-0.39
Depression (yes) (%)	27,290	30.28	48.38	234.327	<0.001	0.09	0.08-0.10
Social participation (yes) (%)	25,605	31.96	28.01	19.742	<0.001	0.03	0.02-0.04
Life satisfaction, mean (SD)	27,290	7.71 (1.75)	7.15 (1.93)	11.777	<0.001	0.30*	0.25-0.35

Source: SHARE, release 7.1.0., wave 6, weighted data, $N = 27,290$.

Notes: Tests for effect size: Cohen's *d*: *small effect (≥ 0.20); **medium effect (≥ 0.50); ***large effect (≥ 0.80); Phi: *small effect (≥ 0.10); **medium effect (≥ 0.30); ***large effect (≥ 0.50).

standard errors are presented (King & Roberts, 2015). Country cross-level interactions were not included in this study due to singularity fit problems.

IBM SPSS 25 was used to execute descriptive and bivariate analyses. R 4.0.2. software was used to perform multilevel linear regression analyses. R function 'lmer' of the lme4 package (Bates et al., 2020) was applied. R Function 'icc' of the package 'performance' was also employed to estimate the intraclass-correlation coefficient (ICC) for mixed effects models (Lüdtke et al., 2020).

3 | RESULTS

Figure 1 displays the mean life satisfaction, according to caregiver condition and country. It showed that the group of spouse caregivers from Austria, Germany, Spain, Italy, France, Israel, Portugal, Slovenia, and Estonia had the lowest life satisfaction levels. Moreover, in Sweden, Denmark, Greece, Switzerland, Belgium, Czech Republic, Poland, Luxembourg, and Croatia, the group of spouse caregivers and the group of non-caregivers did not differ in terms of life satisfaction. When all the countries are considered, the spouse caregiver group reported lower levels of satisfaction with life (7.15) in relation to the non-caregiver group (7.71).

Sociodemographic, economic and health characteristics of the study population, by caregiver condition are displayed in Table 1. Data showed that the spouse caregiver's group had a higher age (76.05 compared to 73.98), were predominantly women (53.97% compared to 48.81%), lower-educated (57.31% compared to 51.18%), and more financially distressed (38.46 compared to 34.5), when compared with the non-caregivers group. Furthermore, the spouse caregiver group had worse physical health (-0.40 compared

to -0.15) and a higher percentage of depression (48.38% compared to 30.28%), as well as lower social participation (28.01% compared to 31.96%) and lower life satisfaction (7.15 compared to 7.71). By analysing results from effect size tests, we found a small effect regarding age ($d = 0.23$), physical health ($d = -0.34$), and life satisfaction ($d = 0.30$).

Regarding the multilevel linear regression analysis, the results of model 0 highlight that 10.6% (ICC = 0.106) of the variation in life satisfaction is explicated by differences among countries. Nevertheless, the decrease in the ICC from 10.6% in Model 0 to 3.8% in Models 1 and 2 showed that the variables considered in the analysis have reduced the unexplained variance at the country level.

After the introduction of individual-level variables (Model 1), all variables were significantly associated with life satisfaction. The data indicate that later age was associated with higher life satisfaction ($\beta = 0.010$; $p < 0.001$). Conversely, the female gender was associated with lower life satisfaction ($\beta = -0.095$; $p < 0.001$). Moreover, a medium educational level, compared to a lower educational level, was associated with higher life satisfaction ($\beta = 0.071$; $p < 0.001$); and financial distress was associated with lower life satisfaction ($\beta = -0.516$; $p < 0.001$). Concerning health, higher physical health scores ($\beta = 0.483$; $p < 0.001$) were associated with higher life satisfaction, and depression (Euro-D) ($\beta = -0.924$; $p < 0.001$) was associated with lower life satisfaction. Additionally, social participation was associated with higher life satisfaction ($\beta = 0.173$; $p < 0.001$), and providing spousal care with lower life satisfaction ($\beta = -0.253$; $p < 0.001$). After including the interaction term (spousal care*social participation) (Model 2), all the variables remained stable. This model showed that providing spousal care and reporting social participation was associated with higher life satisfaction in the order of 0.171 ($p = 0.034$),

compared with the group of spouse caregivers who were not involved in social activities and non-caregivers. As shown in Figure 2, life satisfaction differences between those who did not report social participation and those who reported social participation within each group (spouse caregivers and non-caregivers) was higher among the spouse caregivers (Table 2).

4 | DISCUSSION

Our study analyses the contribution of social participation in the life satisfaction of European and Israeli spouse caregivers aged 65 and over.

Our study results reinforce previous studies (Langner & Furstenberg, 2019; Wagner & Brandt, 2018) by showing that spouse caregivers have lower life satisfaction. Following the literature, the majority of spouse caregivers perform high levels of instrumental care (de Zwart et al., 2017) does not have a choice when assuming the caregiving role (Pertl et al., 2019), and a significant number is caring alone (Ornstein & Kelley, 2018), which may contribute to their experiencing less control over their lives (Wagner & Brandt, 2018) and therefore lower life satisfaction.

This study adds to the literature indicating that European and Israeli spouse caregivers who are involved in social activities have higher life satisfaction levels compared with the group of spouse caregivers who are not involved in social activities, and also non-caregivers. This finding highlights that social participation is a significant driver for improving the life satisfaction of older spouse caregivers. Nevertheless, we also found that the group of spouse caregivers reports fewer social activities than the non-caregiver

group. These results are in line with Pinto (2016) and underline the fact that members of the European and Israeli older spouse caregiver group are less able to engage in social activities. Our results contradict recent findings (Sibalija et al., 2020) showing that informal caregivers report more community-related activities. These differences can mainly be attributed to the fact that we focused on personal care provided by a spouse, whereas the study by Sibalija et al. (2020) focused on assistance with instrumental activities—which are less burdensome than personal care—provided by a spouse, children or a son- or daughter-in-law. As spouse caregivers typically reside with the care recipient, they, therefore, supply more hours of care and have less time to seek respite from their caregiver role (de Zwart et al., 2017). Furthermore, informal caregivers who provide a greater number of tasks are more limited in terms of social participation (Riffin et al., 2017).

From a public policy and practice perspective, our study shows that social participation is an important key factor in enhancing the life satisfaction of spouse caregivers aged 65 plus. Activity theory of ageing (Diggs, 2007) enables us to understand these results, insofar as it states that a higher level of activity contributes to greater satisfaction with life.

According to Khalili et al. (2013), individuals' social participation can be increased by improving each dimension of the social capital, namely family, kinship, neighbourly and friendship relations, institutional trust, economic capital, group relationship and trust level. Taking into account these dimensions, we consider it crucial to create opportunities for broadening the relationships of older spouse caregivers. Family and community social support networks should be stimulated to relieve spouse caregivers and to encourage them to have more control over their lives. Furthermore, social and health

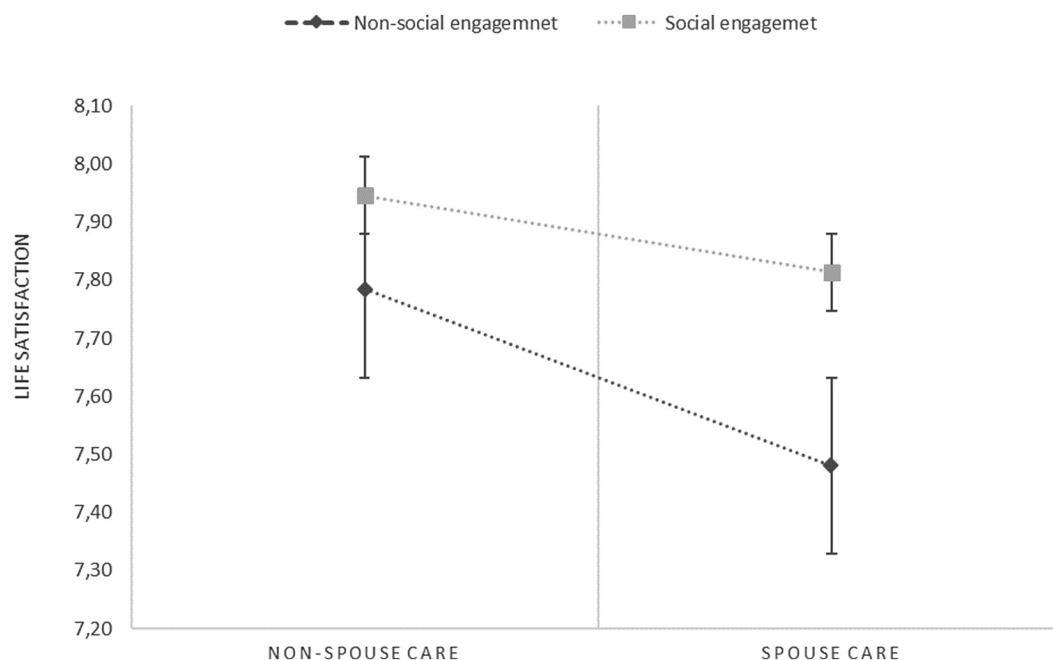


FIGURE 2 Social participation and life satisfaction of spouse caregivers and non-caregivers. Source: SHARE, release 7.1.0., wave 6. Unweighted data, $N = 25,605$. Notes: Brackets denote standard errors

TABLE 2 Multilevel linear regression with life satisfaction as the outcome

	Model 0 (N = 27,290)			Model 1 (N = 25,605)			Model 2 (N = 25,605)		
	β	SE	<i>p</i>	β	SE	<i>p</i>	β	SE	<i>p</i>
Fixed parts									
(Intercept)	7.756	0.138	<0.001	7.522	0.138	<0.001	7.527	0.138	<0.001
Gender (male)				-0.095	0.020	<0.001	-0.095	0.020	<0.001
Age				0.010	0.002	<0.001	0.010	0.002	<0.001
Education									
Low (ref.)									
Medium				0.071	0.025	0.005	0.071	0.025	0.005
High				0.050	0.027	0.060	0.051	0.027	0.056
Financial distress (yes)				-0.516	0.023	<0.001	-0.517	0.023	<0.001
Physical health				0.483	0.016	<0.001	0.483	0.016	<0.001
Depression (yes)				-0.924	0.024	<0.001	-0.923	0.024	<0.001
Social participation (yes)				0.173	0.022	<0.001	0.162	0.023	<0.001
Spousal care (yes)				-0.253	0.037	<0.001	-0.304	0.044	<0.001
Social participation (yes) * Spousal care (yes)							0.171	0.081	0.034
Random parts									
ICCcountry	0.106			0.038			0.038		
Between-country variation	0.3409			0.0869			0.0870		
Deviance	106,234.6			94,347.6			94,343.1		
N countries	18			18			18		

Source: SHARE, release 7.1.0., wave 6. β : Coefficient; SE: Standard Error; *p*: *p* values; ICC: Intra-class Correlation Coefficients. Unweighted data.

Notes: Significant associations ($p < 0.05$) are bold. *: interaction term.

institutions need to understand and support the needs of older spouse caregivers to release them from the most onerous tasks and promote their social skills. Promoting social participation is also shown to be an important intervention goal for health professionals (Levasseur et al., 2010). Caregiver groups should therefore be created to promote social and emotional support.

Furthermore, spouse caregivers are facing higher financial distress (Wagner & Brandt, 2018) compared with their non-caregiver peers, which may lead to greater difficulties in reaching formal care services. In this sense, more economic support is needed to boost the social participation of spouse caregivers.

In addition, diversified formal care services are required to promote the social participation of spouse caregivers. It is necessary to formulate more inclusive social, economic, and health public policies to overcome and prevent difficulties in social participation among older spouse caregivers. From this perspective, spouse caregivers should be encouraged to maintain their autonomy and control over their lives in order to promote their social engagement and participation in society (Marmot, 2015). Implementing these policies will increase trust levels in family and community relations and also

public trust among spouse caregivers and also encourage them to participate in social life if they so desire. Increasing the social participation of spouse caregivers will improve their access to resources and support to promote their life satisfaction.

To our knowledge, this is the first European study to analyse the importance of social participation for the life satisfaction of spouse caregivers 65+. Overall, this study makes a contribution to the literature by highlighting the contribution of social participation to the life satisfaction of European and Israeli spouse caregivers aged 65 plus. The present study also has limitations. As the SHARE project does not ask about the number of hours of care provided per day/week, we were not able to analyse the intensity of care provided by spousal caregivers. Our social participation indicator does not include participation in a religious organisation, as this activity was not considered in the SHARE questionnaire of wave 6. The study may present a further limitation related to using a single item to measure life satisfaction. Although some research shows that this single item has a validity identical to that of multi-item scales, some authors advocate assessing life satisfaction from the latter scales. The SHARE project does not include additional information that would enable this option.

Further studies are needed to explore the longitudinal effect of social participation on life satisfaction, as well as on the physical and mental health of spouse caregivers. Moreover, considering the lower unexplained variance of life satisfaction at the country level, future research should focus on analysis at the regional level of each country.

The central findings of this study are that social participation generates life satisfaction for spouse caregivers aged 65 plus. Our results highlight that the social participation of spouse caregivers aged 65 plus seems to be an important factor in promoting their life satisfaction. Moreover, the group of spouse caregivers reports fewer social activities than the non-caregiver group, which indicates that is necessary to promote the social participation of spouse caregivers. In this sense, the social participation of spouse caregivers has to be a concern to relatives, communities, social and health professionals, as well as public policymakers. Having regard to the increasing value of spouse caregivers in the present and future society, it is imperative to promote the life satisfaction of spouse caregivers through public policies.

ETHICS STATEMENT

Ethical approvals for Wave 6 of the SHARE study were awarded by the Ethics Council of the Max Planck Society and the ethics committees or institutional review boards of the SHARE countries.

ACKNOWLEDGEMENTS

The authors are grateful for the funding awarded to SHARE-Portugal by the FCT/MCTES and Calouste Gulbenkian Foundation (SHARE-Portugal, 2013-2016) and by FCT/MCTES through National Funds (PIDDAC) and the European Regional Development Fund (ERDF) through the Operational Program PORNorte and PORLisboa, AACN° 01/SAICT/2016, Application n°022209 -DATALAB (SHARE-Portugal, from 2017 to the current date). This paper uses data from SHARE Wave 6 (10.6103/SHARE.w6.710), see (Börsch-supan, 2020) for methodological details (Börsch-Supan et al., 2013a, 2013b). The SHARE data collection has been funded by the European Commission through FP5 (QLK6-CT-2001-00360), FP6 (SHARE-I3: RII-CT-2006-062193, COMPARE: CIT5-CT-2005-028857, SHARELIFE: CIT4-CT-2006-028812), FP7 (SHARE-PREP: GA N°211909, SHARE-LEAP: GA N°227822, SHARE M4: GA N°261982) and Horizon 2020 (SHARE-DEV3: GA N°676536, SERISS: GA N°654221) and by DG Employment, Social Affairs & Inclusion. Additional funding from the German Ministry of Education and Research, the Max Planck Society for the Advancement of Science, the U.S. National Institute on Aging (U01_AG09740-13S2, P01_AG005842, P01_AG08291, P30_AG12815, R21_AG025169, Y1-AG-4553-01, IAG_BSR06-11, OGHA_04-064, HHSN271201300071C) and from various national funding sources is gratefully acknowledged (see www.share-project.org).

CONFLICT OF INTEREST

The authors have no conflict of interest to report.

AUTHOR CONTRIBUTIONS

FB and AM designed the study. FB, AM and GV analyzed the data. FB wrote the manuscript. AM and AE participated in the critical review of the manuscript. All authors read and approved the final manuscript.

DATA AVAILABILITY STATEMENT

The datasets used and/or analysed during the current study are available from the corresponding author whenever necessary.

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How to cite this article: Barbosa, F. C. S., Delerue Matos, A. M., Voss, G. D. S., & Eiras, A. F. S. (2022). The importance of social participation for life satisfaction among spouse caregivers aged 65 and over. *Health & Social Care in the Community*, 30, e3096–e3105. <https://doi.org/10.1111/hsc.13754>