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Older People's Personal Strengths During the First Wave of the COVID-19 Pandemic

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Abstract

Background: Although several biopsychosocial variables could play an important role as risk and protective factors of mental health, COVID-19 outbreak studies among older people have seldom focused on protective factors. The purpose of this study was to analyze how older adults' personal strengths predict their well-being and emotional distress. **Method:** 783 Spanish people aged 60 and over completed a survey that included sociodemographic characteristics, perceived health, direct or indirect infection by COVID-19, resilience, gratitude, experiential avoidance, family functioning, emotional distress and well-being. Structural Equation Modelling (SEM) was performed. SEM invariance was also used to analyze whether there were differences between older people affected by COVID-19 and those not affected. **Results:** The best model supports the mediation effect of resilience, gratitude and experiential avoidance on older people's well-being and emotional distress. Whether participants or relatives had been infected by the virus or not did not affect the results. **Conclusions:** Variables used as criteria in older adults are related to well-being and emotional distress, but only indirectly and mediated by resilience, gratitude and experiential avoidance. This confirms the importance of considering psychological strengths in older people's well-being. Interventions focused on these personal resources should be considered.

Keywords: COVID; strengths; protective factors; lockdown; aging; well-being;structural equation modelling.

Resumen

Fortalezas Personales en Personas Mayores Durante la Primera Ola de la Pandemia por COVID-19. **Antecedentes:** las variables biopsicosociales juegan un papel importante como factores de riesgo o protectores de la salud mental, pero los estudios sobre el impacto del COVID-19 en las personas mayores raramente se han centrado en factores protectores. El objetivo del estudio es analizar cómo fortalezas personales de las personas mayores predicen su bienestar psicológico y malestar emocional. **Método:** 783 personas españolas mayores de 60 años completaron el protocolo de evaluación que incluía características sociodemográficas, salud percibida, afectación directa o indirecta por COVID, resiliencia, gratitud, evitación experiencial, funcionamiento familiar, malestar emocional y bienestar psicológico. Se utilizó un modelo de ecuaciones estructurales y su invarianza para analizar si existían diferencias entre personas afectadas o no por COVID-19. **Resultados:** se ha encontrado un modelo que apoya el efecto mediador de la resiliencia, la gratitud y la evitación experiencial sobre el bienestar psicológico y el malestar emocional. Los resultados se han mantenido independientemente de la afectación por COVID. **Conclusiones:** las variables utilizadas como criterio en personas mayores están relacionadas con el bienestar psicológico y el malestar emocional, pero indirectamente y mediadas por fortalezas personales. Esto confirma la importancia de considerar las fortalezas en el bienestar de las personas mayores. Las intervenciones centradas en recursos personales deben ser consideradas.

Palabras clave: COVID; fortalezas; factores protectores; confinamiento; envejecimiento; bienestar; modelo de ecuaciones estructurales.

Stressful life events are episodes that require people to make major efforts to adapt their existing routines. The COVID-19 outbreak can be considered as an uncontrollable stressful life event (Zhang et al., 2020). According to the first waves of epidemiological studies, this virus causes harsher symptoms, more severe consequences, and has a faster progression and a higher risk of mortality than other similar viruses (Remuzzi & Remuzzi, 2020).

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Lockdown measures have been taken to contain the spread of the virus. Spain is one of the Western countries that has been most affected by the virus and has also imposed one of the most restrictive confinement measures (Remuzzi & Remuzzi, 2020). Although these measures were necessary, they caused unprecedented disruption of daily life with severe impacts on people´s health and well-being, especially because the duration of the current situation remains unknown. Evidence from other health crises, such as the SARS epidemic, showed that restricting movement affected people's welfare in a complex way (Zhang et al., 2020).

Social isolation raises the probability of cardiovascular, autoimmune, neurocognitive, and mental health problems such as depression and anxiety (Sutin et al., 2018). However, the lockdown does not affect everyone equally. Several biopsychosocial variables

could play an important role as risk and protective factors (López et al., 2020). Chronological age is one of the most repeatedly noted risk factors in health-related issues. COVID-19 has been also described as a disease of aging (Remuzzi & Remuzzi, 2020). This approach is based on the dominant paradigm of aging decline, traditionally associated with physical and psychological illness, and dependency. Nevertheless, most western older people stay healthy, free of dependence, with high levels of well-being and quality of life (Sexton et al., 2013). These outcomes shed light on an alternative viewpoint, a strengths-based approach (López et al., 2020).

Recent studies are consistent with this perspective. For example, Losada-Baltar, Jiménez-Gonzalo et al. (2021) found an inverse relationship between chronological age and loneliness and psychological distress during COVID-19 lockdown. Justo-Alonso et al. (2020) analyzed the role played by age in the psychological response in the early stages of the pandemic finding better mental health and lower psychological impact in older people compared with other age groups.

Well-being is a complex construct defined as 'the striving for perfection that represents the realization of one's true potential' (Ryff, 1989, p. 100). Deci and Ryan (2008) distinguish between two complementary approaches: hedonic and eudaimonic well-being. The hedonic or subjective well-being includes cognitive (life satisfaction) and affective (positive and negative moods and emotions) aspects of well-being. The eudaimonic or psychological well-being focuses on characteristics linked with psychological self-fulfillment (Deci & Ryan, 2008). While the study of subjective well-being during this pandemic situation has been rather studied, the impact over psychological well-being has received less attention (Paleari et al., 2021), especially in the older population. Nevertheless, only one study has tested the protective role of eudaimonic well-being on physical, psychological, social health and longevity in adverse circumstances, and COVID-19 situation (Recchi et al., 2020).

According to the biopsychosocial model, well-being is determined by physical, psychological and social variables. Regarding physical characteristics, the relationship between age and psychological well-being is complex and contradictory. Whereas Tomás et al. (2012) found that when facing life challenges, older adults can find a sense of purpose and develop one's potential showing personal growth, Springer et al. (2011) described lower scores on personal growth and purpose in life in older people. However, there is enormous interpersonal and intrapersonal variability among them. There is a substantial number of older people scoring above the average for their age group in these constructs which, in turn, is related to better health and longevity (Ryff, 2018). There are also recent articles that point out the impact of COVID-19 over perceived health in older adults and the relationship between well-being and perceived health in this population group during the pandemic (Jiang, 2020).

Similarly, the association between sex and well-being has been inconsistent. Whereas some research has shown women to score higher than men, especially in positive relations, personal growth, life purpose and autonomy (García-Alandete et al., 2013). Other studies found that men scored higher environmental mastery and self-acceptance (Visani et al., 2011).

Concerning psychological factors, although experiencing adverse situations may provoke suffering, it does not always result in negative consequences. Psychological strengths play an important role in mediating between stressful events and well-being. Some research has found a relationship between suffering and positive meaning and gratitude (Sacco et al., 2014). Gratitude is firmly associated with well-being, including personal growth, life purpose and self-acceptance (Wood et al., 2010). And a recent study has confirmed the significant positive impact of gratitude during the COVID-19, finding lower levels of stress and anxiety related to COVID-19 when participants felt more gratitude than usual (Jiang, 2020).

Several studies have also found a relationship between life purpose and increased use of preventive health care practices, decreased the probability of hospitalization and mortality in older people (Boyle et al., 2009).

Adaptative coping strategies, like acceptance, can also help older people to adapt gradually to daily challenges and are critical to recovering from stressful events. A relationship has been found between the acceptance process and affect. Whereas acceptance increased positive affect, experiential avoidance was associated with negative affect and anxiety (Pierson et al., 2019). Resilience is another psychological variable related to eudaimonic well-being and has proved to be a key variable when facing difficult life events (Tomás et al., 2012). It is as a multidimensional construct including mental (adaptative coping styles, gratitude, mental health, positive emotions/regulation), social (community involvement, contact with family and friends, sense of purpose, social support and connectedness, strong/positive relationships) and physical components (functional independence, mobility, physical health) factors (MacLeod et al., 2016).

Finally, aging involves social changes, turning the family, frequently, in the main source of social and emotional support for older people. Thus, well-being is related to social factors, such as family functioning. In fact, a relationship between family functioning and psychological (depression and resilience) and physical health has been found (Lu et al., 2017). Thus, well-being is related to a wide range of positive physical (health status), psychological (resilience, gratitude, acceptance, lower emotional distress), and social factors (social support) outcomes (Cresswell-Smith et al., 2019). What is more, the advantages of improving psychological well-being among older adults have been pointed out extensively because it might decrease emotional distress by reducing symptoms of depression and anxiety (Friedman et al., 2017).

To our knowledge, the existing studies about aging and COVID-19 are mainly focused on older people's negative consequences and risk factors, and so far, none have taken into account a strengths-based approach. To remedy this knowledge gap, the purpose of this study is to analyze how older people's strengths predict their well-being during an the COVID-19 outbreak, using Structural Equation Modelling (SEM). Our study is based on Lazarus and Folkman (1984) stress model which proposes that the assessment or perception of a stressful situation, such as the COVID-19 pandemic, and the use of coping strategies play a significant role on the consequences of being exposed to stressful situations. According to these authors, how people cope with stressful situations influences their mental health (e.g. levels of depression, anxiety, well-being). And how people cope and are affected by stressful situations can vary depending on how they value the stressful situation (as more or less annoying) and on the resources available to conduct effective coping (e.g. personal strengths). We also tested mean differences of the constructs of the model between different levels of being affected by COVID-19

(participants who had a family member affected, participants who were affected themselves, participants who met both requirements, and participants who were not directly affected). Further, we analyzed potential differences among older adults who were directly or indirectly affected by COVID-19 testing the invariance of the SEM. We present, therefore, a shift in perspective, redirecting the focus away from "age as a loss" to focusing on the role played by protective factors in older people's well-being. Based on the framework we have outlined; we proposed a model (Figure 1) in which we hypothesize the following:

a) Sociodemographic characteristics (age and sex), family functioning and perceived health will be associated with psychological well-being and emotional distress mediated positively by strengths (resilience, gratitude) and negatively by experiential avoidance.
b) This model will apply to both participants directly affected by COVID-19 and those who were indirectly affected.

Method

Participants

We undertook a cross-sectional study of community-dwelling older adults living in Spain during the COVID-19 lockdown. 816 non-institutionalized people aged 60 and over from different parts of Spain participated. However, thirty-three individuals were removed who did not meet the inclusion criteria: 26 were under 60 years old, 7 did not specify their age. Therefore, 783 older people met the inclusion criteria. The data presented were gathered from Sunday 5th of April to Monday 13th of April during the first stage of the lockdown. Spain was one of the most affected countries at that time with a high prevalence rate and more restrictive measures were imposed than in other countries. In this stage of the Spanish lockdown, non-essential workers were ordered to remain at home and people were only allowed to leave their homes to buy necessities and attend medical appointments.

The mean age was 68.20 years old (SD = 5.75; range 60-95). Most participants were women (60.6%), were living in their own home (92.60%) with their spouse (63.60%) and reported a good (43.80%) or normal (33.70%) perceived health. Moreover, 212 participants reported being directly or indirectly affected by COVID-19 (see the *Procedure* section). Table 1 presents the main sociodemographic characteristics of the sample of this study.

Instruments

We collected the following sociodemographic characteristics: age, sex, living arrangements (grouped into three categories: family household, private household and other), and perceived health (subjective health on a scale from 0 "very poor" to 4 "very good"). Also, participants answered different dichotomous questions (yes/no) for direct experience of COVID-19 (i.e., "Have you had symptoms of COVID-19?" and "Have you been hospitalized for COVID-19?") and indirect experiences with coronavirus (i.e., "Has a loved one hospitalized by COVID-19?" and "Have you lost a loved one from COVID-19?").

The following measures were used:

- *Brief Resilient Coping Scale* (Sinclair & Wallston, 2004). This 4-item scale was used to measure resilience. Items are rated on a 5-point Likert scale ranging from 1 (not at all) to 5 (a lot) in which the person was asked to indicate the degree the statement reflected the way he or she usually reacts. The Spanish version (Tomás et al., 2012) showed good reliability in our sample (Cronbach's α=.79; McDonald's ω=.79).

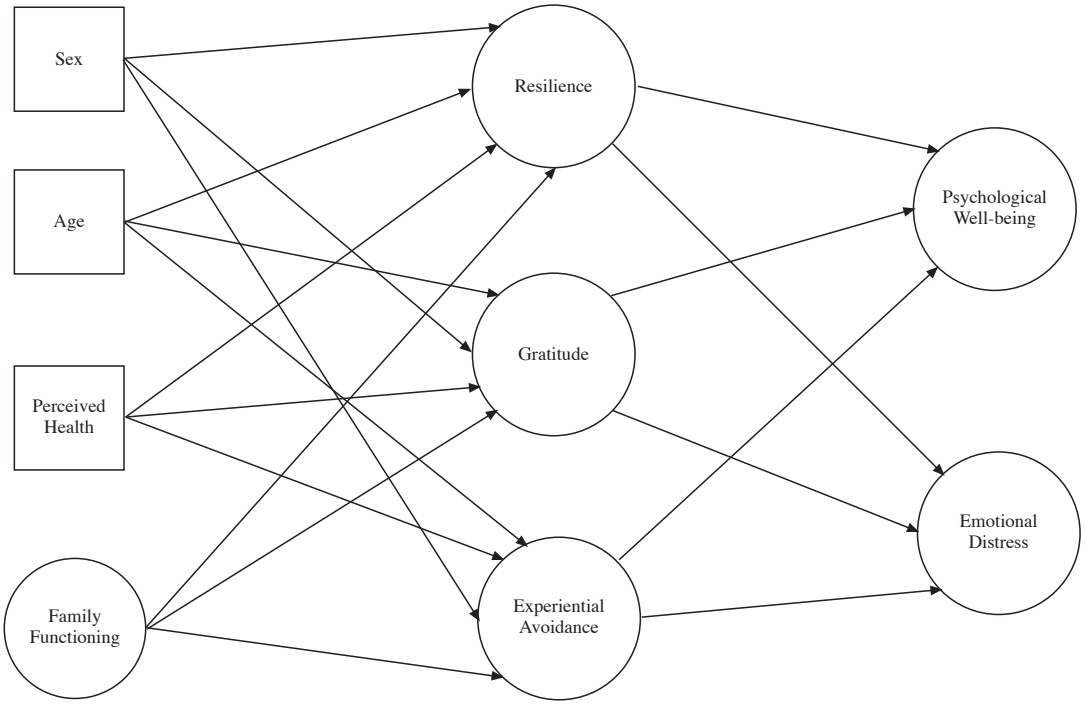

Figure 1. Structural part of the hypothetical Structural Equation Model. The FRAG Model (Family functioning, Resilence, Acceptance and Gratitude)

Table 1
Sociodemographic characteristics of the sample

	Whole sample	Affected by COVID-19	Not-affected by COVID-19
Variable	**M (SD) / Percentage**	**M (SD) / Percentage**	**M (SD) / Percentage**
Age	68.20 (5.75)	67.51 (5.13)	68.45 (5.98)
Sex			
Women	60.70%	63.68%	59.54%
Men	39.30%	36.32%	40.46%
Marital status			
Married or living with a partner	63.60%	61.79%	64.27%
Divorced or separated	12.60%	08.96%	14.01%
Single	12.10%	16.98%	10.33%
Widow/er	11.70%	12.27%	11.39%
Living arrangement			
Family household	04.50%	04.72%	04.38%
Private household	92.60%	90.57%	93.34%
Other	02.90%	04.71%	02.28%
Perceived health			
Very Good	16.10%	13.21%	17.16%
Good	43.80%	49.06%	41.86%
Normal	33.70%	30.19%	35.03%
Poor	06.30%	07.54%	05.78%
Very poor	00.10%	–	00.17%

Note: N=783. *M* = Mean. *SD* = Standard Deviation

- *Gratitude subscale of the Values in Action Inventory of Strengths-Short Form* (Littman-Ovadia, 2015). This 5-item scale was used to measure gratitude, scored on 5-point Likert scale response options ranging from 1 (very different to me) to 5 (very similar to me). The Spanish version (Azañedo et al., 2017) showed good reliability in our sample (Cronbach's α=.78; McDonald's ω=.82).
- *The Acceptance and Action Questionnaire - II (AAQ-II)* (Bond et al., 2011). This 7-item instrument was used to measure experiential avoidance and psychological inflexibility. Participants had to indicate the degree to which a series of thoughts and feelings described him or her, scoring from 1 (very inadequate to describe me) to 7 (very adequate). The Spanish version (Ruiz et al., 2013) was used and showed good reliability in our sample (Cronbach's α=.89; McDonald's ω=.92).
- *The Family APGAR* (Smilkstein, 1978). This 5-item scale was used to measure family functioning (adaptability, partnership, growth, affection and resolve). Items were scored with a 3-point Likert scale ranging from 1 (hardly ever) to 3 (usually). The Spanish version (Bellón et al., 1996) showed good reliability in our sample (Cronbach's α=.84; McDonald's ω=.88).
- *Psychological Well-Being Scales* (Ryff, 1989). This instrument was used to measure psychological well-being. Specifically, we used the subscales personal growth and purpose in life (7 and 6 items, respectively). Both scales were scored on a 7-point Likert scale ranging from 1 (never) to 7 (always). The Spanish version (Díaz et al., 2006) showed good reliability for personal growth (Cronbach's α=.69; McDonald's ω=.81) and purpose in life (Cronbach's α=.81; McDonald's ω=.89).
- *Hospital Anxiety and Depression Scale* (Zigmond & Snaith, 1983). This 14-item scale is composed of two different subscales that measure anxiety and depression composed of 7 items each, with 4 response options. They were used to measure emotional distress. The Spanish version (Terol-Cantero et al., 2015) showed good reliability for anxiety (Cronbach's α=.82; McDonald's ω=.87) and depression (Cronbach's α=.72; McDonald's ω=.79).

Procedure

The study was first approved by the CEU San Pablo University Ethics Committee (reference 436/20/26). Informed consent was obtained from all respondents and confidentiality was explicitly guaranteed. They were also informed that the study was anonymous, and they had the right to withdraw from the study at any time. We developed a web-based survey with Microsoft Forms and we distributed it through older adults' associations and organizations from several backgrounds and social networks via a non-probability snowball sampling strategy focused on recruiting people age 60 or above living in Spain during the COVID-19 outbreak. The validity and reliability of internet research for subjective well-being surveys have been demonstrated to be comparable to those of the paper-based versions (Howell et al., 2010).

All participants had to reply whether they agreed to participate in this research before filling out the survey. Participation was voluntary, and no reward was offered for the collaboration.

Data Analysis

We conducted different statistical analyses to validate the SEM. First, we tested the measurement models of the scales and subscales

that compound the structural model using Confirmatory Factor Analysis (CFA). This is a good practice to validate the measurement model of SEM (Byrne, 2012). Second, we analyzed potential mean differences in the constructs included in the model for groups of participants that were differentially affected by COVID-19 using univariate ANOVAs due to the small sample sizes of the categories. We analyzed the mean differences for these groups using the factor scores of measurement models (McNeish & Wolf, 2020). Third, we tested the full SEM and explored its parameters. Fourth, we tested if the model was invariant for people affected and not affected by COVID-19 (COVID-19 affected vs. not COVID-19 affected). The sample size guaranteed appropriate statistical power for the SEM (Schreiber et al., 2006). Both the CFAs and the full SEM were fitted using *lavaan* package in R software version 3.6.1. Given that the items of the CFA presented a high kurtosis/skewness and the different nature of the variables included in the SEM, the *Weighted Least Square Mean and (WLSMV)* adjusted estimator was used since it is a robust estimator and does not assume normally distributed variables (Muthén & Muthén, 2015). We used usual cut-off points to assess model fit (CFI≥.95, TLI≥.95, RMSEA≤.06, SRMR≤.08) (Hu & Bentler, 1999) and used a robust likelihood ratio test for model comparisons (Satorra, 2000).

Results

Descriptive analyses

The sample presented a mean family functioning of 8.76 (*SD*=1.83) which means good family functioning. A mean resilience of 15.78 (*SD*=3.27) and a mean psychological well-being of 56.01 (*SD*=7.53) were found indicating medium resilient coping and medium psychological well-being. Mean gratitude was 22.09 (*SD*=2.95) which means an adequate level for this strength. Mean experiential avoidance was 19.81 (*SD*=6.74) and mean emotional distress was 3.62 (*SD*=2.71) which indicates an adequate acceptance and absence of emotional distress. This section was calculated using the sum scores of the constructs, but the rest of the analyses were performed with factor scores.

Measurement Models

To validate later results, we tested the measurement models of the latent factors of the SEM (Byrne, 2012). Table 2 presents the model fit of unidimensional or second-order measurement models for each of the latent variables of the hypothetical SEM. These results were obtained after adding a covariance parameter in resilience (items one and three) and experiential avoidance (items two and three) due to their related contents to increase their fit. Whilst the model fit was adequate for all the latent factors, the measurement model of psychological well-being presented some fit problems. In this case, CFI and TLI showed that the data is highly correlated, but RMSEA and RMSR showed that the proposed factor structures present large residuals. Following simulation studies results (e.g., Shi et al., 2019), different strategies were taken to improve the model fit of psychological well-being (different factor structures were tested, covariance parameters between items were added, lower-quality items were removed) but none of the solutions was satisfactory. Guided by theoretical criteria about the contents of the test, it was decided to maintain the second-order structure for psychological well-being despite its larger residuals in the measurement model. In fact, these residuals were significantly smaller in the final SEM.

Testing Mean Differences for Different Levels of Being Affected by COVID-19

Before analyzing the relations of the variables hypothesized in the SEM, we tested the potential mean differences of the constructs of the model. We divided the group of participants affected by COVID-19 into participants who had a family member affected by COVID-19 (*N*=148), participants who were affected themselves (*N*=35), and participants who met both requirements (*N*=29). We analyzed the differences between those groups and the group of participants who were not affected (*N*=571) using univariate ANOVAs. ANOVA results showed relevant differences for gratitude ($F(3,779)=4.833$, $p<.001$) and psychological well-being ($F(3,779)=2.163$, $p=.091$). On the contrary, no relevant differences were found for family functioning ($F(3,779)=0.558$, $p=.643$), resilience ($F(3,779)=0.680$, $p=.564$), experiential avoidance ($F(3,779)=0.860$, $p=.461$), nor emotional distress ($F(3,779)=0.553$, $p=.660$). Table 3 presents pairwise contrasts for mean differences between groups of participants that were differentially affected by COVID-19. Regarding to gratitude, participants who had a family member affected presented more gratitude than participants that were not affected and participants who were affected themselves. Also, participants who had a family member affected and were affected themselves reported more gratitude than participants who were not affected and participants who were affected themselves. Regarding to psychological well-being, participants who had a family member affected and were affected themselves present more psychological well-being than the other three groups of participants. As we analyzed the mean differences for these groups using the factor scores of the measurement models, the differences can be interpreted in a standard metric.

Table 2
Model fit for measurement models of latent variables of the SEM

Variable	Measurement model	χ^2	*df*	*p*	CFI	TLI	RMSEA [90%IC]	SRMR
Family Functioning	Unidimensional	20.16	5	<.01	.99	.99	.06 [.03-.09]	.047
Resilience	Unidimensional	3.07	1	.08	.99	.99	.05 [.00-.12]	.010
Gratitude	Unidimensional	31.45	5	<.001	.99	.99	.08 [.05-.11]	.042
Experiential Avoidance	Unidimensional	48.71	13	<.001	.99	.99	.06 [.04-.08]	.027
Emotional distress	Second-order	150.49	75	<.001	.99	.99	.04 [.03-.04]	.037
Psychological well-being	Second-order	474.40	63	<.001	.96	.95	.10 [.09-.11]	.099

Note: df = degrees of freedom. *p* = p-value of χ^2 test

Table 3
Pairwise contrasts for mean differences between groups of participants that were differentially affected by COVID-19

Variable	Tukey multiple comparisons for pairwise contrasts					
	G1-G0	G2-G0	G3-G0	G2-G1	G3-G1	G3-G2
Family Functioning	0.01 (*p*=.98)	-0.10 (*p*=.70)	-0.05 (*p*=.94)	-0.11 (*p*=.65)	-0.07 (*p*=.90)	0.04 (*p*=.98)
Resilience	0.09 (*p*=.51)	0.02 (*p*=.99)	-0.03 (*p*=.99)	-0.06 (*p*=.96)	-0.11 (*p*=.85)	-0.05 (*p*=.99)
Gratitude	0.12 (*p*=.05)	-0.12 (*p*=.56)	0.25 (*p*=.06)	-0.24 (*p*=.06)	0.12 (*p*=.65)	0.37 (*p*<.05)
Experiential Avoidance	-0.09 (*p*=.55)	-0.03 (*p*=.99)	0.10 (*p*=.87)	0.06 (*p*=.97)	0.19 (*p*=.55)	0.13 (*p*=.89)
Emotional distress	0.03 (*p*=.66)	-0.02 (*p*=.98)	0.00 (*p*=.99)	-0.05 (*p*=.81)	-0.04 (*p*=.93)	0.01 (*p*=.99)
Psychological well-being	0.05 (*p*=.84)	-0.03 (*p*=.99)	0.33 (*p*=.07)	-0.09 (*p*=.92)	0.28 (*p*=.22)	0.36 (*p*=.18)

Note: G0 = Participants who were not affected (*N*=571). G1 = Participants who had a family member affected (*N*=148). G2 = Participants who were affected themselves (*N*=35). G3 = Participants who met both requirements (*N*=29). Due to small statistical power for the sample sizes, grey shading shows the relevant differences (mean difference of standard scores higher than 0.20) to ease the interpretation of the results

Structural Equation Model

In this section, we analyzed the whole sample to test the relations of the variables of the hypothetical SEM. The SEM showed a fit to the data that could be improved ($\chi^2(1203)=5391.55$, $p<.001$, CFI=.84, TLI=.83, RMSEA [90%IC]=.067 [.065-.069], SRMR=.094). Modification indices based on χ^2 were analyzed and suggested the inclusion of a covariance parameter between emotional distress and psychological well-being variables. This modification index was theoretically acceptable (Keyes et al., 2002). Then, the modified SEM showed a good fit to the data ($\chi^2(1202)=4305.75$, $p<.001$, CFI=.97, TLI=.97, RMSEA [90%IC]=.058 [.056-.060], SRMR=.062). Figure 2 presents the structural model of the SEM.

The results of this analysis are as follows. Sex (women = 0, men = 1) was negatively related to resilience, gratitude, and experiential avoidance. Perceived health was positively related to resilience and gratitude and negatively related to experiential avoidance. Family functioning was positively related to gratitude, and negatively related to experiential avoidance. Age was not related to resilience, gratitude or experiential avoidance. Resilience and gratitude showed a positive relationship with psychological well-being, and a negative one with emotional distress. In contrast, experiential avoidance showed a negative relationship with psychological well-being and a positive one with emotional distress. The covariance parameter between psychological well-being and emotional distress was negative.

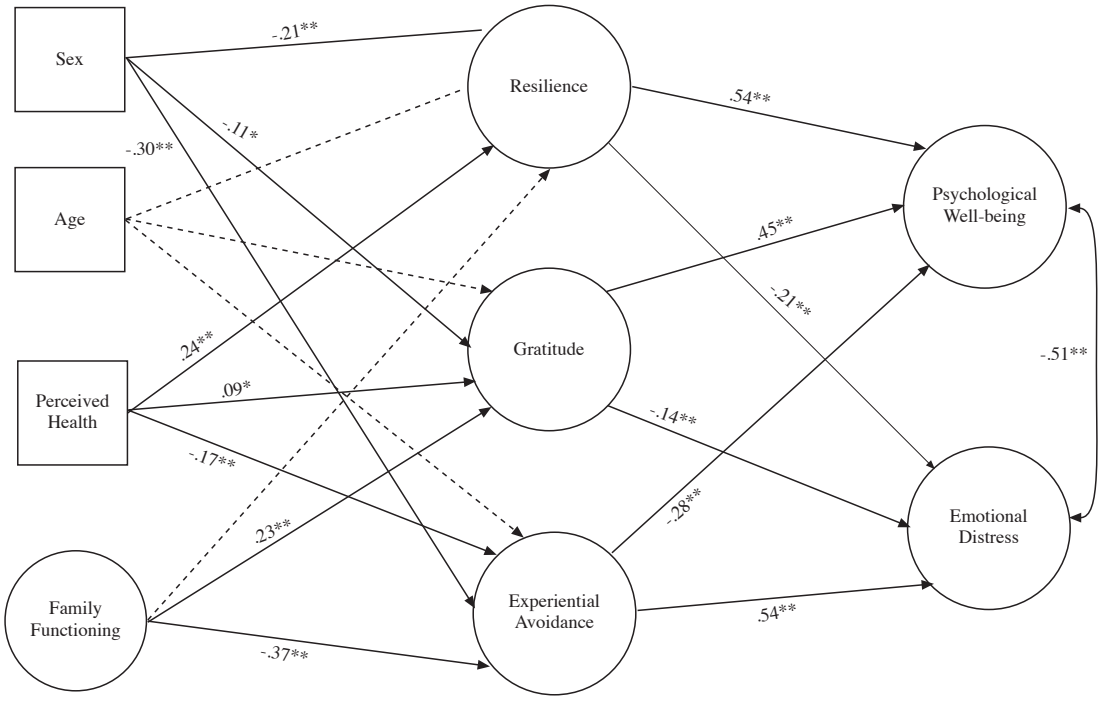

Figure 2. Structural model results of the Structural Equation Model. Note: ** = p<.01. * = p<.05. t = p<.10

Testing Invariance for Participants Affected by COVID-19

We tested the invariance of the SEM to an uncontrollable stressful life event like the COVID-19 outbreak following updated guidelines (Svetina et al., 2020). Two different groups were considered in this analysis: participants affected by COVID-19 (*N*=212) and participants who were not affected (*N*=571). Table 4 presents the invariance tests. Configural invariance test showed that the SEM structure was equivalent for both groups. Model fit to the data was good for participants affected by COVID-19 ($\chi^2(1202)=1714.39$, $p<.001$, CFI=.97, TLI=.97, RMSEA [90%IC]=.056 [.051-.060], SRMR=.086) and participants that were not affected ($\chi^2(1202)=2876.25$, $p<.001$, CFI=.97, TLI=.97, RMSEA [90%IC]=.058 [.056-.060], SRMR=.066). Metric invariance showed that the loadings (weights) of the model were equivalent for both groups. Scalar invariance showed that the mean (thresholds) of the variables was also equivalent. On the contrary, the strict invariance showed that the error variance (residual variances) of the model were different between both groups. These results show the robustness of the parameters of the SEM when comparing both groups (COVID-19 affected vs. not COVID-19 affected).

Discussion

Many studies analyzing the impact of the COVID-19 outbreak on older people are being carried out, but overall are focused on negative characteristics. However, well-being is not only the absence of emotional distress, but rather implies a positive physical, mental, and social condition (Seligman & Csikszentmihalyi, 2000). We have argued that the strengths of this population in confronting this unique situation are being neglected. For this reason, the aim of this research is twofold. Firstly, it attempts to test that sociodemographic characteristics (age and sex), family functioning and perceived health would be associated with psychological well-being and emotional distress mediated positively by strengths (resilience, gratitude) and negatively by experiential avoidance. And secondly, this model would be equivalent for both participants affected by COVID-19 and those who were not affected. Lazarus and Folkman (1984) stress model support that what determines the difference is not the stressor itself but coping strategies. Thus, people cope and are affected by stressful situations depending on their interpretation or perception and on their personal strengths.

Structural equation modelling results showed that well-being and emotional distress are negatively interrelated. This is in line with Friedman et al. (2017). They found that depression and anxiety decrease when psychological well-being was promoted. We also found a mediation effect of resilience, gratitude (both showing a positive effect) and experiential avoidance (showing a negative effect) on well-being. This is consistent with studies suggesting that higher levels of well-being and lower emotional distress could be achieved through strengths such as resilience, gratitude or adapted coping skills (MacLeod et al., 2016; Pierson et al., 2019; Wood et al., 2010). Indeed, these results also support the Strength and Vulnerability Integration model which associates aging with increased strengths and successful coping strategies to manage everyday emotional experiences (Charles, 2010).

Table 4
Invariance tests for participants affected by COVID-19 (*N*=212) and participants that were not affected (*N*=571)

Invariance	χ^2	df	*p*	Robust model comparison		
				$\Delta\chi^2$	Δdf	*p*
Configural	4355.94	2404	<.001	–	–	–
Metric	4205.54	2446	<.001	51.99	42	.14
Scalar	4366.09	2579	<.001	22.14	133	1.00
Strict	4369.15	2580	<.001	6.68	1	<.01

Note: A robust model comparison was computed for WLSMV, thus, $\Delta\chi^2$ was not computed here as the difference between the χ^2 of the models. *df* = degrees of freedom. *p* = p-value of χ^2 test

Another interesting finding is that older people who were direct or indirectly affected by COVID-19 reported more well-being than those who were not affected. This result could be explained based on the mediation effect of resilience, gratitude and acceptance. Facing adversity, trauma, or stress-related to the direct and indirect consequences of the virus might evidence a higher resilience level and better ability to manage unexpected situations, which may improve their well-being (Chen, 2020). And, in line with the literature, feeling gratitude has shown a positive impact on well-being in this pandemic situation (Jiang, 2020). It seems that these strengths are protective factors to promote well-being and help to develop an adaptative response to stressful situations.

Well-being and emotional distress appear to be outcomes of different but interrelated processes. Sex, perceived health and family functioning did not have a direct impact on them. Indeed, the effects of sex and perceived health on well-being and emotional distress were mediated by resilience, gratitude and experiential avoidance. In other words, older women with higher levels of resilience and gratitude and lower levels of experiential avoidance showed higher well-being and lower emotional distress levels in comparison with older men. Difficult situations faced by women along their lives may strengthen and empower them (Hahn et al., 2011). Moreover, people with greater levels of perceived health, resilience and gratitude showed less experiential avoidance. Experiential avoidance is considered a vulnerability variable which affects health negatively (Kashdan et al., 2006).

Family functioning is significantly associated with gratitude (positively) and experiential avoidance (negatively). It seems that ties to others (social contacts and social support) help to appreciate the positive aspects of life and promote adaptation to negative life events (Losada-Baltar, Martínez-Huertas et al., 2021).

In contrast with other studies, we did not find any significant relationships between age and the mediator variables. We could hypothesize that age is not a causal factor for the psychological variables. However, the combination of these variables affects well-being. Another explanation might be related to the most remarkable ageing characteristic: its heterogeneity. Therefore, age is not enough criterion for predicting the direct impact of the virus.

Finally, we only selected two subscales of the Ryff's Psychological well-being Scale for two reasons. These scales (personal growth and purpose in life) are considered the most relevant dimensions of psychological well-being (Ryff, 2018). And because there are contradictory results in the literature. Our results support the idea that protective factors may minimize the impact of traumatic events, such as the COVID-19 outbreak, and could lead to growth and learning opportunities to increase the ability to overcome future adversities.

There are several contributions of the present study. First, it provides empirical evidence of the importance of the assessment of well-being in older people using a broader and a holistic approach, different from the approach based on the dominant paradigm of decline in aging. Second, variables used as a criterion in older adults, such as chronological age, sex and perceived health, are related to well-being and emotional distress, but only indirectly and mediated by resilience, gratitude and experiential avoidance. Third, the results show that the aging process is heterogeneous since age was not found to be directly related to resilience, gratitude and experiential avoidance. This finding calls into question negative stereotypes and attitudes towards aging, supporting the idea that these psychological variables might be relatively stable along life trajectory, such as other personality characteristics.

However, as the direct and indirect consequences of pandemic situation continues along the time and it would be turned into a chronic stressor which might cause long-term effects on well-being, further research should be carried out.

Several limitations of the study need to be acknowledged. First, this is a cross-sectional study that does not allow us to establish causal relationships. Longitudinal studies are needed to ensure the stability of these results. Further, like other similar studies (Losada-Baltar, Jiménez-Gonzalo et al., 2021), our study is based on a convenience and nonprobability sample, which may not be representative of the whole Spanish population of 60 years and older. Women are overrepresented in this study and a wider range of men sample is needed. Regarding participant recruitment, we used an online-based survey due to the exceptional situation, which might have limited the number of older adults who can participate. It is necessary to replicate the results in a more representative sample. Also, the sample consisted of non-institutionalized people and is not representative of older people living in long-term care facilities. However, the majority of Spanish older adults' population dwells in the community. Moreover, the measurement model of psychological well-being presented problems of model fit (large residuals) that may suggest that the factor structure of the Ryff's scale should be revised. Finally, although we have proved the important role of gratitude on older people's well-being, future studies should consider other relevant strengths.

In conclusion, the results of this study suggest the value of a shift in images of aging, moving from a negative view (illness or vulnerability) to a positive and diverse one, focused on a strengths-based approach It is possible that facing adversities along the life course may make people stronger. Our results also emphasize the need for developing policies and interventions that promote older people's strengths (resilience, gratitude and acceptance).

Along these lines, third-wave Cognitive Behavioral therapies**,** such as Acceptance and Commitment Therapy (ACT), focus on the acceptance of the experience, considering to what extent the person cultivates and acts guided by their own values (Hayes et al., 1999). ACT has shown its usefulness with older people by helping the person to clarify valuable directions for life and, subsequently to carry out actions committed to these personal values, improving consistency and increasing psychological well-being by giving meaning to the daily life (Alonso-Fernández et al., 2016). This type of intervention can be very useful to help older people increase their levels of resilience, gratitude and acceptance during the COVID-19 pandemic as well as other stressful situations of similar magnitude that may arise in the future. These characteristics can be especially important for those people who have been infected by the virus or who have had a hospitalized or deceased relative, since they are variables that, according to our results, mediate the relationship between the stressful event and psychological well-being.

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