



Positive and negative feelings among Spanish young-old and old-old during the lockdown of the COVID-19 first wave.

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TITLE PAGE**Positive and negative feelings among Spanish young-old and old-old during the lockdown of the COVID-19 first wave****David Facal, PhD^a, Raquel Rodríguez-González, PhD^{b,c}, Alba-Elena Martínez-Santos, MSc^{b,d}, Manuel Gandoy-Crego, PhD^b**

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Positive and negative feelings among Spanish young-old and old-old during the lockdown of the COVID-19 first wave

ABSTRACT

Objectives: The COVID-19 pandemic required a population lockdown during the first wave in March 2020. Evidence has shown a circular relationship between perceived threat and the risk of developing negative mood, which might impact the affect balance of older adults. We aimed to investigate the positive and negative feelings expressed by young-old (60-70 years) and old-old (over 71 years) Spanish adults during the lockdown of the COVID-19 first wave, and the social and psychological variables associated.

Methods: Cross-sectional study conducted in 528 participants using a questionnaire composed of sociodemographic data and validated scales for resilience (Brief Resilient Coping Scale) and emotions (Scale of Positive And Negative Experience).

Results: We found a positive balance between positive and negative feelings with no differences between both groups. Regression analysis showed that social network and resilience, but not age, are significant predictors of both greater positive feelings and lower negative feelings.

Conclusions: Our results evidence the relevance of promoting targeted support psychological and social measures that effectively help older adults to cope with such a difficult scenario as the current pandemic.

Clinical implications: Healthcare providers must develop targeted care strategies aimed at providing emotional support for older adults from a holistic perspective.

KEYWORDS

Social support; community care; aging; emotional assessment; elderly.

SHORT RUNNING HEAD

Emotional balance during COVID-19

INTRODUCTION

In March 2020, the World Health Organization (WHO) characterized Coronavirus disease (COVID-19) as a pandemic (WHO, 2020). Although the virus can affect everybody, older adults are a particularly vulnerable population due to age-associated physiological changes and chronic medical conditions, showing the highest risk for severe illness. Negative consequences of COVID-19 have been documented, both physically and psychologically, in a scenario of strict lockdown policies that dramatically reduced social interaction, contributing to anxiety and fear of illness and death (López et al., 2020; Rodríguez-González et al., 2020).

Affect can be defined as a positive or negative emotional reaction that is consistent with the evaluation that the individuals construct from their everyday experiences. Affect balance is conceptualized as an affective component of subjective well-being (SWB), representing a balance between positive (PA) and negative affect (NA) (Zhu, 2015). Positive and negative are weighed simultaneously to determine which is more relevant in daily experience, and they are often represented as a difference score -positive minus negative- (Veilleux et al., 2020). Recently, Diener et al. (2016) described the affective component of SWB as the presence of a continuous state of PA for most of the time and with scarce periods of NA. Different scales exist to measure pleasant and unpleasant feelings in daily living, including The Scale of Positive and Negative Experience (SPANE). The SPANE includes broad descriptors for positive and negative feelings, as well as a number of positive and negative emotions that are central to the experience of well-being. For each feeling, a number from 1 (very rarely) to 5 (very often) must be selected, positive, negative and balance scores (Diener et al., 2010).

Both the lockdown scenario and the spread of the virus, as well as associated consequences could cause alteration of people's cognitive and emotional state through perceived threat from the virus can potentially cause NA and make the affective balance more negative (Perez-Fuentes et al., 2020). The results of this study show how perceived threat is a risk variable for the development of negative mood and vice versa, operating as a mediator in this circular relationship of negative affective balance, which increases both effects. Based on this assumption, the current study investigated the positive and negative feelings expressed by young-old and old-old adults during the lockdown declared by the Spanish government during the COVID-19 first wave, and the social and psychological variables related. The hypotheses of the present research were the following: 1) the old-old adults would present less positive feelings and more negative feelings due to the crisis and confinement situation caused by the first wave of COVID-

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3 19 compared to the young-old adults, given that their frailty to the virus is greater, and 2)
4 psychological and social resources and age will be significant predictors of the presence
5 of positive and negative feelings during the lockdown caused by the COVID-19 first
6 wave.
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10 **METHODS**

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13 We undertook a web-based cross-sectional study of community-dwelling older
14 adults living in Galicia (North-west of Spain) during the COVID-19 lockdown. Participants
15 were recruited through the most representative regional organizations in the promotion
16 of active aging (Galician Association of Permanent Adult Training -ATEGAL-, Afundación
17 +60 Centres, Red Cross), as well as through the specific university program for older
18 people from our institution. Participants were asked to distribute the questionnaire among
19 their contacts aged 60 and over, using a snowball sampling technique. The study
20 protocol was approved by the Ethics Committee of the University of Santiago de
21 Compostela.
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29 The survey was electronically distributed using Microsoft Office Forms to collect
30 information about sociodemographic characteristics of old adults, psychological and
31 social data during the COVID-19 lockdown. To obtain the data on the presence of
32 positive and negative feelings, a part of the Spanish version of the Scale of positive and
33 negative experience (SPANE) (Diener et al., 2010) was applied. Specifically, two general
34 items (Positive, Negative) and six specific items (Happy, Sad, Afraid, Joyful, Angry,
35 Contented) were selected. For each one, a number from 1 (Very Rarely) to 5 (Very Often)
36 was selected. Scores were calculated for positive feelings (summation of the positive,
37 happy, joyful, and contented scores), negative feelings (summation of the negative, sad,
38 afraid and angry scores) and balance (positive feelings – negative feelings). To evaluate
39 social networks, the specific question from the Spanish version of the Medical Outcomes
40 Study (MOS) questionnaire for social support (“Approximately, how many close friends
41 or close family do you have?”) was used (Revilla et al., 2005). A numeric answer was
42 requested to the participants. To obtain information regarding resilience, the Spanish
43 version of the Brief Resilient Coping Scale (BRCS) was used (Navarro-Pardo et al.,
44 2015). The BRCS measures resilient coping as a model of active problem solving (i.e. “I
45 look for creative ways to alter difficult situations”) through a four item Likert-type scale,
46 with responses ranging from 0 (does not describe me at all) to 5 (describes me very well)
47 and the higher scores showing greater levels of resilience. The Spanish version of the
48 scale present good psychometric properties in a sample of old adults, with an index of
49 internal consistency of $\alpha = 0.84$.
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3 The sample consisted of adults aged 60 and over living in Galicia (North-West
4 region of Spain, Europe) during the lockdown declared in March 2020 by the Spanish
5 government due to the COVID-19 pandemic (verified by requiring the postcode). The
6 study was undertaken between the 20th and 27th April 2020, before the government of
7 Spain announced the deescalation measures after the first wave of COVID-19. Exclusion
8 criteria were (a) being under 60 years old, (b) be living outside Galicia (North-West region
9 of Spain, Europe) during the lockdown declared in March 2020 by the Spanish
10 government due to the COVID-19 pandemic (verified by requiring the postcode), and (c)
11 not providing online informed consent. A total of 599 participants were recruited, of which
12 16 participants were excluded due to being under 60 years old and 55 participants for
13 not meeting the geographic criteria. Of the 528 participants included in the final sample,
14 342 (64.8%) were between 60 and 70 years old (young-old group), and 186 (35.2%)
15 were over 70 (old-old group). Mean age was 69.25 years old (standard deviation 6.75).
16 341 females (64.6%). 71 participants had primary education (13.4%), 77 had secondary
17 education (14.6%), 65 had technical studies (12.3%) and 315 had higher education
18 (59.7%).

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20 For the comparison between young-old and old-old, *t* test for unequal variances
21 was conducted. To study the relation between positive feelings, negative feelings, age
22 (years old, taken as a continuous variable), psychological resources (BRCS score), and
23 social resources (number of close friends and family members), Pearson bivariate
24 correlations were calculated. To study the role of age, psychological and social resources
25 in the affective state, lineal regression models were conducted to analyze the entire
26 sample, considering scores in positive and negative feelings as dependent variables.

27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 **RESULTS**

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44 Comparisons between the groups of young-old and old-old are showed in Table
45 1. Regarding the presence of positive and negative feelings, internal consistency in our
46 study were of $\alpha = 0.79$ for the positive feelings subscale and of $\alpha = 0.58$ for the negative
47 feeling subscale. A positive balance between positive and negative feelings was found,
48 with higher mean scores in positive feelings than in negative feeling, and positive scores
49 in balance in both groups. Significant differences between groups were only found in
50 resilience, with young-old adults showing higher levels of resilient coping.

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52 Significant negative correlations were found between positive and negative
53 feelings; significant positive correlations between positive feelings and both social
54 networks and resilient coping; and significant negative correlations between negative
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3 feelings and resilient coping (all $p \leq 0.01$, two-tailed, table 2). The results of the regression
4 models (table 3) show that social network and resilience, but not age, are significant
5 predictors of positive feelings. Resilience is also a significant predictor of negative
6 feelings.
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10 **DISCUSSION**

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13 The balance between positive and negative feelings, conceptualized as a core
14 component of SWB (Diener et al., 2016), is even more relevant in the context of the
15 COVID-19 pandemic. It must be noted that a favorable balance between positive and
16 negative feelings is found even in times of strict confinement due to the pandemic. There
17 were no differences in the groups of old adults in terms of affective balance, or in the
18 size of the social network. However, differences were found in resilience, with the
19 youngest older group scoring higher in resilient coping than the old-old group. These
20 differences occur in the opposite direction to previous studies during the lockdown of the
21 first wave of COVID-19 in Spain (López et al., 2020). To consider different age groups is
22 relevant since the response to the pandemic has stressed that old adults are not a
23 homogenous group, and specific analysis can help to plan social and health resources
24 in a more targeted way.
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33 The results of the regression analysis do coincide with those of López et al.
34 (2020), in the sense that psychological resources predict the affective state of older
35 people in a lockdown situation. Our data also show that social resources are significant
36 in predicting the positive feelings of older adults in a lockdown situation. Although the
37 regression models presented are significant, the percentages of explained variance are
38 relatively low. Apart from age and the quantitative, psycho-social predictors introduced
39 in the model, a significant percentage of the variance would also be explained by: a)
40 interpersonal variability, b) specific aspects of the confinement such as the availability of
41 open spaces or the degree of interruption in active aging routines (Rodríguez-González
42 et al., 2020), and c) health features, including physical diseases affecting somatic and
43 neuropsychiatric functioning or concomitant medication, not included in this study. We
44 must be especially cautious when interpreting the regression model that takes the
45 negative feelings subscale as a dependent variable, considering that the reliability of this
46 subscale in our study is poor. In spite of these limitations, our data adds evidence to the
47 importance of promoting psychosocial resources to improve the affective health of the
48 old adults in times of crisis such as the first wave of COVID-19.
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3 This study has some limitations to be considered. The amount of variance
4 explained by the model is modest suggesting that other factors not measured here might
5 be relevant. Secondly, limitations are directly related to the moment in which it was
6 carried out, with the Spanish population confined to their homes. This strict lockdown
7 determined the type of sampling and that short scales and specific items were selected.
8 The sample is not representative of the Galician population since, according to the
9 exceptional situation, the recruitment was carried out looking for a sample as
10 representative as possible through contact with the most representative regional entities
11 in the promotion of active aging. In view of the very urgent nature of data collection, a
12 snowball technique was used as a complementary sampling procedure. Furthermore,
13 the strict lockdown made not possible a detailed study of the health characteristics of
14 individuals. Future studies should include broader affective, social support and social
15 network measurements that allow to delve into the role of social resources in the
16 emotional response during the pandemic, as well as longitudinal research designs that
17 allow establishing causal relationships between affective state, psychological and social
18 resources.
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32 **CLINICAL IMPLICATIONS**

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- 35 • A positive balance was found between positive and negative feelings during the
- 36 strict lockdown of the COVID-19 first wave.
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- 38 • Resilience and social network, but not age, were significant predictors of greater
- 39 positive feelings during the lockdown.
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- 41 • Healthcare providers must take into account social support and affective
- 42 resources when develop care strategies for older adults.
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46 **DECLARATION OF INTEREST STATEMENT**

47
48 None
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3 **TABLES**
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6 Table 1. Comparison between feelings, social network, and resilience of young-old and
7 old-old groups during the lockdown of the COVID-19 first wave. Results are shown as
8 means and standard deviations (between brackets).
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	Young-old	Old-old	t	p
12 Positive feelings	10.14 (4.73)	9.62 (4.51)	1.24	0.96
13 Negative feelings	6.81 (2.72)	6.86 (2.67)	-0.22	0.21
14 Balance between positive and negative feelings	3.33 (5.92)	2.76 (5.73)	1.08	0.83
15 Number of close friends and family members	13.56 (12.24)	13.63 (13.26)	-0.06	0.28
16 Resilience	14.40 (2.62)	13.77 (2.94)	2.45	0.02

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Table 2. Pearson bivariate correlation between positive feelings, negative feelings, age (years), social network and resilience measures.

	Positive feelings	Negative feelings	Age	Social network	Resilience
Positive feelings	1				
Negative feelings	-0.21**	1			
Age	-0.02	0.03	1		
Social network	0.17**	-0.02	-0.04	1	
Resilience	0.37**	-0.34**	-0.15**	0.14**	1

**Correlation is significant at the 0.01 level (2-tailed).

Table 3. Linear regression model for frequency of positive and negative feelings.

	R	R ² adjusted	F	β	t	p
Positive feelings	0.395	0.151	32.25**			
Age				0.04	1.04	0.30
Social network				0.13	3.08	0.01
Resilience				0.36	8.83	0.00
Negative feelings	0.338	0.109	22.58**			
Age				-0.02	-0.54	0.59
Social network				0.03	0.50	0.50
Resilience				-0.34	-8.19*	0.00