

How did Different Generations Cope with the COVID-19 Pandemic? Early Stages of the Pandemic in Spain

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Abstract

Background: The World Health Organization has highlighted the importance of studying the consequences of the COVID-19 pandemic on mental health. The aim of this study is to examine the role of age in the early psychological responses to the pandemic in a Spanish community sample, focusing on how different generations coped with it. **Method:** An online survey was conducted during the early stages of the quarantine. Sociodemographic, health and behavioral variables were compared for five age groups. Mental health was assessed by the Depression, Anxiety and Stress Scale (DASS-21) and psychological impacts were assessed by the Impact of Event Scale-Revised (IES-R). **Results:** 3,524 participants were included ($M_{age} = 39.24$, $SD_{age} = 12.00$). Participants aged between 18 and 33 years old showed more hyperactivation and evitacion, were more depressed, anxious and stressed. Those aged between 26 and 33 years old showed more intrusion. Those aged between 18 and 25 years old suffered more sleep disturbances, claustrophobia and somatization and maintained worse routines. Elderly people showed better psychological responses in general. **Conclusions:** This study provides initial evidence that the negative psychological impact of COVID-19 pandemic hits young people harder. These results should be taken into account when developing specific evidence-based strategies.

Keywords: Pandemic, covid-19, generations, mental health, depression, anxiety.

Resumen

¿Cómo se Enfrentaron las Diferentes Generaciones a la Pandemia por COVID-19? Primeras Etapas de la Pandemia en España. Antecedentes: la Organización Mundial de la Salud ha destacado la importancia de estudiar sus consecuencias sobre la salud mental de la COVID-19. Esta investigación estudia el papel de la edad sobre las respuestas psicológicas tempranas a la pandemia. **Método:** se realizó una encuesta online en la población adulta de España durante la cuarentena. Las variables sociodemográficas, de salud y conductuales fueron estudiadas en 5 grupos de edad. El estado mental se estudió a través del DASS-21 (Depression, Anxiety and Stress Scale) y el impacto psicológico a través del IES-R (Impact of Event Scale-Revised). **Resultados:** 3.524 participantes fueron incluidos ($M_{edad} = 39.24$, $DT_{edad} = 12.00$). Los participantes entre 18 y 33 se mostraban más hiperactivados, evitativos, ansiosos, deprimidos y estresados. Aquellos entre 26 y 33 años presentaban más intrusión. Los participantes entre 18 y 25 años dormían peor, presentaban más claustrofobia y somatizaciones, mayores dificultades para mantener rutinas, mientras que los mayores presentaban mejores respuestas en general. **Conclusiones:** este estudio indica que la población española más joven se ha visto más afectada por las consecuencias psicológicas de la pandemia. Algunas de las diferencias en conductas y preocupaciones que dependieron de la edad deberían tenerse en cuenta para elaborar estrategias de intervención.

Palabras clave: pandemia, covid-19, generaciones, salud mental, depresión, ansiedad.

The World Health Organization declared a pandemic due to coronavirus disease (COVID-19) on 11 March 2020. Measures to reduce the spread of the virus have been drastic in many countries such as Spain, where a quarantine was declared for the entire population. It is imperative to understand how the general population has been coping with such a major disaster. Prior research on COVID-19 has come from China, where more than

half of respondents rated the psychological impact as moderate to severe, and approximately one-third reported moderate to severe anxiety (Wang et al., 2020). As the pandemic spread, data from western countries arrived (González-Sanguino et al., 2020; Mazza et al., 2020) and confirmed the presence of depressive and anxiety symptoms in 20-30% of the population studied.

Diverse individual, social and demographic factors have been linked to worse psychological responses during different pandemics. Being at risk of contagion, suffering from health fears, and being a health worker or working in other high-risk places (Bohlken et al., 2020) increased the likelihood of suffering posttraumatic symptoms and/or worse mental health states. Being a woman, being young and being uneducated were also factors linked to worse psychological responses (Wang et al., 2020).

Diverse findings have been described concerning the influence of age on psychological responses after experiencing trauma in general and pandemic situations in particular. Some data suggest that old people may be more psychologically affected. As people age, exposition to traumatic events is accumulated. Psychic trauma is highly related to trauma repetition, and as such the exposition to previous trauma is linked to increased possibilities for retraumatization when facing new traumatic events (Auxéméry, 2012), and may make the elderly more vulnerable. In this line, a study carried out among the general population during the SARS outbreak in Taiwan showed that the group of people aged 50-59 years old or more than 60 years old suffered more psychological distress (Peng et al., 2010).

However, the opposite results were obtained. During the influenza outbreak in Australia in 2007, a general decrease in the risk of high psychological distress with age was reported. Respondents in the youngest age categories (under 24 years old) had a higher risk of high psychological distress (Taylor et al., 2008). And during the SARS, Ko et al. (2006) found that participants who were older than 50 had a significantly lower chance of suffering a big psychological impact.

Regarding the COVID-19 pandemic, previous authors described that infected people more than 60 years old suffered higher levels of depression and worse perceived quality of life than the infected who were younger (Nguyen et al., 2020), others found that young people were more vulnerable (Mazza et al., 2020), and a third group reported that both individuals from 18 to 39 years old and those above 60 presented the highest peritraumatic distress indexes (Qiu et al., 2020). In their research, Wang et al. (2020) found that the vulnerability was related to being a student and not to the age itself. Other authors described no differences in psychological distress with respect to age (Zhang & Ma, 2020).

As it can be seen, most studies on COVID-19 point to a greater vulnerability for elderly people while diverse and opposing findings were given for previous epidemics and pandemics. Further research is needed in order to clarify not only the general influence of age, but also how different generations cope with the pandemic.

The aim of this study is to explore, in specific age ranges, the mental health state of a Spanish community sample in the early stages of the pandemic. We think that these results may be useful in order to design specific preventive programs for each generation.

Method

Participants

A snowball sampling strategy was used and an online survey was spread through social media around the country. Inclusion criteria were: 1. To be at least 18 years old; 2. To be living in Spain during the pandemic and quarantine. Data were collected from March 23 to March 28 (2020). At that time, Spain was under a general quarantine (9 to 14 days after the declaration of the state of emergency). A large increase in infections and deaths took place during those days (from 2182 to 5690 deaths; Health Ministry - Spanish Government, 2020).

Following the Declaration of Helsinki principles, the research protocol was approved by the Loyola Andalucía University Ethics Committee (Spain) (act 25/03/2020). The participants provided their informed consent after receiving a complete description of the research.

Instruments

The online survey included an ad hoc selection of sociodemographic and health related data, as well as other variables, including the following: perceptions of physical and mental states, antecedents of psychiatric illness, general routines and toxic habits during the quarantine, main concerns regarding the COVID-19 pandemic, different measures of exposure, perceived threat of COVID-19 infection and isolation, and some symptoms such as somatization, claustrophobia, sleep patterns and hypochondriac concern (the survey is available on request from the authors).

It also included two standardized instruments. The Depression, Anxiety and Stress Scale (DASS-21) was selected to assess mental health states (Lovibond & Lovibond, 1995). This self-reported questionnaire includes 3 subscales containing seven items each. The depression subscale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety subscale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress subscale assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient.

The Impact of Event Scale-Revised (IES-R) was selected to assess psychological impact (Weiss & Marmar, 1997) but it is more than a mere instrument to assess impact. This likert and self-report scale is formed of 22 items assessing subjective distress caused by traumatic events (Hosey et al., 2019) across three subscales rating evitacion, intrusion, and hyperactivation.

Both scales have been validated in Spanish populations (Bados et al., 2005; Báguena et al., 2001). For our study, the Cronbach's alpha index was .91 for the IES-R and .86, .85 and .90 for the depression, anxiety and stress subscales, respectively, of the DASS-21.

Procedure

A cross-sectional survey was carried out to assess the immediate psychological responses and mental health states (as well as other sociodemographic and health variables) in a Spanish community sample, stratified by age groups.

In order to perform comparisons, five generations based on age groups were studied: Group 1 (G1) 18 to 25 years old, Group 2 (G2) 26 to 33 years old, Group 3 (G3) 34 to 45 years old, Group 4 (G4) 46 to 60 years old, and Group 5 (G5) more than 60 years old. We stratified the age in these groups to explore more specific, narrower than usual age ranges. As a reference we used the emergent adulthood period (Arnett, 2000) and the age of 45 years because it is an important cut-off for mental health in Spain (Health Ministry - Spanish Government, 2017).

Data Analysis

Descriptive statistics were calculated and are presented as percentages of responses, which were calculated according to the number of respondents per response with divided by the number of total responses to a question.

The total and partial scores of the two main instruments used (DASS-21 and IES-R) were expressed as means and standard deviations. Comparisons between groups were examined using

paired sample Student-t tests and ANOVA. Chi-squared tests were calculated for categorical outcomes, with the correction of McNemar for 2x2 tables. Finally, six univariate general linear models (GLM) were calculated for the three most representative age groups (18-25 years old, 34-45 years old and more than 60 years) in order to know which variables predicted the DASS-21 scores and IER-R scores in each age group. We considered possible confounders and interactions terms (Rutherford, 2011).

All the analyses were complemented with the corresponding effect size statistic: one directly obtained from the statistical program and another one calculated using an online calculator (Lenhard & Lenhard, 2016). The interpretation of Cramer's V as proposed by Cohen depends of the number of degrees of freedom (df) (Cohen, 1988). For the Partial eta-square (η_p^2), the reference values were .01, .06 and > .14 for small, medium and large sizes, respectively.

All results are shown with a significance level of $p < .05$ and all tests were two-tailed. Statistical analysis was performed by using SPSS Statistics 26.0 (IBM SPSS Statistics, New York, United States).

Results

Survey Respondents

A total of 4,139 people completed an online survey. The final sample was composed of 3,524 respondents after a careful cleaning of the database and checking the inclusion criteria.

Most participants came from the geographical areas of Andalusia (39.60%), Galicia (21.40%) and Madrid (13.60%).

Most participants were women (74.20%; 909 men, 2611 women and 4 people who manifested other preferences) with an age range of 18 to 79 for the whole sample ($M_{total} = 39.24$, $SD_{total} = 12.00$; $M_{men} = 41.40$, $SD_{men} = 13.38$; $M_{women} = 38.49$, $SD_{women} = 11.39$). A total of 68.60% of the respondents were married or in a relationship, 24.20% were single, 5.60% were divorced and 1.00% were widowers. Concerning the level of education, 75.80% had at least a university degree, 19.80% completed either professional training or finished upper secondary school, and 3.00% had completed only primary studies.

Considering age ranges, most participants between 18 and 25 years old were women (77.00%) and 70.40% had at least a university degree. Between 26 and 33 years old, 78.70% were women and 83.40% had at least a university degree. Between 34 and 45 years old, 75.00% were women and 78.50% had at least a university degree. Between 46 and 60 years old, 72.50 were women and 72.60% had at least a university degree. Finally, people older than 61 years, 52.5% were women and 72.60% had at least a university degree.

Descriptive Statistics

A total of 16.90% of the participants considered that they had been in direct contact with a material or person infected with COVID-19, and 41.80% of the sample answered "possibly". A total of 3.20% of the sample reported being infected (self-perception, not confirmed) while 28.90% responded maybe yes. Only 3.80% had been quarantined due to suffering the symptoms of a COVID-19 infection. A total of 20.80% considered themselves to be part of a risk group for COVID-19.

Concerning the level of isolation during the quarantine period, up to 53.40% stated that they stayed at home the whole day, and 40.80% went out only for essential reasons (work, shopping, walking their dogs, etc.). A total of 72.40% of the sample reported they had an organized schedule concerning sleep while 69.10% considered that they maintained their general daily routines.

A total of 32.00% of the participants had previously been diagnosed with a mental disorder, mostly anxiety and/or depression. Within those who reported having been diagnosed, 19.70% stated that their symptoms had worsened during the quarantine.

In addition, a total of 22.00% of the sample reported that they were suffering from sleep disturbances at that moment of the survey. 24.00% reported that their level of somatization increased, 10.40% suffered more agoraphobic symptoms than they used to have, and 13.30% showed higher hypochondriac concerns than usual.

Mean Differences by Age Group: Health, Behavioral and COVID-19 Linked Variables

Differences in the scores of the DASS-21 and IES-S and their subscales by age are presented in Table 1. It is remarkable that groups 1 and 2 (from 18 to 25 years old and 26 to 33 years old; $n_{G1} = 458$, $n_{G2} = 729$, respectively) scored significantly higher than groups 4 and 5 (46 to 60 years old and more than 60 years old; $n_{G4} = 749$, $n_{G5} = 204$, respectively) in global DASS-21 while groups 1, 2 and 3 ($n_{G3} = 1358$) scored significantly higher than groups 4 and 5 in the global IES-R.

Regarding self-reported health perception, we found significant differences by age group in self-perceived physical condition ($F(4) = 17.44$, $p < .001$, $d = 0.41$) and self-perceived emotional state ($F(4) = 17.21$, $p < .001$, $d = 0.59$). Young people scored significantly higher than the other groups with respect to physical condition and elderly people scored significantly higher regarding emotional state.

Concerning sleep, 32.80% of the age group from 18 to 25 (G1) years old and 25.70% of the age group from 26 to 33 years old (G2) showed significant increases in sleep disturbances during the quarantine ($X^2(12) = 121.15$, $p < .001$, $V = .11$). A total of 28.20% of G1 and 30.30% of G2 reported increased somatization ($X^2(12) = 93.47$, $p < .001$, $V = .09$). A total of 17.90% within G1 and a total of 13.30% within G2 considered they suffered more claustrophobic symptoms than usual ($X^2(12) = 69.43$, $p < .001$, $V = .08$). 15.90% of the group from 26 to 33 years old and 14.80% of the group aged from 34 to 45 years old reported experiencing more hypochondriac concerns than usual ($X^2(12) = 26.12$, $p < .001$, $V = .05$).

Within the age group from 18 to 25 years old, a total of 30.60% were drinking less alcohol ($X^2(12) = 176.53$, $p < .001$, $V = .13$), 11.40% were smoking less ($X^2(12) = 58.99$, $p < .001$, $V = .07$), and 44.10% were using less drugs than before ($X^2(12) = 59.99$, $p < .001$, $V = .75$). In contrast, within the age group from 34 to 45 years old, 9.20% are smoking more ($X^2(12) = 58.99$, $p < .001$, $V = .07$) and 10.70% are drinking more alcohol than usual ($X^2(12) = 176.53$, $p < .001$, $V = .13$).

A total of 44.10% of the participants in the youngest group are keeping fewer routines than before while 1.90% of the group aged 34 to 45 years old are holding even more routines than usual ($X^2(8) = 73.51$, $p < .001$, $V = .10$). Regarding the maintenance of a sleep schedule, 71.60% of the group aged from 34 to 45 years old and 76.90% of the group aged from 46 to 60 years old were keeping

Table 1
Mean Differences in Psychological Impact of the Event and Depression, Anxiety and Stress for Each Age Group

Variable	Group	Mean	Standard Deviation	Sum of Squares	F	p	Cohen's d	Differences between groups*
Global DASS	1	17.43	13.26	10342.99	17.73	< .001	.24	G1- G4**
	2	16.09	12.70					G1- G5**
	3	14.97	11.77					G2- G4**
	4	13.12	11.81					G2- G5**
	5	10.46	9.66					G3- G4**
	Total	14.87	12.18					G3- G5**
Subscale DASS: Depression	1	5.07	4.69	780.23	11.53	< .001	.28	G1- G3**
	2	4.27	4.24					G1- G4**
	3	3.91	4.02					G1- G5**
	4	3.64	3.96					G2- G4*
	5	3.30	3.33					
	Total	4.04	4.14					
Subscale DASS: Stress	1	8.10	5.72	2572.87	23.78	< .001	.26	G1- G4**
	2	7.61	5.48					G1- G5**
	3	7.29	5.13					G2- G4**
	4	6.18	4.93					G2- G5**
	5	4.64	4.34					G3- G4**
	Total	7.07	5.27					G3- G5**
Subscale DASS: Anxiety	1	4.26	4.49	724.90	10.68	< .001	.16	G1- G4**
	2	4.21	4.42					G1- G5**
	3	3.77	4.04					G2- G4**
	4	3.31	3.98					G2- G5**
	5	2.52	3.02					G3- G5**
	Total	3.75	4.14					
Global IES-R	1	25.33	11.77	8256.51	14.43	< .001	.13	G1- G4**
	2	25.17	12.23					G1- G5**
	3	24.22	11.99					G2- G4**
	4	21.85	12.00					G2- G5**
	5	20.15	11.03					G3- G4**
	Total	23.82	12.05					G3- G5**
Subscale IESR: Hyperactivation	1	5.82	3.89	840.13	13.95	< .001	.16	G1- G4**
	2	5.75	4.03					G1- G5**
	3	5.47	3.91					G2- G4**
	4	4.84	3.80					G2- G5**
	5	3.94	3.33					G3- G5**
	Total	5.35	3.91					
Subscale IESR: Evitation	1	10.49	4.66	1478.12	17.64	< .001	.26	G1- G3**
	2	9.87	4.65					G1- G4**
	3	9.56	4.58					G1- G5**
	4	8.54	4.49					G2- G4**
	5	8.39	4.36					G2- G5**
	Total	9.46	4.62					G3- G4**
Subscale IESR: Intrusions	1	9.03	5.45	768.98	6.48	< .001	.01	G2- G4**
	2	9.55	5.74					G2- G5**
	3	9.19	5.43					
	4	8.46	5.31					
	5	7.82	4.95					
	Total	9.01	5.46					

Note: (N total = 3524). G1- 18 to 25 years old (n = 458), G2 - 26 to 33 years old (n = 729), G3- 34 to 45 years old (n = 1358), G4 - 46 to 60 years old (n = 749) and G5 - more than 60 years old (n = 204).

* Bonferroni correction. *p < .05. ** p < .01

significantly better routines when compared to other groups; nevertheless, 11.10% of those aged 18 to 25 years old and 9.30% of those aged 34-45 years old reported a significant worsening of their sleep routines ($X^2(12) = 59.99, p < .001, V = .07$).

Table 2 reflects the mean differences calculated by a Chi-Squared test concerning those variables regarding COVID-19

contact and how participants are coping with the pandemic. As stated, the youngest group reports spending more time at home than the other groups. The oldest group is the one with a lower self-perception of being infected, while the groups aged from 26-33 and 34 to 45 years old are the ones receiving more psychological support during the pandemic.

Table 2
Exposure and Coping with COVID-19: Mean Differences by Age Group

	χ^2	Df	P	Cramer's V	%
Quarantine	62.32	12	< .001	.08	Not going out of the house - G1 (66.80%) Going out for essential reasons (work, shopping...) - G4 (47.40%)
I've moved house because of COVID-19	153.02	12	< .001	.21	I have changed - G1 (34.80%) I have changed - G2 (26.20%)
Self-perception of being infected	24.32	8	< .001	.06	I think I am not infected - G5 (79.90%)
Psychological support during the quarantine	21.83	4	< .001	.08	Yes - G2 (8.60%) Yes - G3 (7.80%)
Concern about the possibility of getting infected or die	13.60	4	< .001	.06	I'm worried about it - G4 (17.60%) I'm worried about it - G5 (5.00%)
Concern about the isolation	56.20	4	< .001	.13	I'm worried about it - G1 (87.10%) I'm worried about it - G2 (78.70%)
Concern about personal economic troubles	16.08	4	< .001	.07	I'm worried about it - G1 (21.10%) I'm worried about it - G2 (17.40%)
Concern about the collapse of the health system	5.77	4	.220	.04	No differences between age groups
Concern about the lack of food	14.39	4	< .001	.06	I'm not worried about it - G3 (35.10%)
Concern about the lack of grooming tools	18.07	4	< .001	.07	I'm worried about it - G4 (69.70%) I'm not worried about it - G3 (37.80%)
Concern about the health of family and friends	9.39	4	.050	.05	No differences between age groups
Concern about the loneliness	21.43	4	< .001	.08	I'm worried about it - G1 (74.50%) I'm worried about it - G5 (76.5%) I'm not worried about it - G3 (34.70%)
Concern about the psychological impact in those we are in charge of	12.40	4	.010	.06	I'm not worried about it - G4 (76.50%)

Note: More significant concerns are shown ($\tau > 1.96$) divided by age group.
Note: G1- 18 to 25 years old, G2 - 26 to 33 years old, G3- 34 to 45 years old, G4 - 46 to 60 years old and G5 - more than 60 years old

Univariate General Linear Models by Age Group

In the range age from 18 to 25 years old, the model proposed for explaining the DASS-21 scores includes routines during the day ($\eta^2_p = .03$), gender ($\eta^2_p = .04$), level of education ($\eta^2_p = .02$), alcohol consumption ($\eta^2_p = .03$), physical condition ($\eta^2_p = .03$), concern about food shortages ($\eta^2_p = .02$), concern about loneliness ($\eta^2_p = .03$) and concern that they are at risk of catching COVID-19 ($\eta^2_p = .03$). A total of 448 people were considered for the model, which explains 16% of the variance in DASS-21. The model for IES-R scores includes gender ($\eta^2_p = 0.07$), physical condition ($\eta^2_p = .03$), concern about loneliness ($\eta^2_p = .02$) and whether or not they consider themselves at risk of catching COVID-19 ($\eta^2_p = .03$). A total of 457 people were considered for the model, which explains 13.20% of the variance in IES-R. All the variables in both models were significant (see Table 3). Models parameters are presented in Table 4, in which we can see the significant categories of each predictive variable.

In the range age from 34 to 45 years old, the model proposed for explaining the DASS-21 scores includes: gender, considering yourself at risk for COVID-19 ($\eta^2_p = .03$), daily routine, smoking, alcohol use ($\eta^2_p = .02$), physical condition ($\eta^2_p = .06$), being infected by COVID-19 and concern about getting sick or dying. A total of 1383 people were considered for the model, which explains 18% of the variance in DASS-21. The model for IES-R scores includes gender ($\eta^2_p = .04$), physical condition ($\eta^2_p = .03$), considering

themselves to be at risk of catching COVID-19 ($\eta^2_p = .03$), being infected by COVID-19 ($\eta^2_p = .01$), alcohol consumption ($\eta^2_p = .03$), education ($\eta^2_p = .02$) and people whom they live with (partial eta-square = .01). A total of 1226 people were considered for the model, which explains 16% of the variance in IES-R (see Table 5 for both models). Models parameters are presented in Table 6.

In people greater than 60 years old, the model proposed for explaining the DASS-21 scores consider a total of 204 people and explaining 21% of the variance in DASS-21. Ordered by predicted power, the included variables are gender ($\eta^2_p = .10$), daily routines ($\eta^2_p = .09$) and smoking ($\eta^2_p = .04$). The model for IES-R scores, also considering 204 people and explaining 20% of the variance in IES-R, includes gender ($\eta^2_p = .10$), considering themselves at risk for COVID-19 ($\eta^2_p = .03$) and smoking ($\eta^2_p = .10$) (see Table 7). Models parameters are presented in Table 8.

It is important to mention that symptom variables such as somatization, agoraphobia, hypochondria, sleeping troubles and diagnosis of a mental health disease were not included because of collinearity problems. Possible interactions between predicted variables did not resulted statistically significant neither.

Discussion

In agreement with previous research (Wang et al., 2020), in our study, women and uneducated people were more likely to have worse psychological responses to the pandemic. Concerning the

Table 3
Univariate General Linear Model for Predicting DASS-21 and IES-R in the Range Age from 18 to 25

	Sum of Squares	Df	Mean Square	F	P	η^2_p
DASS-21						
Corrected model	14679.29	16	917.46	6.15	< .001	.19
Intersection	14204.86	1	14204.86	95.28	< .001	.18
Gender	2538.61	1	2538.61	17.03	< .001	.04
Routine	1959.85	2	979.92	6.57	< .001	.03
Physical condition	1650.09	2	825.05	5.53	< .001	.03
Education	1514.61	4	378.65	2.54	.040	.02
Alcohol consumption	2119.28	3	< .001	< .001	< .001	.03
Concern about loneliness	1742.37	1	< .001	< .001	< .001	.03
Concern about food shortage	969.33	1	969.33	6.50	.010	.02
At risk for COVID-19	1782.63	2	891.31	5.98	< .001	.03
Error	64253.99	431	149.08			
Total	214528.00	448				
Corrected Total	78933.23	447				
IES-R						
Corrected model	9073.98	6	1512.33	12.55	< .001	.14
Intersection	27289.68	1	27289.68	226.52	< .001	.34
Gender	3861.49	1	3861.49	32.05	< .001	.07
At risk for COVID-19	1616.95	2	808.48	6.71	.001	.03
Concern about loneliness	1034.48	1	1034.48	8.59	.004	.02
Physical condition	1631.14	2	815.57	6.77	.001	.03
Error	54213.38	450	120.47			
Total	356259.00	457				
Corrected Total	63287.36	456				

Notes: η^2_p = partial eta-square, considering reference values of .01, .06 and > .14 as small, medium and large sizes, respectively (Cohen, 1988). $R\text{-square}_{\text{DASS-21}} = .19$ (adjusted R-square = .16). $R\text{-square}_{\text{IES-R}} = .14$ (adjusted R-square = .13)

age factor, the scarce available research points at diverse and different results. Our study was conducted in an occidental country and within the first 15 days of quarantine so that it can evaluate early responses. At that time, young participants showed a stronger psychological impact of the pandemic and had significantly worse mental health states. People from 18 to 33 years old showed more hyperactivation and more evitacion, but intrusions were more significant in those aged from 26 to 33 years old. The participants aged from 18 to 45 years old were more anxious and more stressed than those older than 60 years old. Concerning depression, those aged from 18 to 25 years old scored significantly higher than all the groups older than 45. This differs from some research coming from China (Wang et al., 2020). Italian (Mazza et al., 2020) and Spanish young people were more psychologically affected than elderly people, in opposition to Chinese people, which points at a cultural factor.

The lack of daily routines during the quarantine was more common within the youngest group, where most participants are students, their main activity was suddenly interrupted and many uncertainty around it appeared. Furthermore, the fact that young people have moved into their parents' houses to be quarantined while older people stayed at their houses may also be a stress factor. In our study, young people also reported higher levels of "staying at home the whole day", and so their social contact was particularly decreased. Although this generation is very used to social media, the decrease in face-to-face interactions may be stressful for them (Fegert et al., 2020). Nevertheless, loneliness was not a concern

only within this group but was also a concern within the more than 60 years old group. According to the responses, age was not related to concerns about the collapse of the health system and the worry for family and friends. Furthermore, keeping organized routines can be considered a preventive factor for all ages. Concerning toxic habits, the increase in the smoking levels was predictive for worse mental health within the youngest and the oldest groups, while the increases in drinking were predictive for stronger psychological impact in those aged from 34 to 45 years old, which is also useful for future prevention strategies.

In Spain, people aged more than 60 years old have lived either during the Spanish civil war or the posterior period of the dictatorship that lasted until 1975. These experiences are indeed traumatic but they may have also helped them to be able to relativize the present crisis by a resilience mechanism (Bonanno, 2004). High levels of resilience had been previously observed in elderly people (Ko et al., 2006) and some studies have pointed at religion as an important factor (da Silva Júnior et al., 2019).

It is interesting to note that although elderly people are more vulnerable to suffering from serious health conditions due to COVID19 or even dying, but in our sample this issue did not make them consider themselves as already being infected when compared to other age groups. Nevertheless, when they consider themselves at risk, this variable was predictive of more psychological impact.

Negative psychological responses to traumatic events can be prevented by early mental health care. Age considerations must be taken on account in order to design evidence driven strategies

Table 4
Parameters in the Univariate General Lineal Model for Predicting DASS-21 and IES-R from 18 to 25

Parameter	B	SE	T	P	95% Confidence Interval		η^2_p
					Lower limit	Upper limit	
DASS-21							
Intersection	12.05	2.54	4.74	< .001	7.05	17.05	.05
Routine							
Half	3.82	1.35	2.83	< .001	1.17	6.47	.02
No	5.84	1.99	2.94	< .001	1.93	9.75	.02
Yes				Reference			
Gender							
Men	-5.84	1.42	-4.13	< .001	-8.62	-3.06	.04
Woman				Reference			
Education							
Primary studies or lower	9.36	5.76	1.63	.110	-1.95	20.68	< .01
Professional training	6.34	2.53	2.51	.010	1.37	11.31	.01
Secondary School	4.15	2.05	2.02	.041	0.12	8.17	< .01
University	1.63	1.71	.952	.340	-1.73	4.99	< .01
Master. Postgraduate. Doctorate				Reference			
Alcohol consumption							
Same	0.54	1.70	0.32	.75	-2.81	3.88	< .0001
More	7.47	3.44	2.17	.03	0.71	14.24	.01
Less	4.35	1.33	3.26	< .001	1.73	6.97	.02
Don't drink				Reference			
Physical condition							
1-3	1.84	5.14	0.36	.72	-8.26	11.94	< .0001
4-7	4.37	1.31	3.33	< .001	1.79	6.95	.03
8-10				Reference			
Concern about loneliness							
No	-7.46	2.18	-3.42	< .001	-11.75	-3.17	.03
Yes				Reference			
Concern about food shortage							
No	5.38	2.11	2.55	.01	1.23	9.53	.02
Yes				Reference			
At risk for COVID-19							
No	-0.77	1.99	-0.39	.70	-4.69	3.14	< .0001
Maybe	6.51	2.73	2.39	.02	1.16	11.87	.01
Yes				Reference			
IES-R							
Intersection	25.65	1.78	14.42	< .001	22.15	29.14	.32
Gender							
Men	-6.94	1.23	-5.66	< .001	-9.35	-4.53	.07
Woman				Reference			
Physical condition							
1-3	4.43	4.56	0.97	.33	-4.53	13.40	< .01
4-7	4.18	1.15	3.63	< .001	1.91	6.44	.03
8-10				Reference			
Concern about loneliness							
No	-3.46	1.18	-2.93	.004	-5.78	-1.14	.02
Yes				Reference			
At risk for COVID-19							
No	0.32	1.75	0.18	.85	-3.12	3.76	< .0001
Maybe	7.03	2.39	2.94	.003	2.33	11.74	.02
Yes				Reference			

Notes: $b \eta^2_p$ =Partial eta square, considering as reference values .01, .06 and > .14 as small, medium and large sizes respectively

in mental health since the risk factors and main concerns differ according to age. Furthermore, in the concrete case of the

Spanish population, people aged from 18 to 25 years old should be considered a vulnerable group and specific programs could be

Table 5
Univariate General Linear Model for Predicting DASS-21 and IES-R in the Range Age from 34-45

	Sum of Squares	Df	Mean Squared	F	P	η^2_p
DASS-21						
Corrected model	36959.90	16	2309.99	20.40	< .001	.19
Intersection	50925.01	1	50925.00	449.63	< .001	.25
Gender	2351.35	1	2351.35	20.76	< .001	.02
Person at risk for COVID	5291.70	2	2645.85	23.36	< .001	.03
Routine	1972.23	2	986.12	8.71	< .001	.01
Smoking	1895.56	3	631.85	5.58	< .001	.01
Alcohol consumption	2755.93	3	918.64	8.11	< .001	.02
Physical condition	10237.96	2	5118.98	45.20	< .001	.06
Infected by COVID	1186.05	2	593.03	5.24	< .001	.01
Concern about get sick or died	1301.88	1	1301.88	11.50	< .001	.01
Error	154714.71	1366	113.26			
Total	501531.00	1383				
Corrected Total	191674.60	1382				
IES-R						
Corrected model	29962.25	18	1664.57	13.93	< .001	.17
Intersection	102959.69	1	102959.69	861.33	< .001	.42
Physical condition	4124.29	2	2062.14	17.25	< .001	.03
People living together	1147.75	4	286.94	2.40	.048	.01
Person at risk for COVID	4107.52	2	2053.76	17.18	< .001	.03
Infected by COVID	1609.23	2	804.61	6.73	.001	.01
Alcohol consumption	3645.06	3	1215.02	10.17	< .001	.03
Studies	2723.92	4	680.98	5.70	< .001	.02
Gender	6147.23	1	6147.23	51.43	< .001	.04
Error	144279.01	1207	119.54			
Total	883204.00	1226				
Corrected Total	174241.26	1225				

Notes: η^2_p = partial eta-square, considering reference values of .01, .06 and > .14 as small, medium and large sizes, respectively (Cohen, 1988). R-square_{DASS-21} = .19 (adjusted R-square = .18). R-square_{IES-R} = .18 (adjusted R-square = .17)

Table 6
Parameters in the Univariate General Lineal Model for Predicting DASS-21 and IES-R from 34 to 45

Parameter	B	SE	T	p	95% Confidence Interval		η^2_p
					Lower limit	Upper limit	
DASS-21							
Intersection	13.54	0.94	14.40	< .001	11.69	15.38	.13
Gender							
Men	-3.12	0.68	-4.556	< .001	-4.46	-1.77	.02
Woman				Reference			
Person at risk for COVID							
No	0.30	0.78	0.391	0.69	-1.22	1.83	< .01
I do not know	6.18	1.05	5.895	< .001	4.12	8.23	.02
Yes				Reference			
Routine							
Half	2.08	0.70	2.95	< .001	0.70	3.45	< .01
No	4.35	1.30	3.35	< .001	1.80	6.89	< .01
Yes				Reference			
Smoking							
Same	-1.40	1.02	-1.37	.17	-3.40	0.60	< .01
More	3.46	1.02	3.38	< .001	1.45	5.47	< .01
Less	-1.88	1.45	-1.30	.19	-4.72	0.96	< .01
I don't smoke				Reference			

Alcohol consumption							
Same	-0.52	0.70	-0.74	.46	-1.88	0.85	< .01
More	4.01	0.99	4.05	< .001	2.07	5.95	.01
Less	-1.38	0.93	-1.49	.14	-3.20	0.44	< .01
Don't drink	Reference						
Physical condition							
1-3	11.46	1.61	7.10	< .001	8.30	14.63	.04
4-7	4.60	0.61	7.52	< .001	3.40	5.80	.04
8-10	Reference						
Infected by COVID							
No	-2.05	0.64	-3.20	< .001	-3.30	-0.79	< .01
Yes	-0.64	1.68	-0.38	.71	-3.94	2.67	< .01
Maybe	Reference						
Concern about get sick or die							
No	-2.44	0.72	-3.39	< .001	-3.85	-1.03	< .01
Yes	Reference						
IES-R							
Intersection	23.87	1.30	18.24	< .001	21.31	26.44	.22
Physical condition							
1-3	7.39	1.81	4.09	< .001	3.84	10.93	.01
4-7	3.25	0.66	4.89	< .001	1.94	4.55	.02
8-10	Reference						
Person at risk for COVID							
No	-1.50	0.83	-1.80	.07	-3.14	0.13	< .01
I do not know	4.26	1.15	3.68	< .001	1.99	6.53	.01
Yes	Reference						
People living at home							
Partner. children and other family	-1.12	1.55	-0.72	.47	-4.17	1.93	< .0001
Partner	-0.67	1.06	-0.63	.52	-2.77	1.42	< .0001
Partner. Children	0.60	0.96	0.62	.53	-1.28	2.48	< .0001
Parents	3.48	1.59	2.19	.02	0.36	6.61	< .01
Alone	Reference						
Alcohol consumption							
Same	-0.60	0.75	-0.79	.42	-2.09	0.88	< .01
More	4.81	1.06	4.53	< .001	2.73	6.90	.02
Less	-1.65	1.01	-1.63	.10	-3.64	0.33	< .01
Don't drink	Reference						
Education							
Primary studies or lower	2.63	1.86	1.41	.15	-1.02	6.29	< .01
Professional training	2.47	1.06	2.32	.02	0.38	4.57	< .01
Secondary School	2.51	1.31	1.91	.05	-0.06	5.09	< .01
University	3.33	0.71	4.67	< .001	1.93	4.73	.02
Master. Postgraduate. Doctorate	Reference						
Infected by COVID							
No	-2.50	0.70	-3.57	< .001	-3.88	-1.13	.01
Yes	-0.22	1.84	-0.12	.90	-3.84	3.38	< .01
Maybe	Reference						
Gender							
Men	-5.27	0.73	-7.17	< .001	-6.71	-3.83	.04
Woman	Reference						
Notes: $b \eta_p^2$ =Partial eta square, considering as reference values .01, .06 and > .14 as small, medium and large sizes respectively							

implemented based on their particular needs. This does not mean that older people do not need support. In fact, those aged from 34 to 45 years old are the group receiving the most psychological support. It is possible that at that age they are more used to demanding help when needed as with younger people. Longitudinal studies are needed in order to check if these preliminary data change over time.

Finally, some strengths and limitations of the study must be taken into account. The use of snowball sampling through social media may have conditioned the characteristics of the sample (with a larger number of women when compared to men, higher education of the participants when compared to the general population and greater representation of young people as compared to old people, perhaps because of access to social media). Because of this, the sample cannot

be considered representative of the Spanish general population, but its considerable size makes it interesting as a representation of a community sample. The use of self-reported measures is also a limitation. These aspects are shared with other studies carried out

at early stages of the pandemic and during the lockdown (Qiu et al., 2020; Wang et al., 2020). The main strengths of the study are that it was carried out at a very early stage of the pandemic, the sample size and also the focus on age as a useful and original approach.

Table 7
Univariate General Linear Model for Predicting DASS-21 and IES-R for People > 60 Years Old

	Sum of Squares	Df	Mean Squared	F	p	η^2_p
DASS-21						
Corrected model	4456.66	6	742.78	10.08	< .001	.24
Intersection	8119.03	1	8119.03	110.22	< .001	.36
Gender	1612.30	1	1612.30	21.89	< .001	.10
Routine	1462.95	2	731.48	9.93	< .001	.09
Smoking	665.92	3	221.97	3.01	.031	.04
Error	14511.94	197	73.67			
Total	41271.00	204				
Corrected Total	18968.60	203				
IES-R						
Corrected model	5576.62	6	929.43	9.61	< .001	.23
Intersection	21108.31	1	21108.31	218.24	< .001	.53
Gender	2076.03	1	2076.03	21.46	< .001	.10
Smoking	2078.75	3	692.91	7.16	< .001	.10
Person at risk for COVID	626.83	2	313.41	3.24	.041	.03
Error	19053.66	197	96.71			
Total	107475.00	204				
Corrected Total	24630.28	203				

Notes: η^2_p = partial eta-square, considering reference values of .01, .06 and > .14 as small, medium and large sizes, respectively (Cohen, 1988). R-square_{DASS-21} = .24 (adjusted R-square = .21). R-square_{IES-R} = .23 (adjusted R-square = .20)

Table 8
Parameters in the Univariate General Lineal Model for Predicting DASS-21 and IES-R for People > 61

Parameter	B	SE	T	p	95% Confidence Interval		η^2_p
					Lower limit	Upper limit	
DASS-21							
Intersection	11.23	0.95	11.82	< .001	9.39	13.11	.42
Gender							
Men	-5.70	1.22	-4.68	< .001	-8.10	-3.30	.10
Woman					Reference		
Routine							
Half	5.69	1.51	3.77	< .001	2.71	8.67	.07
No	7.27	2.51	2.90	< .001	2.32	12.22	.04
Yes					Reference		
Smoking							
Same	-0.95	2.19	-0.43	.670	-5.27	3.37	< .01
More	10.00	3.40	2.95	< .001	3.30	16.70	.04
Less	0.11	3.11	0.03	.971	-6.03	6.24	< .01
I don't smoke					Reference		
IES-R							
Intersection	23.95	1.16	20.62	< .001	21.66	26.24	.68
Gender							
Men	-6.58	1.42	-4.63	< .001	-9.38	-3.78	.10
Woman					Reference		

Person at risk for COVID-19							
No	-3.83	1.70	-2.25	.020	-7.18	-0.47	.03
Maybe	1.62	2.18	0.74	.450	-2.69	5.93	< .01
Yes	Reference						
Smoking							
Same	-5.80	2.51	-2.31	.022	-10.75	-0.85	.03
More	14.76	3.83	3.84	< .001	7.19	22.33	.07
Less	-1.36	3.60	-0.37	.706	-8.46	5.74	< .01
I don't smoke	Reference						

Notes: $b \eta^2_p$ =Partial eta square, considering as reference values .01, .06 and > .14 as small, medium and large sizes respectively

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