

Exploring resilience and well-being of family caregivers of people with dementia exposed to mandatory social isolation by COVID-19

Dementia

2022, Vol. 21(2) 410–425

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DOI: [10.1177/14713012211042187](https://doi.org/10.1177/14713012211042187)

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Abstract

Background: The COVID-19 pandemic has raised questions about the resilience of health care systems worldwide. In this regard, one group of people whose physical and mental health has been affected has been family caregivers of people with dementia.

Objective: This study aims to identify the variables that predict a high degree of well-being in family caregivers of people with dementia during this period of mandatory lockdown.

Methods: A total of 310 respondents participated in an online survey (266 women and 44 men) from various regions in Spain, aged between 20 and 73 years old ($M = 46.45$; $SD = 15.97$), and all were family members.

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Results: The results showed that there were notable differences in all the protective variables, together with a significant strong positive relationship between well-being and resilience ($r = 0.92$; $p < 0.01$) and with coping strategies ($r = 0.85$; $p < 0.01$), and there were also some significant negative relationships between well-being and difficulties in emotional regulation ($\rho = -.78$; $p < 0.01$). The most predictive variables of a higher level of well-being included the type of dementia ($\beta = 1.19$; CI (95%) = 1.01-1.29; $p < 0.01$), living in a large house ($\beta = 0.97$; CI (95%) = .23-0.98; $p < 0.01$), social support as a coping strategy ($\beta = 1.27$; CI (95%) = 1.21-1.29; $p < 0.01$) and mainly resilience ($\beta = 1.34$; CI (95%) = 1.30-1.37; $p < 0.01$).

Discussion: We discuss the importance of promoting higher levels of resilience through the development of protective psychosocial variables in caregivers of people with dementia exposed to situations of mandatory social isolation as a modulator of the psychosocial well-being of these family caregivers.

Keywords

COVID-19, resilience, perceived well-being, family caregivers, dementia

Introduction

Coronavirus-19 (COVID-19) has reached pandemic proportions in most parts of the world ([World Health Organization-WHO, 2020a](#)). Beyond the stress inherent in infection, this pandemic have produced negative psychological effects in the general population such as symptoms of post-traumatic stress, anger and anxiety, which are intensified by time in confinement or quarantine ([Brooks et al., 2020](#)). The mandatory nature of mass home confinement (including quarantine and isolation) has led to concerns in the scientific community about how these situations may affect particular groups ([Beam & Kim, 2020](#); [Pfefferbaum & North, 2020](#)), especially older people ([De Leo & Trabuchi, 2020](#)).

The outbreak of COVID-19 in Spain started at the end of February, and between the beginning of the pandemic, and the end of 2020, there were 50,122 deaths from COVID-19 in Spain, with 33,880 (65.60%) of those being over 60 years old ([Ministerio de Sanidad, Consumo y Bienestar Social, 2020](#)), although these figures vary depending on the source ([WHO, 2020b](#)). In addition, infection prevention measures have increased the sense of loneliness and isolation in this age group ([Heidinger & Richter, 2020](#)) but have also produced significant emotional distress in their family caregivers ([Centers for Disease Control and Prevention, 2020](#)), especially when they are caring for an older person with dementia ([Usher et al., 2020](#)). The total number of people with dementia worldwide is projected to reach 82 million in 2030 and 152 million in 2050, with it currently affecting some 50 million people, 60% of whom live in low- and middle-income countries ([WHO, 2020c](#)). People with dementia are particularly vulnerable to COVID-19 due to their age, multimorbidity and the difficulty in maintaining physical distancing ([Lee et al., 2020](#); [Livingston et al., 2020](#)). Dementia already isolates these people in one way or another, but if we add compulsory home confinement along with a breakdown in social and health care, it can lead to major setbacks to their progress, reducing their well-being ([Alzheimers's Society, 2020](#)).

In Spain, 80% of all people with dementia live in private homes and depend on the care of a family member ([Suarez-González & Comas-Herrera, 2020](#)), and in other countries such as the USA, this figure rises to 83% ([Friedman et al., 2015](#)). There has been extensive assessment of the level of perceived well-being in the general population ([Groarke et al., 2020](#); [Rodríguez-Rey et al., 2020](#)) and in university students ([Collado-Boira et al., 2020](#); [Paredes et al., 2021](#)) affected by obligatory confinement due to the COVID-19 pandemic, and in all studies, it was considered that the

COVID-19 crisis had greatly impacted on their daily life, including changes in their daily routines and cancellation of important activities. However, there is not much information on how this situation of mandatory confinement has affected family caregivers of people with dementia. These caregivers are a group that is highly vulnerable to traumatic situations due to the negative consequences of the care situation (Brodaty & Donkin, 2009). Family caregivers with a high level of well-being are a great ally in the prevention of COVID-19 infection in people with dementia, but their mental well-being also directly affects the health of the family member with dementia (Chiao et al., 2015; Dubey et al., 2020), which could lead to increased stress and anxiety for caregivers (Migliaccio & Bouzigues, 2020). Feeling overwhelmed or excessively concerned about COVID-19 may affect the resilience and capabilities of family members caring for others at home as they did before the pandemic. The additional traumatic stress reactions resulting from the pandemic may include fatigue, fear, withdrawal and guilt. Family members who are unable to visit sick relatives in hospital due to strict lockdowns may find it emotionally difficult. In addition, family members coming to hospitals because their critically ill relatives need urgent care or to be admitted may experience feelings of helplessness and vulnerability for fear of violating social distancing rules, setting an example of 'learned helplessness' (Wand et al., 2020). This is exacerbated in a pandemic such as the current situation due to the explicit knowledge that people with dementia may not receive the health or social care they need due to the rationing of socio-health resources (Wand et al., 2020).

Some studies have demonstrated a specific socio-demographic profile in dementia caregivers. In fact, most are usually aged 40 or older (Ornstein et al., 2019), with high levels of education (Rabarison et al., 2018), and the type of dementia in their family member along with the time since diagnosis influence how much of a burden it is for them (Ma et al., 2017). More than three-quarters are women, so the necessary restrictive measures such as the closure of schools and day-care centres increased their burden at home (Mantovani et al., 2020). Other studies have already suggested that caregivers can develop high levels of resilience (Joling et al., 2016; Robles-Bello et al., 2020) or put in place adequate coping mechanisms (Pfefferbaum & North, 2020). However, there has not been sufficient assessment of how the care situation of a family member with dementia and compulsory confinement by COVID-19 can affect the level of well-being of these family caregivers. One possible outcome of this traumatic exposure could be an increase in levels of resilience (Chen & Bonanno, 2020), which would indirectly enable greater psychological well-being for the person with dementia (Paredes et al., 2021). There are several personal protective factors that maximise a resilient outcome in the general population, such as self-efficacy, coping strategies and self-pity, but empirical evidence of how these protective factors modulate well-being in this sub-population of family caregivers is very scarce.

Therefore, this study aims to determine whether certain socio-demographic and psychological variables act in protection of the level of well-being, and which of them are effective predictors of that well-being in family caregivers of people with dementia who have been confined to their homes because of COVID-19. The sex, age and educational levels of family caregivers of people with dementia are expected to be socio-demographic variables that are predictive of well-being, as are resilience, self-efficacy and problem-focused coping strategies.

Method

Sampling and participants

The initial sample consisted of 327 people. The response rate was 90.12%, with 17 participants eliminated for not meeting all of the inclusion criteria. These criteria were as follows: (1) to be

18 years of age or older; (2) to have read the information sheet and accepted the electronic informed consent; (3) to be family caregivers of a person with dementia; (4) to live in the same home as their family member with dementia during the mandatory confinement in the first wave of COVID-19 in Spain and (5) to complete all the questionnaires. The final sample (310 participants) was composed of 266 women and 44 men. Ages ranged from 20 to 73 years old ($M = 46.45$; $SD = 15.97$).

The Spanish government declared a State of Alarm on 14 March, 2020, due to the COVID-19 pandemic (Boletín Oficial del Estado-BOE, 2020) which forced all citizens into home isolation by law. It was only possible to go out into the street to do essential activities (buying food, going to the pharmacy or doctor or going to work alone for activities that could not be done online). These activities had to be justified to state security bodies.

From 15 April, 2020, we distributed all of the questionnaires online through social networks. Data collection were carried out between 1 and 26 May, 2020, with participants who met the inclusion criteria to take part in this study invited via the link https://docs.google.com/forms/d/e/1FAIpQLSdMWbfS9n2fxwikqns9Zex8ojx1CWuMQ_THRM0tqYCAarxV/viewform?usp=sf_link. Participants completed the questionnaires through an online survey platform (Google Forms, licensed by the University of XXX). The informed consent of all participants was given before the questionnaire could be completed. In order to be able to fill in the form, the participant must first give his or her consent.

The study was approved by the ethics committee of the University of XXX (code: ABR.20/6.TFM), and followed the ethical guidelines from the Spanish Society of Psychology, the principles of the Declaration of Helsinki and Organic Law 3/2018, 5 December, on the Protection of Personal Data and Guarantee of Digital Rights, as well as Directive (EU) 2016/680 of the European Parliament and Council, of 27 April, 2016 and applicable national and European laws on data protection and privacy.

Instruments

Well Being Index (WHO-5) by the World Health Organization -WHO (1998) was translated into Spanish by Suárez and Villa (2017). This index evaluates the level of emotional well-being in the previous 2 weeks. It consists of five items with a Likert-type response scale from 0 to 5, where 0 is never and 5 is all the time. The total score ranges from 0 to 25, with scores below 13 considered indicative of depression. The way the questions are worded around aspects related to levels of energy and happiness encourages honest answers from people who suffer from depression by reducing the stigma associated with it (Henkel et al., 2004). It is a reliable measure of depressive states or high levels of well-being (Carrasco, 2012). Cronbach's alpha in the Spanish adult population version was 0.84 (Suárez & Villa, 2017). In this study, Cronbach's alpha was 0.82.

General Self-efficacy Scale (GS-ES) by Schwarzer and Jerusalem (1995), was translated into Spanish by Sanjuán et al., (2000). This scale determines feelings of personal competence in coping with different problematic situations. It uses ten items, with a 4-point Likert-type response format, where 1 is uncertain and 4 is true (Sanjuán et al., 2000). A higher score is indicative of a greater perception of self-efficacy. Cronbach's alpha for the Spanish population was 0.87. In this study, Cronbach's alpha was 0.84.

Inventory of Coping Strategies (ICS) (Cano et al., 2007). This scale evaluates which situations generate discomfort and problems in daily life and the strategies that each person can use to deal with them. It provides both qualitative and quantitative information; however, in this study, we only used quantitative data. The questionnaire is made up of forty items with Likert-type response options ranging from 0 = not at all to 4 = totally. Its first-order factor structure has eight factors: problem-solving; self-criticism; emotional

expression; disiderative thinking; social support; cognitive restructuring; problem avoidance and social withdrawal. Its internal consistency is between 0.63 and 0.89 depending on the sub-dimensions (Barquin-Cuervo et al., 2018). In this study, the total Cronbach's alpha was 0.89.

Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004), was translated into Spanish by Hervás and Jódar (2008) (called DERS-E). This scale assesses the difficulties of the adult population in emotional regulation processes. The Spanish adaptation has 28 items, measuring mainly five subscales: emotional rejection, lack of emotional control, daily interference, emotional neglect and emotional confusion. The responses are given on a 5-point Likert-type scale, with 1 being almost never and 5 being almost always. It is scored by adding together the scores for each of the items, with higher scores indicators of greater difficulty in regulating emotions. The adaptation to the Spanish population demonstrated good levels of internal consistency between 0.71 and 0.73 (Guzmán-González et al., 2014). In this study, Cronbach's alpha was 0.91.

Self-Compassion Scale-short form (SCS-SF) by Raes et al. (2011), was translated into Spanish by García-Campayo et al. (2014). This scale measures how the subject usually acts towards themselves at difficult times through 12 items with a Likert-type scale (1 to 5). It consists of six positive subscales: self-love, common humanity, mindfulness and the opposite, self-judgement, isolation and over-identification. The original version demonstrated adequate internal consistency (Cronbach's alpha ≥ 0.86) and a six-factor factor structure (Raes et al., 2011). The Spanish version had an adequate Cronbach's α of 0.85 and the six subscales were between 0.71 and 0.77 (García-Campayo et al., 2014). In this study, we found an alpha of 0.89.

Resilience Scale 14 items (RS-14) by Wagnild (2009), was translated into Spanish by Sánchez-Teruel and Robles-Bello (2015). This scale evaluates resilience, which measures people's adaptive responses to stressful situations. The scale has two factors in the original English version, but the Spanish version is one-dimensional. Cronbach's alpha in the original version was 0.87 (Wagnild, 2009), and it has a negative correlation with both anxiety and depression, while in the Spanish sample, Cronbach's alpha was 0.79 (Sánchez-Teruel & Robles-Bello, 2015). For the sample of family caregivers, we found an internal consistency of 0.88.

Data analysis

Missing data accounted for less than 1% for all variables, and we used a multiple imputation method (SPSS) to impute missing values (Graham, 2012). We carried out a descriptive analysis and comparison of means for one sample (t) for all the variables. Following that, we examined the possible relationships between the variables using Pearson and Spearman correlations. Lastly, we attempted to assess which demographic and psychological variables predicted higher levels of well-being in family carers through a multiple hierarchical regression procedure, initially calculating the goodness of fit indices. We also calculated indices of power and effect size. The level of statistical significance required in all tests was a minimum of $p < 0.05$. The statistical analysis was performed using SPSS version 25.0 (Corporation IBM, 2013) and the statistical power and effect size were determined using G*Power 3.1.9.7 (Faul et al., 2009).

Results

Sample description

The results report that the sample of this study is characterised by a significant proportion of women (85.81%; $\chi^2_{(1)} = 28.26$; $p < 0.05$), with a minimum educational level of high school

(37.74%; $\xi^2_{(3)} = 2.19$; $p > 0.05$) and who are employed (39.03%; $\xi^2_{(3)} = 11.26$; $p > 0.05$), with no differences in these variables. The type of dementia of the relative they cared for was senile (28.39%; $\xi^2_{(4)} = 19.46$; $p > 0.05$) and whose diagnosis occurred between 1 and 4 years ago (55.81%; $\xi^2_{(4)} = 20.34$; $p < 0.05$). There were differences in this sample in terms of the number of members confined in the same home as the caregiver, where the majority were three members excluding the caregiver (33.87%; $\xi^2_{(3)} = 19.34$; $p < 0.05$) and the home where the whole family lived confined during this period of COVID-19 preventive confinement was of a medium size (between 60 and 99 m²) (26.13%; $\xi^2_{(3)} = 7.11$; $p > 0.05$). All these results are reflected in [Table 1](#).

Table 1. Description of socio-demographic data of the sample.

	<i>n</i> (%)	ξ^2	d.f.	Phi
Gender		28.26**	1	0.62
Women	266 (85.81)			
Men	44 (14.19)			
Level of education completed		2.19 ^{ns}	3	0.44
None	36 (11.61)			
Secondary education	69 (22.26)			
Bachelors' degree/vocational training	117 (37.74)			
Post-graduate qualification	88 (28.39)			
Employment situation		11.26 ^{ns}	3	0.33
Employed	121 (39.03)			
Self-employed	77 (24.84)			
Retired	39 (12.58)			
Unemployed/ERTE/ERE	73 (23.55)			
Family member's type of dementia		19.46 ^{ns}	4	0.57
Alzheimer	82 (26.45)			
Senile	88 (28.39)			
Parkinson	67 (21.61)			
Vascular	63 (20.32)			
Others	10 (3.23)			
Time since diagnosis of dementia		20.34*	4	0.65
Less than 1 year	12 (3.87)			
Between 1 and 4 years	173 (55.81)			
Between 5 and 9 years	107 (34.52)			
10 years or more	18 (5.80)			
Number of members confined to the same dwelling		19.34**	3	0.05
1	32 (10.32)			
2	75 (24.20)			
3	105 (33.87)			
4 or more	98 (31.61)			
Type of dwelling		7.11 ^{ns}	3	0.19
Small flat (<59 m ²)	53 (17.10)			
Medium flat (60–99 m ²)	81 (26.13)			
Large flat (>100 m ²)	79 (25.48)			
House (>100 m ²)	97 (31.29)			
	310 (100)			

ξ^2 = Chi-square; * = $p < 0.05$; ** = $p < 0.01$; ns = not significant; d.f. = degrees of freedom; Phi = effect size.

Descriptive analyses and the comparison of means

The results of the descriptive analyses and the comparison of means for one sample (t) showed that there were differences between the highest possible score and the score in the sample of all the protective variables, especially for well-being ($t_{(309)} = 143.22$; $p < 0.001$), self-efficacy ($t_{(309)} = 218.25$; $p < 0.001$), coping strategies ($t_{(309)} = 230.21$; $p < 0.001$) and resilience ($t_{(309)} = 149.86$; $p < 0.001$) (Table 2). The t-test measures the difference between a sample mean in a given variable and a hypothetical value in the same sample, which in this case was the maximum possible score for that variable.

Correlations between protective psychosocial variables

The strongest significant positive correlations were between well-being and resilience ($r = 0.92$; $p < 0.01$), between well-being and coping strategies (see Table 3) ($r = 0.85$; $p < 0.01$) and between resilience and self-efficacy ($r = 0.78$; $p < 0.01$). The strongest significant inverse relationships were between well-being and difficulties in emotional regulation ($\rho = -.78$; $p < 0.01$) and between resilience and difficulties in emotional regulation ($\rho = -.88$; $p < 0.01$). Interestingly, not all relationships were significant ($p < 0.01$); for example, the relationship between well-being and self-compassion was not significant ($\rho = 0.15$; $p > 0.01$).

Predicted higher levels of well-being

Hierarchical multiple regression was used to assess which socio-demographic and psychosocial variables predicted a high level of well-being in this sample of family caregivers of people with dementia exposed to a situation of mandatory household confinement due to COVID-19. Prior to the regression, goodness of fit indices confirmed that the assumptions of non-multicollinearity held (<3 , VIF= 1.00 and 1.77; Kleinbaum et al., 1988) and the tolerance values (1-0.1) were between 0.98 and 1 (Lomax & Hahs-Vaughn, 2012). Additionally, there was no autocorrelation in any of the psychosocial or socio-demographic variables, so the assumption of independence of errors (Durbin-Watson = 1-3) was fulfilled with a coefficient close to two (D-W=1.95) (Yoo et al., 2014). Some

Table 2. Descriptive statistics and comparison of means for one sample for all psychosocial protective variables.

	M(SD)	Min./Max	A (SE = 0.32)	C (SE = 0.63)	K-S	T	95% CI LL/UL
WHO-5	27.85 (18.63)	12-84	-0.01	-0.98	0.06*	143.22**	26.93/29.56
GS-ES	29.31 (4.70)	20-40	-0.07	-0.35	0.20*	218.25**	25.55/26.19
ICS	71.78 (15.37)	42-110	0.47	0.20	0.36*	230.31**	19.55/20.29
DEERS-E	63.76 (16.50)	30-109	1.03	1.17	0.79 ^{ns}	98.17*	29.42/31.18
SCS-SF	15.22 (3.67)	12-48	1.26	1.67	0.89 ^{ns}	76.19*	12.15/16.28
RS-14	45.11 (12.03)	46-97	-0.48	-0.25	0.43*	149.86**	38.08/39.19

WHO-5 = Well Being Index; GS-ES = General Self-efficacy Scale; ICS = Inventory of Coping Strategies; DEERS-E = Difficulties in Emotion Regulation Scale; SCS-SF = Self-Compassion Scale-short form; RS-14 = Resilience Scale 14 items; M = Mean; SD = Standard deviation; Min = Minimum; Max = maximum; A = Asymmetry; C = Kurtosis; SE = Standard error; K-S=Kolmogorov-smirnov; t = Student-t test for comparison of means for one sample; * $p < 0.05$; ** $p < 0.01$; ns = not significant; 95% CI = confidence intervals; L.L. = lower limit; U.L.= upper limit.

Table 3. Correlations between all protective psychosocial variables.

	WHO-5	GS-ES	ICS	DERS-E	SCS-SF	RS-14
WHO-5	1	0.39**	0.85**	-0.78**	0.15	0.92**
GS-ES	0.39**	1	0.48**	-0.46**	0.31*	0.78**
ICS	0.85**	0.48**	1	-0.13	0.29*	0.65**
DERS-E	-0.78**	-0.46**	-0.13**	1	-0.47*	-0.88**
SCS-SF	0.15	0.31*	0.29*	-0.47*	1	0.59*
RS-14	0.92**	0.78**	0.65**	-0.88**	0.59*	1

WHO-5 = Well Being Index; GS-ES = General Self-efficacy Scale; ICS = Inventory of Coping Strategies; DERS-E = Difficulties in Emotion Regulation Scale in spanish; SCS-SF = Self-Compassion Scale-short form; RS-14 = Resilience Scale 14 items; * $p < 0.05$; ** $p < 0.01$; ns = not significant.

sociodemographic and psychosocial variables explained a greater degree of well-being, with the proposed model (set of independent variables) being significant and explaining 89.10% of the well-being in this sample ($R^2 = 0.891$; $\Delta R^2 = 0.981$; $F_{(7,309)} = 1246.10$; $p < 0.01$) (Table 4). The final proposed model (model 4) would indicate the variables that predict higher levels of well-being. Specifically, the results of Table 4, referring to socio-demographic variables, show that being self-employed (employment situation) ($\beta = 0.17$; CI (95%) = 0.11-0.34; $p < 0.01$), caring for a relative with Alzheimer's type dementia ($\beta = 0.19$; CI (95%) = 0.1-0.29; $p < 0.01$), with a recent diagnosis (less than 1 year) ($\beta = 0.44$; CI (95%) = 0.31-0.92; $p < 0.01$) and living in a house (>100 m²) ($\beta = 0.37$; CI (95%) = 0.23-0.46; $p < 0.01$) were the sociodemographic variables that would best explain a higher level of well-being. As for the psychosocial variables, the data indicate that self-efficacy ($\beta = 1.22$; CI (95%) = 1.02-1.26; $p < 0.01$), along with coping strategies (problem-solving $\beta = 0.67$; CI (95%) = 0.62-0.69; $p < 0.01$ and social support $\beta = 1.27$; CI (95%) = 1.21-1.29; $p < 0.01$), and especially resilience ($\beta = 1.34$; CI (95%) = 1.30-1.37; $p < 0.01$) were the most predictive variables for perceived well-being in this sample. In addition, this predictive model had high statistical power ($1-\beta = 0.99$) and a large effect size ($f^2 = 20.7$) (McDonald, 2014), which allows us to state that the results are clinically relevant in predicting the well-being of caregivers in extreme adverse situations (caring for a person with dementia confined to the home due to COVID-19).

Discussion

Caring for a relative with dementia often entails a high overload and significant psychosocial risks, but even more so when there is confinement to their home due to a global pandemic (Altieri & Santangelo, 2021). COVID-19 has increased the strain on family caregivers of people with dementia due to the fear of infection (Volkshilfe, 2020). This situation has been exacerbated by the care and education of other dependents at home such as children with online classes. The well-being of carers is very important, so much so that it has been shown that a decrease in carer well-being means that the person being cared for may suffer more health crises (European Commission, 2020). It is important to ensure that family caregivers have a good capacity for resilience and well-being, to prevent crises and to foster appropriate care environments.

Psychological disorders resulting from the COVID-19 pandemic in the general population have been extensively studied (Groarke et al., 2020; Robles-Bello et al., 2020), including specific populations such as university students (Paredes et al. 2021). However, few studies have measured protective variables that may facilitate successful adaptation to this situation of COVID-19

Table 4. Predictive models of well-being according to protective socio-demographic and psychosocial variables.

	R ²	ΔR ²	F	B	SE.	T	C.I. (95%) for β			1-β	f ²
							B	L.L.	U.L.		
Model 1	0.101	0.101	5.51**							0.12	0.28
Gender				0.12	0.08	0.28 ^{ns}	0.32	0.12	1.91		
Age				0.23	0.26	0.85 ^{ns}	0.71	0.04	1.32		
Employment situation				0.67	0.81	3.18*	0.12	0.11	0.81		
Type of dementia				1.37	0.31	1.22*	0.45	0.32	0.51		
Time for diagnosis dementia				0.49	0.83	1.37*	0.62	0.41	0.76		
Type of dwelling				1.22	0.42	4.22*	0.21	0.19	0.34		
Model 2	0.273	0.212	6.22**							0.29	1.12
Self-efficacy				1.56	0.91	3.18*	0.10	0.12	0.18		
Coping strategies				1.36	0.79	4.45*	0.33	0.67	0.91		
Diff. in emotion regulation				-1.89	0.19	-2.34*	-2.27	1.81	2.37		
Self-compassion				3.02	0.11	-0.73 ^{ns}	-0.12	-0.05	3.51		
Resilience				2.67	0.34	6.35*	3.26	3.01	3.29		
Model 3	0.452	0.484	122.40**							0.81	9.32
Employment situation				0.43	0.04	11.22*	0.56	0.23	0.66		
Type of dementia				0.54	0.48	9.13*	0.27	0.15	0.29		
Time since dementia diagnosis				0.22	0.91	6.78*	0.12	0.10	0.23		
Type of dwelling				0.28	0.47	29.34**	0.27	0.11	0.29		
Self-efficacy				0.12	0.19	18.16**	0.31	0.27	0.42		
Coping strategies				0.39	0.22	16.45*	0.32	0.28	0.41		
Diff. in emotion regulation				-0.93	0.28	-4.46*	-0.27	-0.21	0.29		
Resilience				1.96	0.23	56.45*	1.39	4.01	4.41		
Model 4	0.891	0.981	1246.10**							0.99	20.7
Employment (self-employed)				0.29	0.31	29.12**	0.17	0.11	0.34		
Type of dementia (Alzheimer)				0.23	0.76	84.43**	1.19	1.01	1.29		
Time since dementia diagnosis (1 year)				0.81	0.69	56.28**	0.44	0.31	0.92		
Type of dwelling (house (>100 m ²))				0.29	0.94	81.94**	0.97	0.23	0.98		
Self-efficacy				0.45	0.87	59.36**	1.22	1.02	1.26		

(continued)

Table 4. (continued)

	R^2	ΔR^2	F	B	SE.	T	C.I. (95%) for β				
							B	L.L.	U.L.	1- β	f^2
Coping strategies (problem-solving)				0.73	0.38	12.81**	0.67	0.62	0.69		
Coping strategies (social support)				0.69	0.45	0.65.51**	1.27	1.21	1.29		
Resilience				0.82	0.43	79.63**	1.34	1.30	1.37		

R^2 = sDetermination coefficient; ΔR^2 = Improvement of the coefficient of determination; F = contrast statistic (ANOVA); * $p < 0.05$ ** $p < 0.01$; ns = not significant; B = non-standardised coefficient; SE = standard error; t = predictive variable contrast statistic; β = result of the regression or beta equation; C.I. = confidence intervals; L.L. = lower limit; U.L. = upper limit; 1- β = statistical power; f^2 = effect size.

pandemic-enforced isolation in family caregivers of people with dementia, focussing exclusively on risk factors. Our results support the hypothesis that this sample presents moderate levels of well-being, and we identified factors that contribute to predicting the capacity for flexible adaptation to this situation, which influences perceived well-being. These protective variables that modulate well-being can help associations and non-governmental organisations to understand what they need to enhance in this population in order to minimise the impact of adverse situations that cause traditional negative outcomes such as anxiety, depression or burden.

This study shows that family caregivers in this situation can have adequate levels of resilience. In addition, it is noted that no differences due to gender or age, unlike previous studies (Gaugler et al., 2000; Joling et al., 2016), although those studies were not looking at mandatory confinement. However, in this respect the results are inconclusive as the majority of our sample was female, which is an important limitation. In both the study by Gaugler et al. (2000) and Joling et al. (2016), they found that being heavily involved in caregiving threatened the resilience of caregivers. In addition, Gaugler found a positive correlation between being a female caregiver and resilience, which may be due to the conceptualisation of high resilience used by these authors (low levels of burden despite the high demand for care by the dependent person).

On the other hand, previous review studies have shown that there seem to be psychosocial variables that modulate the level of resilience in caregivers of people with dementia (Harmell et al., 2011). In the current study, hierarchical regression analysis showed that the significant psychosocial variables with the highest predictive power on well-being were social support (Zhong et al., 2020) and self-efficacy (Sheth et al., 2020). Self-efficacy has an important relationship with resilience, which is in line with Kunzler et al. (2018), who argued that self-efficacy helps reduce negative thoughts, and encourages increased positive affect and mental health, as well as acting as a resilience factor in the face of various adversities. Hence, these results lead us to consider self-efficacy as a variable to work on and enhance in work with family caregivers. Saria et al. (2017) noted that active coping strategies are related to greater resilience in family caregivers. Active coping strategies include problem-solving, cognitive restructuring and emotional expression. Social support is another relevant protective factor which has also occasionally been studied as a form of coping strategy. Different studies have noted that positive communication between family members and relatives encourages resilience in the family context, fosters a social network of trust and security,

and increases caregiver self-efficacy (Cerquera & Pabón, 2016; Palacio et al., 2019). In line with this, our study has shown that the principal coping strategies that correlate with resilience are problem-solving and social support. Therefore, working with caregivers to improve problem-solving strategies and social support would be one way to enhance resilience in this population. With regard to caregivers' perceptions of well-being, this has been found to be particularly related to the strategy of cognitive restructuring and to social support. In conclusion, social support is fundamental because it enhances both resilience and well-being. This agrees with the findings of the literature review (Fernández & Crespo, 2011; Waligora et al., 2018). Considering these results, it would be advisable to create places to encourage both family respite and association with other family caregivers, where peer support networks can be established to promote protective variables such as resilience.

In terms of sociodemographic variables, housing size and dementia type were the most predictive (Kovaleva et al., 2018). This is because the dementia type can lead to greater cognitive impairment and this in turn modulates greater caregiving burnout, as other studies have shown (Van Bruggen et al., 2016). In addition, better living conditions improve the well-being of family caregivers, and in turn promote more opportunities and space for the caregiver to rest.

There are some limitations to this study. On the one hand, the large sample of women may mean a gender conditioning factor in the results. The majority of family caregivers are women, and this is a variable that should be balanced in future studies. It is also important to consider the inherent limitations of using self-reporting as an outcome measure, and this could lead to difficulties in obtaining results, which would negatively affect the generalisability to the population of family caregivers of people with dementia. Finally, another limitation refers to the fact that only those people with information technology access could participate.

Conclusions

All these results suggest that well-being and enhancing the variables associated with it (resilience, social support and self-efficacy) may have a protective effect on the psychological state of caregivers in the COVID-19 pandemic situation. It can also help to identify high-risk caregivers, guide them on how to improve problem management, acquire coping strategies and life skills, and reduce their emotional burdens. These aspects should be considered for the development of future training and respite programmes, supported by public social services.

Author contributions

Both authors contribute equally to all the research and the article.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethical approval/Patient consent

All procedures performed involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable

ethical standards. Informed consent was obtained from all individual participants included in the study. A favourable report was obtained from the ethics committee of the University of Jaen (Spain).

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