

Gender-related differences in the psychological impact of confinement as a consequence of COVID-19 in Spain

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Abstract

The Covid-19 pandemic has caused a significant effect on our mental health. In this research, we aim to analyze gender-related differences in the psychological impact of the Covid-19 lockdown in Spain. A cross-sectional study was conducted through an online survey (n=1,041) with two measurements: at two and five weeks after the declaration of the state of emergency and stay-at-home order in Spain. The presence of depressive symptoms, anxiety and post-traumatic stress disorder (PTSD), perceived loneliness and spiritual well-being were evaluated. Linear mixed models with random slopes were calculated for each variable in the study in order to analyze the effect of longitudinal measures and interaction with gender. Women showed more symptoms of depression, anxiety and PTSD, more feelings of loneliness and less spiritual well-being compared to men. The psychological impact caused by the pandemic is maintained over time and increases for depression. Covid-19 appears to be having a greater psychological impact on women than men. More attention needs to be paid to this issue to establish the causes and reduce these differences.

Key words: Care; Covid-19; Gender inequalities; Housework; Lockdown.

Introduction

Covid-19 is a global pandemic, its effects have been felt throughout the world. On March 14, a state of alarm¹ was declared in Spain. This longitudinal study consists of two data collection points. In the first, at the end of March, citizens were confined to their homes for 2 weeks. During this period, it was only possible to leave home to buy essential items or to go to work. The second two-week period was much more restrictive. From March 30 to April 12, 2020, there was total suspension of all non-essential employment activity. This exceptional situation of confinement was an experience with important psychological potential, including depressive symptoms, psychological distress, symptoms of post-traumatic stress disorder (PTSD), higher levels of stress and anxiety, insomnia and irritability, loneliness, and so on (Balluerka et al. 2020; Brooks, et al., 2020; Bu, Steptoe, & Fancourt, 2020; González-Sanguino et al. 2020; Ko et al. 2020; Li et al., 2020; Lima et al., 2020; Wang et al. 2020a; Romero et al. 2020; Shelef & Zalsman, 2020). The outbreak has also greatly increased the need for care both outside and inside homes. Families with dependents (children and dependents) who also work (in the workplace or homeworking) are one of the groups most affected by the burden of confinement. Within families, women generally bear a greater share of the care burden as they are used to dealing with this (Manzo & Minello, 2020; Urdinola & Tovar, 2020; Chesley, 2017). Historically, women have provided on average 3.3 times more care than men at home (Addati et al., 2018). Additionally, in times of crisis and social isolation, the risk of

¹ The state of alarm in Spain is in force "when extraordinary circumstances make it impossible to maintain normality through the ordinary powers of the competent authorities", as established by the Organic Law. 4/1981, of June 1 of States of Alarm, Exception and Siege, which establishes the corresponding powers and limitations, although they are also included in the Spanish Constitution in its article 116. The state of alarm allows the limitation of the rights of free movement or permanence of persons at determined times and places, to carry out temporary requisitions of all types of properties, to temporarily intervene and occupy workshop industries or factories, to limit or ration the use of services or consumption, as well as to give the necessary orders to ensure the supply of markets and the functioning of services.

domestic abuse increases (Peterman et al., 2020; Usher et al., 2020). Consequently, women are at risk of paying a higher price during the Covid-19 crisis than men due to the enormous physical and mental workload they must take on (Blaskó & Papadimitriou, 2020; Wenham et al., 2020).

Some studies have already reported on the differences between men and women in relation to the psychological impact of the pandemic and the presence of symptoms of anxiety and depression (González-Sanguino et al., 2020; Özdin & Bayrak Özdin, 2020; Wang, Pan, Wan, Tan, Xu, Ho, et al., 2020; Wang, Pan, Wan, Tan, Xu, McIntyre, et al., 2020; Zhang & Ma, 2020). With regard to the confinement of individuals, the few studies that have been conducted indicate that there is a strong relationship between being a woman and experiences of loneliness during the Covid-19 crisis (Losada-Baltar et al., 2020). Spiritual well-being is another variable in which gender differences are observed, with women showing the lowest level of well-being (González-Sanguino et al., 2020).

For the moment, and despite the negative consequences that the situation is having on women, no longitudinal studies have been published for gender-related differences in the psychological impact (mental health, loneliness and spiritual well-being variables) of confinement in Spain. The aim of this longitudinal study is to examine the role of gender in the psychological impact of the Covid-19 pandemic in Spain at two different moments in time, after two and five weeks of quarantine.

Methods

Design

The longitudinal study took place between March 21 and April 27, 2020 and consisted of two measurements, one from March 21 to 29 and the other from April 13 to 27. A survey was developed to be completed online using the Google Forms platform with the aim of reaching the maximum population possible. Data was collected online. The evaluation

also included a section with information regarding the research, as well as the consent form to participate in the study and acceptance of the data protection laws regarding regulation (EU) 2016/679 of the European Parliament and of the Council, of April 27, 2016, on the protection of personal data. The survey contained 80 questions and the average time for completion was about 7 minutes. At the end of the first survey, an independent section was included informing the respondents that they could participate in a second evaluation, if they wished. The study was approved by the Deontological Commission of the Faculty of Psychology of the Complutense University of Madrid with reference "pr_2019_20_029".

Participants

In the first evaluation, participants were recruited by sending the survey through various social network channels (distribution through WhatsApp lists, email, Facebook, Twitter) and on the website www.contraelestigma.com. The final sample, obtained through the snowball method, contained 3,480 participants from the general population. Those people who agreed to participate in the second evaluation (N = 1,041) were directly contacted by email.

The inclusion criteria were: 1. To be over 18 years old; 2. To be living in Spain during the Covid-19 health emergency; 3. To have agreed to participate in the second evaluation of the study.

Variables and instruments

The following variables and instruments were included in the assessment:

- Sociodemographic variables: questions developed ad hoc allowed data collection on age (subsequently grouped into clusters: 18-30, 31-59, 60-80); gender identity (man, woman, other); relationship; educational level; profession; employment situation; economic situation; importance of religious beliefs; presence of medical diagnosis.

- Loneliness: measured by the 3-item version of the UCLA Loneliness Scale (UCLA-3) (Russell, 1996), in its Spanish version (Velarde-Mayol et al., 2016) and self-applied. A single item of loneliness is also included (Campaign to End Loneliness, 2015).
- Spiritual well-being: evaluated through the Spanish version of the Functional Assessment of Chronic Illness Therapy Spiritual Well-Being (FACIT-Sp12) (Cella et al., 1998). This scale explores three dimensions of spiritual well-being: meaning, peace and faith. These dimensions come together in two subscales: meaning/peace and faith. We selected 4 items from the meaning/peace subscale.
- Patient Health Questionnaire 2 (PHQ-2) (Kroenke et al., 2009), in its Spanish version (Diez-Quevedo et al., 2001). This is a brief self-report questionnaire that addresses the frequency of depressive symptoms.
- Generalized Anxiety Disorder Scale (GAD-2) (Spitzer et al., 2006), Spanish version (Garcia-Campayo et al., 2014).
- Civilian version of the Post-traumatic Stress Disorder Checklist (PCL-C) (Weathers et al., 1993). This questionnaire was used to detect post-traumatic symptoms. A reduced version was chosen (Lang et al., 2012; Lang & Stein, 2005).

Analysis

Means and their confidence intervals (95%) were calculated for all variables in the study, for women and men. Linear mixed models (LMM) with random slopes (Time nested to Subjects) were calculated for each variable in the study in order to analyze the effect of longitudinal measures, and the interaction with gender. The maximum likelihood estimation (MLE) method was used and results are provide as fixed and random effects. The analyses have been performed using R (v3.5.6) with the nlme package.

Results

Characteristics of the sample

The sample (N = 1,041) contained a majority of women (81%), with an average age of 39.39 years. In relation to gender, all of the respondents classified themselves as "male" or "female". Moreover, 44% of the participants had children, 56% declared that they had a partner and shared their home with them, and 38% were engaged with university studies. Table 1 shows the sociodemographic characteristics of the sample.

Gender and mental health

The representation of means and their confidence intervals (95%) for women and men in the mental health variables is found in figure 1. Table 2 shows the means and differences in the scores of the variables at the two measurement intervals, indicating their significance.

Linear mixed models showed a significant change between the two temporal measurements (T0 and T1) for the depression variable (PHQ-2), $F(1, 1040)=58.95$, $p<0.001$; but not for anxiety (GAD-2), $F(1, 1040) = 0.10$, $p=0.751$ or PCL-C, $F(1,1040) = 1.78$, $p=0.181$. The standard deviation for random and residual terms were Time= 1.05, Residual=0.54; Time= 1.20, Residual=0.60; and Time= 1.49, Residual=0.71, for each model.

Gender and Depression: For the depression variable (PHQ-2), significant differences were also found between women and men, $F(2, 1040) = 36.14$, $p<0.001$ but not for the interaction with the two time measurements, $F(2, 1040) = 1.75$, $p<0.186$. Figure 1 shows how the means increase in women and men, showing a greater increase in depression between the T0 and T1 measurements in women.

Gender and Anxiety: A significant effect for gender in the longitudinal measurements was also found in the anxiety variable (GAD-2), $F(2, 1040)= 46.39$, $p<0.001$, but not for the

interaction with the two time measurements, $F(2, 1040) = 0.15$, $p < 0.702$. The graph in Figure 1 shows significantly higher values of the variable for women compared to men. Figure 1 shows how the means decrease in men and women, registering a greater decrease in anxiety between the T0 and T1 measurements in men.

Gender and PTSD: The PCL-C measurement shows a significant effect for gender, $F(2,1040) = 42.11$, $p < 0.001$ but not between the two time measurements $F(2, 1040) = 0.23$, $p = 0.633$. The graph shows significant differences between women and men, with the latter registering lower scores. Figure 1 shows how the means decrease in men and women, registering a greater decrease in post-traumatic symptoms between the T0 and T1 measurements in women.

Gender and Loneliness

The representation of means and their confidence intervals (95%) for women and men in the Loneliness variables can be seen in Figure 2.

Models similar to the previous ones were calculated for the variables of Loneliness UCLA-3 and the Single item of loneliness showing a change between the T0 and T1 measurements for UCLA-3 $F(1, 1040) = 4.2$, $p < 0.05$ and the Single item for Loneliness, $F(1,1040) = 4.14$, $p < 0.05$. The standard deviation for random and residual terms was Time = 1.08, Residual = 0.58; and Time = 0.49, Residual = 0.26, for each model.

The variable UCLA-3 and the Single item of loneliness showed a strong gender effect $F(2, 1040) = 7.83$, $p < 0.01$; $F(2, 1040) = 7.36$, $p < 0.01$. The graph shows higher values of loneliness for women. Average scores on both measures increase in women over time, while average scores in men decrease at UCLA-3 and increase in the Single item for Loneliness. The increase in loneliness is higher in women than in men, and the difference shows a significant effect of the interaction with the longitudinal measures in the UCLA-

3, $F(2, 1040)=5.69$, $p=0.5$, but not in the Single item for Loneliness., $F(2, 1040)=0.02$, $p=0.887$.

Gender and Spiritual Well-being

The representation of means and their confidence intervals (95%) for women and men in the Spiritual well-being variable is found in Figure 2.

Models similar to the previous ones were calculated for the spiritual well-being variable showing no change between the T0 and T1 measurements for FACIT variable $F(1, 1040) = 0.75$. $p=0.386$. The standard deviation for random and residual terms was Time= 1.81, Residual=1.10, for this model.

Spiritual well-being (FACIT) shows clear differences between women and men, with men showing significantly greater well-being, $F(2, 1040)=13.15$, $p<0.001$. Figure 2 shows how the means increase in men and decrease in women, with no obvious interaction effect, $F(2, 1040)=0.72$, $p=0.395$.

Discussion

This is the first study in the scientific literature that reports the different psychological impact of Covid-19 on mental health, loneliness and spiritual well-being variables as a function of gender, over time, in the Spanish population.

Data shows that in the first measurement (after two weeks of confinement), women were the ones that suffered the greatest impact in all the variables studied and the lowest level of spiritual well-being. In the second measurement (after five weeks of confinement), data shows how, over time, depressive symptomatology increased significantly in men and women, while anxiety and PTSD do not show statistically significant changes. Women's levels of loneliness increased and spiritual well-being decreased, showing significant changes. Men presented fewer depressive, anxious and PTSD symptoms, less loneliness

and greater well-being in both measurements. Women suffered a greater impact from prolonged confinement in all the studied variables.

The longitudinal results are consistent with previous studies that indicate that women are affected to a greater extent with regard to psychological impact of the pandemic (González-Sanguino et al. 2020; Zhang and Ma 2020; Moreira et al. 2020; Qiu et al. 2020; Wang et al. 2020b; Özdin & Bayrak Özdin, 2020), loneliness (Losada-Baltar et al., 2020) and spiritual well-being (González-Sanguino et al., 2020).

One explanation for these results may be that the prevalence of depression and anxiety is generally higher in women (Asher et al., 2017; Salk et al., 2017), but it can also indicate that they are suffering from a greater care burden due to the increased need for care both outside and inside the home during lockdown (McLaren, Wong, Nguyen & Mahamadachchi, 2020; Graves, 2020). In Spain, attention has already been drawn to this issue, with a survey carried out during the pandemic on more than 12,000 mothers showing the emotional and logistical difficulties that the lack of work-life balance caused for mothers (Club de las Malas Madres, 2020). In addition, it is also worth noting the increase in domestic violence that has occurred during the alarm situation, with the impossibility for the woman to physically move away from the aggressor and the lack of support resources (Peterman et al., 2020; Usher et al., 2020; Campbell, 2020), which may also explain the differences in the results presented.

To mitigate these harmful consequences, an awareness of the particular circumstances of women and the gendered policy responses in all policy areas are needed (Wenham et al., 2020). Blaskó, Papadimitriou, & Manca (2020) point out that the outbreak has also created new opportunities that could cause a shift towards a more even distribution of unpaid labor between men and women. They suggest specific actions to achieve a more equitable distribution of unpaid work between men and women. These include providing

more childcare, reducing working hours due to family commitments, addressing the needs of single mothers, raising awareness of gender differences and the burden on women, encouraging measures to support mothers' entry into the workforce, as well as strengthening the role of women's shelters and raising awareness of gender-based violence.

The Covid-19 crisis could be seen as an opportunity to challenge social dynamics in a way that benefits both women and men. In this sense, for Betron et al. (2020), the Covid-19 crisis is an opportunity to establish long-term flexible work policies, upend men's mentality as 'heads of households' and breadwinners, and promote shared caregiving roles between women and men. These authors point to the need for a gender-focused strategy in the Covid-19 response to mitigate the impacts of the pandemic.

The study has some limitations. The sample chosen, using the snowball method, may not represent the Spanish population and the use of the online tool limits access to persons who use this technology to a lesser degree, such as the elderly. In addition, in relation to sampling and data collection, there are some data that should be noted that were not collected, such as the ethnic group, or sexuality. On the other hand, it would have been interesting to evaluate in more detail the proportion of women employed and their type of employment, which we will include as one of our lines of research in the future.

Conclusion

The covid-19 pandemic and measures taken to address it have been shown to have a greater psychological impact on women, with higher levels of depressive symptoms, anxiety, post-traumatic stress and perceived loneliness. Over time during the lockdown these differences are maintained with an increase especially in depressive

symptomatology and perceived loneliness for women. Men have so far experienced the least impact of the pandemic and report greater spiritual well-being than women. The pandemic underlines the need to pay greater attention to the gender and the private sphere to prevent and alleviate the psychological consequences of the pandemic on this group.

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Declaration of interest statement: none

References

- Asher, M., Asnaani, A., & Aderka, I. M. (2017). Gender differences in social anxiety disorder: A review. *Clinical Psychology Review, 56*, 1–12.
<https://doi.org/https://doi.org/10.1016/j.cpr.2017.05.004>
- Betron, M., Gottert, A., Pulerwitz, J., Shattuck, D., & Stevanovic-Fenn, N. (2020). Men and COVID-19: Adding a gender lens. *Global Public Health, 1–3*.
- Campbell, A. M. (2020). An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International: Reports, 100089*.
- Cella, D., Hernandez, L., Bonomi, A. E., Corona, M., Vaquero, M., Shiimoto, G., & Baez, L. (1998). Spanish Language Translation and Initial Validation of the Functional Assessment of Cancer Therapy Quality-of-Life Instrument. *Medical Care, 36*(9), 1407–1418. <https://doi.org/10.1097/00005650-199809000-00012>
- Chesley, N. (2017). What does it mean to be a “breadwinner” mother?. *Journal of Family Issues, 38*(18), 2594-2619.
- Club de las Malas Madres. (2020). Las claves de la conciliación durante la cuarentena. España. Recuperado de: https://clubdemalasmadres.com/claves-conciliacion-cuarentena/?fbclid=IwAR0Nh2wlllQ6ozdJZzqNm-aU91_npscP0jkAswMsC2_3TL8LdhHRdPNa6XA
- Diez-Quevedo, C., Rangil, T., Sanchez-Planell, L., Kroenke, K., & Spitzer, R. L. (2001). Validation and utility of the patient health questionnaire in diagnosing mental disorders in 1003 general hospital Spanish inpatients. *Psychosomatic Medicine, 63*(4), 679–686. <https://doi.org/10.1097/00006842-200107000-00021>
- Garcia-Campayo, J., Navarro-Gil, M., Andrés, E., Montero-Marin, J., López-Artal, L., & Demarzo, M. M. P. (2014). Validation of the Spanish versions of the long (26

- items) and short (12 items) forms of the Self-Compassion Scale (SCS). *Health and Quality of Life Outcomes*, 12(1), 4. <https://doi.org/10.1186/1477-7525-12-4>
- González-Sanguino, C., Ausín, B., ÁngelCastellanos, M., Saiz, J., López-Gómez, A., Ugidos, C., & Muñoz, M. (2020). Mental Health Consequences during the Initial Stage of the 2020 Coronavirus Pandemic (COVID-19) in Spain. *Brain, Behavior, and Immunity*. <https://doi.org/10.1016/j.bbi.2020.05.040>
- Graves, L. (2020). Women's Domestic Burden just got Heavier with Coronavirus. *London: Kings Place*
- Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: The PHQ-4. *Psychosomatics*, 50(6), 613–621. <https://doi.org/10.1176/appi.psy.50.6.613>
- Lang, A. J., & Stein, M. B. (2005). An abbreviated PTSD checklist for use as a screening instrument in primary care. *Behaviour Research and Therapy*, 43(5), 585–594. <https://doi.org/10.1016/j.brat.2004.04.005>
- Lang, A. J., Wilkins, K., Roy-Byrne, P. P., Golinelli, D., Chavira, D., Sherbourne, C., Rose, R. D., Bystritsky, A., Sullivan, G., Craske, M. G., & Stein, M. B. (2012). Abbreviated PTSD Checklist (PCL) as a guide to clinical response. *General Hospital Psychiatry*, 34(4), 332–338. <https://doi.org/10.1016/j.genhosppsych.2012.02.003>
- Lopez, J., Perez-Rojo, G., Noriega, C., Carretero, I., Velasco, C., Martinez-Huertas, J. A., López-Frutos, P., & Galarraga, L. (2020). PSYCHOLOGICAL WELL-BEING AMONG OLDER ADULTS DURING THE COVID-19 OUTBREAK: A COMPARATIVE STUDY OF THE YOUNG-OLD AND THE OLD-OLD ADULTS. *International Psychogeriatrics*, 1—17. <https://doi.org/10.1017/s1041610220000964>

- Losada-Baltar, A., Jiménez-Gonzalo, L., Gallego-Alberto, L., Pedroso-Chaparro, M. D. S., Fernandes-Pires, J., & Márquez-González, M. (2020). "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. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*. <https://doi.org/10.1093/geronb/gbaa048>
- Manzo, L. K. C., & Minello, A. (2020). Mothers, childcare duties, and remote working under COVID-19 lockdown in Italy: Cultivating communities of care. *Dialogues in Human Geography*, 2043820620934268. <https://doi.org/10.1177/2043820620934268>
- McLaren, H.J.; Wong, K.R.; Nguyen, K.N.; Mahamadachchi, K.N.D. Covid-19 and Women's Triple Burden: Vignettes from Sri Lanka, Malaysia, Vietnam and Australia. *Soc. Sci.* 2020, 9, 87
- Moreira, P. S., Ferreira, S., Couto, B., Machado-Sousa, M., Fernandez, M., Raposo-Lima, C., Sousa, N., Pico-Perez, M., & Morgado, P. (2020). Protective elements of mental health status during the COVID-19 outbreak in the Portuguese population. *MedRxiv*, 2020.04.28.20080671. <https://doi.org/10.1101/2020.04.28.20080671>
- Özdin, S., & Bayrak Özdin, Ş. (2020). Levels and predictors of anxiety, depression and health anxiety during COVID-19 pandemic in Turkish society: The importance of gender. *International Journal of Social Psychiatry*, 0020764020927051. <https://doi.org/10.1177/0020764020927051>
- Peterman, A., Potts, A., O'Donnell, M. *et al.* (2020). Pandemics and Violence Against Women and Children. *Center for Global Development Working Paper*

- Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: Implications and policy recommendations. In *General Psychiatry* (Vol. 33, Issue 2). BMJ Publishing Group. <https://doi.org/10.1136/gpsych-2020-100213>
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20–40. https://doi.org/10.1207/s15327752jpa6601_2
- Salk, R. H., Hyde, J. S., & Abramson, L. Y. (2017). Gender differences in depression in representative national samples: meta-analyses of diagnoses and symptoms. *Psychological Bulletin*, 143(8), 783.
- Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097. <https://doi.org/10.1001/archinte.166.10.1092>
- Urdinola, B. P., & Tovar, J. A. (2019). *Time Use and Transfers in the Americas*. , Switzerland: Springer International Publishing.
- Usher, K., Bhullar, N., Durkin, J., Gyamfi, N., & Jackson, D. (2020). Family violence and COVID-19: Increased vulnerability and reduced options for support. *International journal of mental health nursing*.
- Velarde-Mayol, C., Fragua-Gil, S., & García-de-Cecilia, J. M. (2016). Validación de la escala de soledad de UCLA y perfil social en la población anciana que vive sola. *Semergen*, 42(3), 177–183. <https://doi.org/10.1016/j.semereg.2015.05.017>
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population

- in China. *International Journal of Environmental Research and Public Health*, 17(5), 1729. <https://doi.org/10.3390/ijerph17051729>
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., Choo, F. N., Tran, B., Ho, R., Sharma, V. K., & Ho, C. (2020). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain, Behavior, and Immunity*. <https://doi.org/10.1016/j.bbi.2020.04.028>
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility. *Annual Convention of the International Society for Traumatic Stress Studies, San Antonio, TX*, 462.
- Wenham, C., Smith, J., Morgan, R., & Group, G. and C.-19 W. (2020). COVID-19: the gendered impacts of the outbreak. *Lancet (London, England)*, 395(10227), 846–848. [https://doi.org/10.1016/S0140-6736\(20\)30526-2](https://doi.org/10.1016/S0140-6736(20)30526-2)
- Zhang, Y., & Ma, F. Z. (2020). Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. In *International Journal of Environmental Research and Public Health* (Vol. 17, Issue 7). <https://doi.org/10.3390/ijerph17072381>

Table 1. Socio-demographic characteristics of the sample

Variables	n (%)
Gender	
Man	200 (19)
Female	841 (81)
Other	0 (-)
Age	
18-30	305 (29)
31-59	669 (64)
60-80	69 (7)
Relationship	
Single	264 (25)
Couple no sharing	195 (19)
Couple sharing	584 (56)
Marital Status	
Single	541 (52)
Married	385 (37)
Divorced	82 (08)
Separate	28 (3)
Widower	7 (1)
Children	
No	579 (56)
Yes	464 (44)
Education	
Elementary	15 (1)
High school	148 (14)
Vocational training	126 (12)
University	399 (38)
Posgraduate	355 (34)

Professional area

Administration	94 (9)
Commercial	55 (5)
Education	179 (17)
Social-health	348 (33)
Other	367 (35)

Table 2. Descriptives and results for mental health variables

Gender	N	PHQ2		GAD2		PCLC	
		T0	T1	T0	T1	T0	T1
male	200	1.07 (1.34)	1.27 (1.38)	1.23 (1.35)	1.18 (1.37)	0.78 (1.28)	0.76 (1.32)
female	841	1.59 (1.45)	1.93 (1.41)	1.95 (1.64)	1.94 (1.58)	1.61 (1.94)	1.53 (1.88)
Fixed terms:							
Time		F=58.95; p <.001***		F=0.1; p = 0.751		F=1.78; p = 0.181	
Gender		F=36.14; p <.001***		F=46.39; p <.001***		F=42.11; p <.001***	
Interaction		F=1.75; p = 0.186		F=0.15; p = 0.702		F=0.23; p = 0.633	
Random terms:							
Time		1.05		1.20		1.49	
Residual		0.54		0.60		0.71	

Table 3. Descriptives and results for Loneliness and Spiritual wellbeing variables

Gender	N	UCLA-3		Single item of Loneliness		FACIT	
		T0	T1	T0	T1	T0	T1
male	200	4.27 (1.61)	4.15 (1.53)	1.38 (0.7)	1.42 (0.74)	16.26 (3.24)	16.32 (3.27)
female	841	4.48 (1.57)	4.61 (1.66)	1.52 (0.74)	1.56 (0.74)	15.46 (3.25)	15.37 (3.31)
Fixed terms:							
		Time F=4.2; p < .05*		F=4.14; p < 0.05*		F=0.75; p = 0.386	
		Gender F=7.83; p < .01**		F=7.36; p < 0.01**		F=13.15; p < .001***	
		Interaction F=5.69; p < .05*		F=0.02; p = 0.887		F=0.72; p = 0.395	
Random terms:							
Time		1.08		0.49		1.81	
Residual		0.58		0.26		1.10	

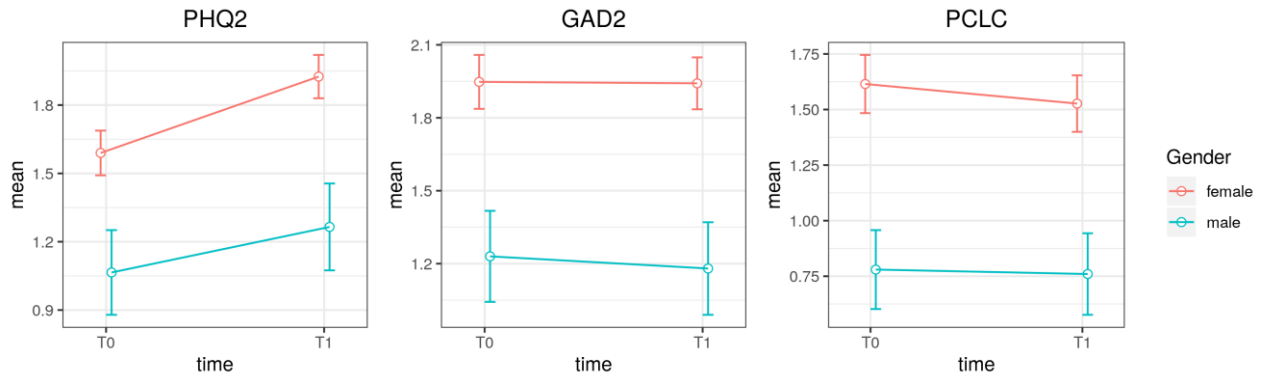


Figure 1. Means and their confidence intervals (95%) as a function of gender for the mental health variables: depression (PHQ-2), anxiety (GAD-2) and well-being (PCL-C).

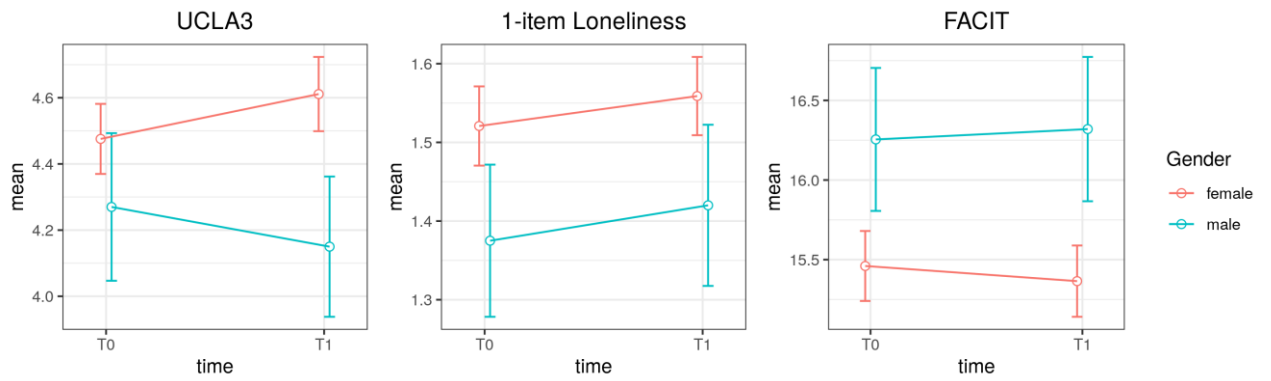


Figure 2. Means and their confidence intervals (95%) as a function of gender for the other variables in the study: Loneliness (UCLA-3 and Single item of Loneliness), and spiritual well-being (FACIT).