"We're staying at home". Association of self-perceptions of aging, personal and family resources and loneliness with psychological distress during the lock-down period of COVID-19.

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Abstract

Objectives

Families are going through a very stressful time because of the COVID-19 outbreak, with age being a risk factor for this illness. Negative self-perceptions of aging, among other personal and relational variables may be associated with loneliness and distress caused by the pandemic crisis.

Method

Participants are 1310 Spanish people (age range: 18-88 years) during a lock-down period at home. In addition to specific questions about risk for COVID-19, self-perceptions of aging, family and personal resources, loneliness and psychological distress were measured. Hierarchical regression analyses were done for assessing the correlates of loneliness and psychological distress.

Results

The measured variables allow for an explanation of 48% and 33% of the variance of distress and loneliness, respectively. Being female, younger, having negative self-perceptions about aging, more time exposed to news about COVID-19, more contact with relatives different to those that co-reside, fewer positive emotions, less perceived self-efficacy, lower quality of sleep, higher expressed emotion and higher loneliness were associated with higher distress. Being female, younger, having negative self-perceptions about aging, more time exposed to news about COVID-19, lower contact with relatives, higher self-perception as a burden, fewer positive emotions, lower resources for entertaining oneself, lower quality of sleep and higher expressed emotion were associated with higher loneliness.

Discussion

Having negative self-perceptions of aging and a lower chronological age, together with other measured family and personal resources, are associated with loneliness and psychological distress. Older adults with positive self-perceptions of aging seem to be more resilient during the COVID-19 outbreak.

Key words: coping, depression, expressed emotion, crisis, self-efficacy

Introduction

The outbreak of the COVID-19 pandemic is having a strong impact among individuals and families, who are going through a very stressful period (Zhang, Wang, Rauch, & Wei, 2020). Countries such as Spain are requiring lock-downs of their citizens. Epidemiological data indicate that age is clearly associated with the risk of developing critical health problems and mortality related to this illness (Remuzzi & Remuzzi, 2020). Beyond chronological age, negative self-perceptions of aging may be related to negative outcomes for older adults and play a significant role in this context, considering previous findings linking negative self-perceptions of aging to less engagement in health behaviors (Levy & Myers, 2004). The risk of getting infected by COVID-19 through personal contact, together with the lock-down scenario, may contribute to feelings of loneliness and psychological distress.

The prolonged exposure to stress due to the lock-down scenario may also contribute to an increase in psychological distress by reducing sources of support (e.g., family), increasing the importance of personal resources such as self-efficacy and relational variables. These issues may have a strong impact on perceived loneliness, a factor widely associated with psychological distress as well as an outcome in itself (Cacioppo & Cacioppo, 2018).

Drawing upon the stress and coping model (Lazarus & Folkman, 1984), which highlights the relevance of personal or social resources for understanding the differences in distress between individuals, the objective of this study is to analyze the capacity of variables related to the outbreak of COVID-19 to explain loneliness and distress in people exposed to COVID-19 lock-down scenario, controlling for sociodemographic variables (including age and self-perceptions of aging), and personal and family resources.

Method

Participants and procedure

Participants were people older than 18 years living in Spain and experiencing the required (mandatory) situation of lock-down at home, beginning on Monday 16th of March after the government's decision. Participation in this study was requested through social networks and all the options available for the researchers to contact potential participants. The same description and request for participation was sent to associations or institutions that frequently collaborate with the research team, as well as to other potential associations or institutions contacted through social networks such as Whatsapp, Facebook or Linkedin. The data presented here were gathered from Saturday 21st of March (at 19:00 hours) to Thursday 24th of March (at 21:00 hours). All participants provided their consent to participate in the study and during the first week of lock-down answered a survey that was developed using Google Forms. The study was approved by the Ethics Committee of the Hospital Universitario Fundación Alcorcón.

Measures

In addition to age, gender, and marital status, self-perceptions of aging were measured through the same procedure used by Levy, Slade, Kunkel and Kasl (2002), with the Liang and Bollen (1983) Attitudes Toward Own Aging subscale. This is a 5-item scale (e.g., "Things keep getting worse as I get older"), with higher scores indicating more negative self-perceptions of aging. Cronbach's alpha of this scale in the current sample was .60.

Stressors. Considering sources of stress that have been identified as related with COVID-19, such as the risk to clinicians' physical health (Dewey, Hingle, & Linzer, 2020), fear about own health (Brooks et al., 2020), and massive quantities of information about the pandemic

(Van Bavel et al., 2020), the following questions were included: "Do you have a profession or vital situation that puts you in a risk situation?" (answers: "no" and "yes") and "Do you consider yourself to be at risk of serious health outcomes if getting COVID-19?" (answers: "no", "yes", and "I don't know). The item "How much time do you devote to looking for and processing information related to COVID-19 and the current situation? (e.g., news, radio or TV, internet, others)" was included (answers ranging from 0 "Not at all" to 10 "I am attentive to all the possible information").

Family resources. The items "I am satisfied with the support that I receive from my family" (adapted from the APGAR questionnaire (Smilkstein, 1978), with answers ranging from 0 "almost never" to 2 "always"), "I feel that I am a burden to my family" (from the Self-Perceived Burden Scale (Cousineau et al., 2003); answers from 0 "never or almost never" to "4 "almost always"), and "How much contact do you have with relatives different to those you reside with?" (answers from 0 "no contact at all" to 10 "I have all the contact that I need") were included. In addition, participants were requested to report how many people (different from themselves) they were co-residing with.

Personal resources. Ad hoc questions were included to measure diverse personal resources related with emotion regulation, behavioral, cognitive and social coping strategies selected among the many and diverse potential resource variables analyzed in the stress and coping literature. Specifically, questions were included to measure daily positive emotions ("How many moments of happiness, humor, laughter, or positive emotions do you have per day?"; answers from 0, "no moment at all" to 10 "I have many moments per day"); entertainment resources ("To what extent do you feel that you have resources for entertaining yourself at home?"; answers from 0 "I have nothing to entertain myself with" to 10 "I have all the things I need"); and self-efficacy ("To what extent do you feel capable of coping effectively with the current situation?"; answers from 0 "not at all capable" to 10 "totally capable"). Daily

time devoted to exercise was reported in a scale from 0 "No time at all" to 4 "more than one hour and a half"). Quality of sleep was rated in a scale ranging from 0 "very bad" to 3 "very good". Finally, as an indicator of expressed emotion, the following items based on the Family Attitude Scale (Kavanagh et al., 1997) were included: "To what extent do you like to have people around?", "I feel that people living with me are driving me crazy", "I lose my temper with those living with me", and "I shout at people living with me". Cronbach's alpha for these 4 items in this sample is .87.

Loneliness. Perceived loneliness was measured using the same procedure as Kool and Geenen (2012), through the item "How much loneliness do you feel?", with answers ranging from 0 "I do not feel lonely at all" to 10 "I feel absolutely lonely".

Psychological distress. A wide array of psychological responses to COVID-19 have been described, including anxiety and depression (Wang et al., 2020), anger or fear (Brooks et al., 2020). With the aim of providing a brief measure of these diverse emotions, and drawing on research providing support for the use of single-item measures of emotional problems (e.g., Zimmerman et al., 2006), an ad-hoc 5-item scale was developed that measured, respectively, anxiety, anger, sadness, fear and hope (e.g., "How much sadness do you feel"). Answers ranged from 0 "I do not feel ____ at all" to 10 "I feel totally ____ ", except for the item measuring hope, which was reversed. Cronbach's alpha for this scale with the current sample is .80.

Data analysis

In addition to descriptive and correlational analyses, two hierarchical regression analyses were conducted to examine the association between the assessed variables and loneliness and psychological distress, using the SPSS software (version 22.0). Drawing upon the stress and

coping model, sociodemographic variables were included in the first step, followed by stressors, family resources, personal resources, and loneliness.

Results

Participants were 1310 people (71.1% female) with an age range from 18 to 88 (mean = 42.36; SD: = 16.20). Of these, 408 (31.1%) were aged between 18 and 29 years, 300 (22.9%) between 30 and 44, 375 (28.6) between 45 and 59, and 227 (17.3%) were older than 60 years. Regarding measures of risk of contracting COVID-19, 273 (20.8%) people reported being professionals at risk, and 309 (23.6%) reported perceiving themselves as at risk for COVID-19. The descriptive characteristics of the remaining variables and correlations between the assessed variables can be found in the supplemental material.

Regarding the results of the hierarchical regression for explaining psychological distress (Table 1), the inclusion of variables at each step contributed significantly to the explained variance of psychological distress, with steps 1 (sociodemographic characteristics and negative self-perceptions of aging) and 4 (personal resources) yielding the highest contributions to the variance. The variables with a significant contribution to explaining distress in the final model were: being female, of lower chronological age, higher negative self-perceptions about aging, more time devoted to COVID-19 information, more contact with other relatives different to those that co-reside, fewer daily positive emotions, less perceived self-efficacy, lower reported quality of sleep, higher expressed emotion and higher loneliness.

Regarding the results of the hierarchical regression for explaining loneliness (Table 2), the inclusion of variables at each step (except step 2, stressors) contributed significantly to the explained variance of loneliness, with step 1 (sociodemographic characteristics and negative self-perceptions of aging) yielding the highest contribution to the variance. The variables

with a significant contribution to explaining loneliness in the final model were the same that contributed to the explanation of psychological distress (except for perceived self-efficacy), plus a lower number of people (different from themselves) co-residing, a higher self-perception as a burden, and lower reported resources for entertaining oneself at home.

Discussion

Contrary to our hypothesis, an inverse association was found between chronological age and both loneliness and distress. Consistent with these results, previous studies have found a lower reactivity to stress in older adults (e.g., Birditt, Fingerman, & Almeida, 2005), that may be related to resilience (Ong, Bergeman, Bisconti, & Wallace, 2006), or to a more effective emotion regulation ability, involving more use of preventive and emotion-focused strategies (e.g., Charles & Carstensen, 2007). However, as expected, negative self-perceptions of aging were found to be strongly associated with emotional outcomes. This central role of negative self-perceptions of aging in the explanation of loneliness and distress identified in this study provides additional support for its importance as a dimension associated with negative outcomes, and supports an interesting combination of both the embodiment theory (Levy, 2009) and the stress and coping model (Lazarus & Folkman, 1984). The fact that the strength of association between negative self-perception of aging and loneliness and distress decreases (although still significant) in the fourth step of the model (when personal resources are included) could be suggesting an interesting mediation role of personal resources in the relationship between negative self-perceptions of aging with loneliness and psychological distress. These findings seem to support previous results reported by Levy and Myers (2004), who found that positive self-perceptions of aging were related to engagement in more preventive health behaviors, and by Bellingtier and Neupert (2018), who found that older

adults with more negative attitudes toward own aging reported increased emotional reactivity to stressors.

Being female was found to be associated with reporting higher loneliness and distress and, among the assessed stressors, participants having a profession that put them at risk of being infected with COVID-19 did not show higher distress scores. Only time devoted to looking for and processing COVID-19 information, a strategy that can increase psychological vulnerability (Van Bavel et al., 2020), had a significant positive association with loneliness and psychological distress.

Regarding family resources, having contact with members of the family that do not reside in the same household was found to be related to more distress (but lower loneliness) in the final step of the regression analysis. The correlations of distress with lower satisfaction with family support and negative self-perception as a burden, and fewer resources for entertaining oneself at home, are no longer significant when personal resources are considered. Possible mediation effects could explain these findings. For example, lower satisfaction with the support from the family may lead to higher expressed emotion attitudes (Delvecchio, Di Riso, Chessa, Salcuni, Mazzeschi, & Laghezza, 2014).

In summary, in addition to gender, chronological age, self-perceptions of aging, and time devoted to COVID-10 information, family and personal resources, seem to be relevant for explaining loneliness and psychological well-being during a critical stressful period.

Limitations. The cross-sectional nature of the data does not allow clear identification of the effects of the factors associated with an increase in loneliness and distress during the lock-down period. In addition, the obtained sample may not be representative of the general Spanish population (population census; INE, 2019). For example, while the gender distribution of the Spanish population is quite similar for the population between 20 and 89

years old, in our study most of the participants were women. In addition, although the percentage of participants from the age ranges of 30 to 44, and 45 to 59 is similar to the general population distribution, a higher proportion of participants was obtained for the age range of 18 to 29, and a lower proportion for the range of 60 and older. Also, older adults who participate in this study are users of online technologies and may not therefore be representative of the general older adult population, something that may be acting as a confounding variable in this study (as well as in similar studies done in the context of COVID-19; Zhong et al., 2020). Even though studies exist that provide support for the use of single-items in surveys and even clinical contexts (e.g., Zimmerman et al., 2006), the use of single-items for measuring the wide-ranging effects of the lock-down situation in the context of individuals and families through a brief and easy to answer measure is a limitation of the study. The internal consistency of the self-perceptions of aging scale, although similar to that reported in other studies (e.g., Siebert, Wahl, Degen, & Schröder, 2018), is low. Regarding the psychological distress measure, even though a good internal consistency was found, future studies are needed to support the validity and reliability of the measure. Despite the fact that the obtained percentage of explained variance of loneliness and psychological distress is high, other variables that can also contribute to distress in this scenario were not measured, such as perceived susceptibility and confusion about information reliability (Qian et al., 2020), knowledge, attitudes and practices towards COVID-19 (Zhong et al., 2020), or uncertainty about the future (including potential health or economic issues).

In spite of these limitations, we believe that the findings of this study, obtained at a unique moment, with a large sample of participants during the first stage (first week) of the lock-down period linked to the COVID-19 outbreak, provide important information regarding the effect of psychosocial variables on loneliness and psychological distress. Loneliness and psychological distress seem to be related to family and personal resources that may have to

do with a negative view of aging, such as perceiving oneself as less capable of facing stressful situations adaptively, or maladaptive ways of communicating with other relatives. The data from this study suggest that it is not chronological age itself but having negative self-perceptions of aging that is related to loneliness and psychological distress in people during a lock-down at home during the COVID-19 crisis. Older adults with positive self-perceptions of aging seem to be more resilient to loneliness and distress during the COVID-19 outbreak.

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Table 1.

Hierarchical regression analysis examining the associations between assessed variables and psychological distress

	Step 1			O	Step 2			Step 3			Step 4			Step 5		
	В	S.E.	В	В	S.E.	В	В	S.E.	В	В	S.E.	В	В	S.E.	В	
Gender (1 = male)	-4.71	.59	21**	-4.76	.58	21**	-4.40	.59	20**	-2.76	.53	12**	-2.47	.51	11**	
Age	08	.02	13**	10	.02	16**	08	.02	13**	08	.02	13**	07	.02	11**	
Self-perception of aging	2.75	.19	.37**	2.60	.19	.35**	2.24	.20	.30**	1.07	.19	.14**	.89	.18	.12**	
Profession of risk for	7			.55	.67	.02	.70	.66	.03	.10	.58	.00	.11	.57	.00	
COVID-19 (1 = yes)				.55	.07	.02	.70	.00	.03	.10	.30	.00	.11	.57	.00	
Health risk if infected by				1 20	.67	.05	1.08	.67	.05	.62	.59	.03	.64	.57	.03	
COVID-19 (1 = yes)				1.30	.07	.03	1.06	.07	.03	.02	.39	.03	.04	.37	.03	
Time devoted to				77	1.1	1044	92	1.1	1044	7.6	10	1044	70	00	1744	
COVID-19 information				.77	.11	.18**	.83	.11	.19**	.76	.10	.18**	.72	.09	.17**	
People co-residing							17	.22	02	40	.19	05*	14	.19	02	
Satisfaction with family							-1.68	.51	09**	17	.46	01	.03	.45	.00	

Self-perception as a			1.81	.36	.14**	.69	.32	.05*	.31	.31	.02
burden			1.01	.50	.17	.07	.52	.03	.51	.51	.02
Contact with relatives			.09	.12	.02	.39	.11	.09**	.47	.11	.11**
not co-residing		MI.	.07	.12	.02	.37	.11	.07	.47	.11	.11
Daily positive emotions						86	.14	16**	68	.14	12**
Rersources for	10					08	.16	01	.10	.16	.02
entertaining oneself						06	.10	01	.10	.10	.02
Perceived self-efficacy	2					-1.45	.13	28**	-1.40	.13	27**
Daily hours of exercise	•					29	.22	03	27	.21	03
Sleep quality						-1.97	.29	16**	-1.79	.29	14**
Expressed emotion						.63	.11	.15**	.51	.10	.12**
Loneliness									.83	.10	.21**
Change in R ²	.21**	.04**	.03**			.18**			.03**		

^{*}p < .05; ** p < .01

Table 2.

Hierarchical regression analysis examining the associations between assessed variables and loneliness

	Step 1			Step 2				Step 3		Step 4		
	В	S.E.	В	В	S.E.	В	В	S.E.	В	В	S.E.	В
Gender (1 = male)	47	.16	08**	48	.16	09**	53	.15	09**	35	.15	06*
Age	03	.00	19**	03	.01	21**	02	.01	11**	02	.01	10**
Self-perception of aging	.63	.05	.33**	.62	.05	.33**	.42	.05	.22**	.22	.05	.12**
Profession of risk for COVID-19 (1 = yes)				.03	.18	.00	.13	.17	.02	00	.16	.00
Health risk if infected by COVID-19 (1 = yes)				.22	.18	.04	.07	.17	.01	02	.16	00
Time devoted to COVID-19 information				.02	.03	.02	.06	.03	.05*	.06	.03	.05*
People co-residing							29	.06	13**	32	.05	15**
Satisfaction with family							57	.13	12**	24	.13	05
Self-perception as a burden							.60	.09	.18**	.46	.09	.14**

Contact with relatives not co-residing			18	.03	17**	10	.03	09**
Daily positive emotions						22	.04	16**
Rersources for entertaining oneself	10,					22	.05	13**
Perceived self-efficacy						06	.04	05
Daily hours of exercise						03	.06	01
Sleep quality						22	.08	07*
Expressed emotion						.15	.03	.14**
Change in R ²	.16**	.00	.09**			.08**		

^{*}p < .05; ** p < .01