Proceeding

Mental health and resilience during the COVID-19 pandemic among Spanish residents: Do age and gender matter? An exploratory study †

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Abstract: Since the WHO designated the COVID-19 outbreak as a global pandemic in March 2020, Spain is one of the top ten countries around the world with the highest number of infected people. The COVID-19 pandemic not only damages individuals´ physical but also psychological health, increasing the probability of developing mental health problems. The exposure of population to the substantial psychosocial stress that the COVID-19 represents seems to lead them to experience lower feelings of life satisfaction and higher levels of state anxiety and death anxiety, especially among women, younger people and with lower resilience capacity. Despite their usefulness in intervention terms, data at this level on Spanish residents are still scarce. This study aims to explore the relations among age, gender, levels of resilience and mental health in a sample made up of 195 Spanish adults. It was conducted within three months from the state of alarm declared in Spain on March 14, 2020. Nonparametric tests conducted indicated that younger people experienced higher levels of death anxiety, and lower feelings of satisfaction with life. Moreover, younger women have less resilience. Taken as a whole, these findings suggest the importance of developing interventions that incorporate, especially among younger women, the strengthening of such a key personal resource as resilience capacity.

Keywords: COVID-19; mental health; age; gender; death anxiety; life satisfaction; resilience

1. Introduction

The COVID-19 pandemic is probably the greatest challenge that humanity at a global level has had, and still will have, to face in these first decades of the 21st century. In countries like Spain, since the WHO designated the COVID-19 outbreak as a global pandemic in March 2020, the incidence and prevalence data among the population does not seem to give respite. There are over 1.8 million confirmed cases and 50.122 deaths according to official data, by December 30, 2020 [1].

But the devastating effects of this global pandemic have not only taken place at the level of physical health. Since the declaration of the state of alarm on March 14, 2020, Spanish citizens´ everyday lives are not the same in areas so diverse and key for optimal human functioning as work situation, family income and dynamics, daily and social routines, leisure options and so on. And such a plethora of dramatic changes derived from the COVID-19 pandemic, can also significantly harm psychological health, increasing the proneness of people of developing mental health problems. Across the world a growing body of research had demonstrated the negative psychological consequences of this pandemic for individual´s psychological health as symptoms of post-traumatic stress, depression, and anxiety, as well as lower feelings of life satisfaction and an increased fear of death and death anxiety [2-5].

This detrimental impact on mental health of the pandemic and its related containment measures (e. g. quarantine and self-isolation) may increases the risk of disabling

mental health conditions [6] specially among young people, women, and less resilient individuals [2,4-5]. Resilience has been generally conceptualized as personal qualities that enable the individual to thrive in the face of adversity [7] and considered as a key protective factor of mental health [8-9] specially in these pandemic times. Several empirical studies have found positive correlations between resilience and positive mental health indicators such as life satisfaction and negative correlations with negative indicators such as anxiety [6,10].

Although there is still little research in Spain at this level, some studies have shown that young individuals and women experienced higher levels of anxiety [11-12] and lower of life satisfaction [13]. Moreover, the levels of resilience seem to be lower among women and the youngest ones (or emerging) adults. In this sense, it has been suggested by prior research that highly resilient individuals experienced low levels of state anxiety, and that this effect was moderated by age [14]. In this context, this study aims to explore the relations among age, gender, levels of resilience and mental health in Spanish adults.

2. Materials and Methods

2.1. Participants and Procedure

The participants were 195 Spanish residents, 147 women (75.4%) and 48 men (30.4%), mean age 27.97 years (SD = 12.56, range = 18–60). All of them completed a self-report questionnaire on an online platform, after providing their informed consent. Spanish population lockdown took effect at 00:00 on Sunday, 15 March 2020, until June 21, 2020. At the time of the study was started, the duration of confinement was two months and a half. The study was approved by the Research Ethics Committee of the Autonomous Community of Aragon (C.I. PI20/223).

2.2. Measures

2.2.1. Dependent Variables: Life Satisfaction, Trait anxiety, State anxiety, Death anxiety, and Resilience

The Spanish version [15] of the Satisfaction with Life Scale (SWLS, [16]) consists of five items, rated on a seven-point scale (1 = Completely disagree to 7 = Completely agree). The Cronbach's alpha coefficient for this study was 0.86.

The Spanish abbreviated form [17] of the State-Trait Anxiety Inventory (STAI, [18]) allowed to measure trait anxiety as well state anxiety. Eight items rated on a five-point scale (0 = Not at all to 4 = Almost always), four of them to answer about trait anxiety and the other four to answer about state anxiety. The internal consistency was $\alpha = 0.71$ for both measures.

The Death Obsession Scale (DOS, [19]) was used in its Spanish version [20]. Four items scored on a five-point Likert response format (1 = Not at all to 5 = Very much) to answer about death anxiety. The reliability was $\alpha = 0.87$.

The Connor-Davidson Resilience Scale (CD-RSIC, [7]), in its reduced Spanish version [21], was utilized to measure individual's resilience through 10 items scored on a five-point scale (0 = Not at all to 4 = Almost always). The Cronbach's alpha coefficient for this study was 0.91.

2.2.2. Independent Variables: Age and Gender

Age and gender were assessed through the questionnaire in its sociodemographic section. Age was measured in years and recoded for study purposes in a variable with three levels or categories [5]: Emerging adults (from 18 to 27 years old inclusive, group 1), early (young) adults (from 28 to 44 years old inclusive, group 2) and middle adults (from 45 to 60 years old inclusive, group 3). Gender was measured asking the person to indicate whether he/she was woman or man.

2.3. Data Analysis

The statistical analyses were carried out using the Statistical Package for Social Sciences (SPSS) v. 26 (IBM Corp., Armonk, NY, USA). To verify normal data distribution, the Kolmogorov-Smirnov normality test was used. Since the assumptions of a normal distribution were violated for all dependent variables ($p \leq 0.001$), nonparametric tests were conducted (Mann-Whitney U test and Kruskal-Wallis H test (using post-hoc Dunn test with Bonferroni adjustment)).

3. Results

3.1. Descriptive results

The socio-demographic characteristics by gender and age of study sample are described in Table 1.

Table 1. Descriptive data of Gender and Age for the study participants.

		N	%
Gender	Women	147	75.4
	Men	48	24.6
Age Group	Emerging adults	142	72.8
	Early adults	15	7.7
	Middle adults	38	18.5

The distribution of men and women in each age group would be as follows: Emerging adults, 29 men (20.4%) and 113 women (79.6%); early (young) adults, 4 men (26.7%) and 11 women (73.3%), and finally middle adults, 15 men (39.5%) and 23 women (60.5%).

3.2. Kruskal-Wallis H test

Comparing the three age groups composed of emerging adults, early (young) adults, and middle adults respectively, significant differences were found in life satisfaction, trait and state anxiety, and death anxiety. As can be seen in table 2 post-hoc comparisons showed that the significant differences were between emerging and middle adults. Specifically, emerging adults reported lower levels of life satisfaction (M = 3.48 ± 0.79; $p \leq 0.01$) and higher of trait anxiety (M = 1.13 ± 0.63; $p \leq 0.01$), state anxiety (M = 1.13 ± 0.58; $p \leq 0.05$), and death anxiety (M = 1.13 ± 0.63; $p \leq 0.01$), than middle adults. The three groups did not differ significantly in their levels of resilience.

Table 2. Kruskal-Wallis Rank Sum Test by Group Age.

	Emerging Adults (1)		Early Adults (2)		Middle Adults (3)		χ^2	p	Post-hoc[1]
	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)			
Life Satisfaction	142	3.48 (0.79)	15	3.69 (0.75)	38	3.90 (0.83)	9.29	0.010	1 < 3
Trait Anxiety	142	1.13 (0.63)	15	0.87 (0.61)	38	0.77 (0.51)	10.45	0.005	1 > 3
State Anxiety	142	1.11 (0.58)	15	1.23 (0.68)	38	0.88 (0.58)	6.96	0.031	1 > 3
Death Anxiety	142	2.20 (1.01)	15	1.98 (0.76)	38	1.65 (0.74)	12.14	0.002	1 > 3
Resilience	142	2.80 (0.76)	15	2.90 (0.66)	38	3.05 (0.63)	3.08	0.214	-

[1] Dunn-Bonferroni post hoc test.

3.3. Mann-Whitney U test

Regarding gender differences (Table 3), the Mann-Whitney U test indicated that the levels of death anxiety were greater for women (M = 2.17 ± 0.63; $p \leq 0.01$) than for men (M = 1.77 ± 0.81; $p \leq 0.01$). Moreover, females also showed lower values for resilience (M = 2.78 ± 0.69; p $\leq$ 0.01).

Table 4. Mann-Whitney U test by Gender.

	Men		**Women**			
	N	**Mean (SD)**	**N**	**Mean (SD)**	**U[1]**	***p***
Life Satisfaction	48	3.72 (0.88)	147	3.53 (0.77)	2926.00	0.075
Trait Anxiety	48	0.93 (0.64)	147	1.08 (0.62)	4034.50	0.132
State Anxiety	48	0.95 (0.58)	147	1.12 (0.68)	4082.00	0.100
Death Anxiety	48	1.77 (0.81)	147	2.17 (0.99)	4469.50	0.005
Resilience	48	3.09 (0.84)	147	2.78 (0.69)	2926.00	0.001

[1] Statistic Mann-Whitney U value.

Comparing within each age group between men and women the Mann-Whitney U test showed that the levels of death anxiety were greater for the youngest women (M = 2.26 ± 1.03; $p \leq 0.05$). Moreover, emerging (M = 2.75 ± 0.71; $p \leq 0.01$) and early adult women (M = 2.71 ± 0.65; $p \leq 0.05$) were less resilient than emerging (M = 3.02 ± 0.94) and early adult men (M = 3.45 ± 0.35).

4. Discussion and conclusions

The present study explored the relations among age, gender, levels of resilience and mental health during the COVID-19 pandemic in Spanish adults. Comparing the three age groups composed of emerging adults, early (young) adults, and middle adults respectively, the results obtained show younger adults (emerging) experienced higher levels of anxiety (both trait and state) and death anxiety, as well as lower life satisfaction. Regarding gender differences, death anxiety was greater for women than for men, as well as females, especially the youngest ones, were low resilient than men.

In line with previous evidence [2,4-5,11-13], the findings obtained offer support for the consideration that the mental health of women and young people has been more affected during outbreak of COVID-19 and subsequent social lockdown. Moreover, among Spanish adults younger age seems too to represent a risk factor for poor psychological functioning during the pandemic [5], increasing the proneness of young people of developing mental health problems. In this sense, if we consider that the necessary social isolation can deprive us of a coping resource as important as social support, that truly relevant personal resource that constitutes resilience becomes even more key if possible. Strengthening this important protective factor of mental health that constitutes resilience seems crucial in the case of younger women.

The present study is not without limitations. These limitations include its cross-sectional nature and the non-proportional representation in the sample of men and women and age groups, perhaps due to the data collection method used. Despite these limitations, the results obtained are of value for the design and development of interventions at this level: In preventing future mental illness policies emphasizing the needs of women and young people are likely to play an important role [3].

Conflicts of Interest: The author declares no conflict of interest.

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