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Marital Satisfaction and Mental Health in Adults Over 40 Years Old. Associations with Self-Perceptions of Aging and Stress Related to the COVID-19 Pandemic

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Abstract. Being married has been associated with a better attitude to aging and a buffer against stressful situations, factors that influence mental health. The study analyzes the role of self-perceptions of aging and stress related to the COVID-19 pandemic in the association between marital satisfaction and participants' mental health. 246 people older than 40 years in a marital/partner relationship were assessed. A path analysis was tested, where self-perceptions of aging and stress from the COVID-19 situation were proposed as mechanisms of action in the association between marital satisfaction and anxious and depressive symptoms. Marital satisfaction, self-perceptions of aging, and stress associated with the COVID-19 pandemic significantly contributed to the model and explained 31% of the variance in participants' anxious symptomatology, and 42% of the variance in depressive symptomatology. The indirect path of self-perceptions of aging and stress associated with the COVID-19 pandemic in the link between marital satisfaction and anxious and depressive symptoms was statistically significant for both outcome variables. The findings of this study suggest that lower perceived marital satisfaction is associated with higher levels of negative self-perceptions of aging and with higher anxiety and depressive symptoms. Public significance statements: This study suggests that higher marital satisfaction may be a buffer for negative self-perception of aging, and both factors are related with experiencing less stress from COVID-19. These links are associated with less anxious and depressive symptoms.

Received 2 September 2022; Revised 30 March 2023; Accepted 19 April 2023

Keywords: marital satisfaction, mental health, self-perception of aging, stress from the COVID-19 situation

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Acknowledgement: We thank all the participants in the study and also the following centers for collaborating with us in the project: Fundación Telefónica, Voluntarios Telefónica, Programa de Voluntariado Corporativo de Grupo Telefónica; Entidad Amigos de los Mayores; Fundación Alicia y Guillermo, and Fundación 26 de Diciembre.

Funding Statement: The preparation of this paper was supported in part by grants: L. Jiménez-Gonzalo and J. A. Fernandes-Pires were supported by a Pre-Doctoral Grant from the Universidad Rey Juan Carlos, and M. d. S. Pedroso-Chaparro was supported by a Pre-Doctoral Grant from the Universidad Autónoma de Madrid.

Conflicts of Interest: None.

Data Sharing: The study materials, analytic methods, and data are available from the corresponding author for reproducing the results or replicating the procedure or on reasonable request.

Authorship credit: Fernandes-Pires, Jose Adrián: Conceptualization, data curation, methodology, formal analysis, investigation, visualization, writing-original draft. Pedroso-Chaparro, María del Sequeros: Data curation, investigation, writing—review and editing.

Jiménez-Gonzalo, Lucía: Writing-review and editing.Márquez-González, María: Writing-review and editing, and supervision. Cabrera, Isabel: Writing—review and editing.

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The quality of life and longevity of older adults are influenced by social relationships, which protect against functional decline and promote resilience (Umberson et al., 2006; World Health Organization, 2015). Research on couple relationships is robust in showing the protective effect that partner relationship has on physical and emotional well-being (Carr et al., 2014; Carr & Springer, 2010; Davila et al., 1997). Bryant et al. (2012) found that, compared to individuals who do not have a partner, participants with partners reported significantly lower symptoms of depression and anxiety and higher scores on general mental health and satisfaction with life. In addition, marital quality also seems to have an impact on the mental health of people in a

How to cite this article:

Fernandes-Pires, J. A., Pedroso-Chaparro, M. S., Jiménez-Gonzalo, L., Márquez-González, M., Cabrera, I., & Losada-Baltar, A. (2023). Marital satisfaction and mental health in adults over 40 years old. associations with self-perceptions of aging and stress related to the COVID-19 pandemic. The Spanish Journal of Psychology, 26. e14. Doi:10.1017/SJP.2023.13

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relationship. It has been found that marital dissatisfaction is associated with anxious symptoms (Borstelmann et al., 2015; Proulx, 2007; Trudel et al., 2010) and significantly predicts depressive symptoms (Goldfarb & Trudel, 2019). The study of marital satisfaction in older adults may be especially important, as research has shown that spousal relationship becomes more salient to individuals throughout adulthood (Carstensen, 1992), and principal relationships have significant effects on individual well-being (Giudici et al., 2019; Scorsolini-Comin & Dos Santos, 2012). In general, marital satisfaction does not decline over time (Karney & Bradbury, 2020). However, Kamp Dush et al. (2008) found in a 20-year longitudinal study that marital happiness decreases across the first years and experiences an upturn in the last years. Previous studies have also found that men report higher perceived levels of satisfaction than women (Boerner et al., 2014; Jackson et al., 2014).

One potential path through which marital satisfaction may have an impact on emotional well-being is through its effects on people's self-perceptions of aging. Several studies have shown an association between negative self-perceptions of aging and worse physical and mental health (Bryant et al., 2012; Cheng, 2020; Lamont et al., 2017; Levy, 2003; Stewart et al., 2012; Wurm & Benyamini, 2014). Also, negative self-perceptions of aging influence the likelihood of suffering stress (Levy et al., 2000). Lazarus and Delonguis (1983) noted that beliefs about self are especially worthy of attention because they shape stress and coping over the life course. For instance, during the COVID-19 pandemic situation, higher levels of negative self-perceptions of aging longitudinally predicted higher levels of distress, irrespective of chronological age (Losada-Baltar et al., 2022). Regarding the association between marital relationships and self-perceptions of aging, being married has been linked with more positive attitudes to aging (Bryant et al., 2012), and higher spousal support and lower marital strain are associated with better perceptions of aging (Barrett & Toothman, 2017; Kim et al., 2018). However, to our knowledge, there is no research analyzing the specific association between marital satisfaction, self-perceptions of aging, and mental health.

Another path through which marital satisfaction may have an impact on well-being is through its stress buffering effects. Marital satisfaction has been found to buffer potential stressors such as unemployment, economic stress, somatic disease, or partner distress (Kuhn et al., 2018; Randall & Bodenmann, 2017; Røsand et al., 2012). Better dyadic relationship processes are linked to the impact of external stressors (Bodenmann, 2005; Cohan & Cole, 2002). For example, marital satisfaction has been found to be associated with less emotional distress in couple relationships exposed to external

stressors such as economic pressure (Randall & Bodenmann, 2017) and cancer disease (Dagan et al., 2011). These findings suggest that relationship processes may alter the impact of external stressors; partner relationship quality may thus reduce or exacerbate distress feelings related to external stress.

The COVID-19 pandemic has been a significant stressor for the whole population, and it has had a great impact on people's mental health (Losada-Baltar et al., 2020; Pierce et al., 2021; Taquet et al., 2021) and partner relationships (Balzarini et al., 2020; Schmid et al., 2021). The impact of the pandemic on people's mental health seems to have been higher in women, probably due to them being exposed to role overload, including family care (Pierce et al., 2020, Wenham et al., 2020). Even though no evidence of significant change in relationship quality has been found from the onset to the early stages of the pandemic (Williamson, 2020), some studies have found a link between stressors associated with the COVID-19 situation and partner stress and lower marital satisfaction (e.g., Reizer et al., 2020) and relationship quality (Randall et al., 2021).

Considering these issues, the aim of this study was to test the protective effects of marital satisfaction on middle-aged and older adults' mental health through its effects on their self-perceptions of aging and stress associated with a critical event, such as the COVID-19 pandemic. Based on the aforementioned studies, we hypothesized that (a) marital satisfaction would be negatively associated with anxious and depressive symptomatology, (b) marital satisfaction would be inversely associated with negative self-perception of aging and levels of COVID-19-related stress, and (c) self-perception of aging and stress associated with the COVID-19 pandemic would be positively associated with anxious and depressive symptomatology. In other words, participants with higher marital satisfaction would report less negative self-perceptions of aging, and lower perceptions of stress related to the pandemic situation, which in turn would lead to less anxiety and depressive symptoms.

Method

Participants and Procedure

To be included in this study, participants had to be in a marital/partner relationship of at least one year's duration and be at least 40 years old at the time of the data collection. Data were collected from 334 participants, 88 of whom finally did not take part in the study because they did not meet the inclusion criteria. The study was therefore based on data from 246 participants, who completed the questionnaire in approximately 50 minutes (median = 49.57). As shown in Table 1, the sample

Table 1. Descriptive data and correlations among study variables

	1	2	3	4	5	6	7	8	9	10	11	Mean or percentage (N)	SD	Range
1. Gender (1 = female)												63 % (155) ^d		
2. Age	19**											57.85	10.47	40-90
3. Level of education ^a	08	10										5	1.50	2-7
4. Years of relationship	08	.66**	30**									27.00	13.95	1-70
5. Offspring	.01	18**	.15*	30**								88.6% (218) ^e		
(1 = yes, 2 = no)														
6. Physical health ^b	.09	.38**	12	.25**	03							12.18	2.95	10-28
7. Economic stress ^c	.12	14*	.00	07	06	.11						1.74	0.77	1–4
8. Marital satisfaction	20**	03	01	05	.06	02	16*					90.82	18.45	20-120
9. Stress associated with pandemic situation	.25**	04	.01	.03	.09	.24**	.13*	20**				2.34	0.75	1–4
10. Negative self-perception of aging	.16*	.13*	02	.10	00	.31**	.19**	27**	.35**			1.94	1.46	0-5
11. Anxiety symptoms	.18**	11	14*	04	.06	.20**	.38**	24**	.38**	.42**		6.02	6.01	0-20
12. Depressive symptoms	.21**	03	14*	.02	.01	.30**	.31**	31**	.38**	.58**	.73**	12.17	11.43	0-57

Note. ^aHigher scores are related to higher level of education.

^bHigher scores are related to poorer physical functioning.

^cHigher scores are related to higher economic stress.

^dWomen.

^eParticipants with offspring

^{*}p < .05;

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

was composed mostly of female participants (63%) and had a mean age of 57.87 years (SD = 10.47; range = 40–90). The average duration years of the relationship was 27.21 years (SD = 13.98; range = 1–70).

The power analysis showed that the sample size was sufficient to detect a medium effect size ($f^2 = .15$) (Proulx et al., 2007; Whisman, 2007) with the target power of .80, which is adequate following Cohen's guidelines (Cohen, 1988).

Data collection took place from the 15th of January to the 17th of Nov 2021. Given that social distancing rules due to the COVID–19 pandemic were still widely in force, participants were recruited and assessed through an online survey. Potential participants were contacted through social networks and all the options available to the researchers. The same 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. All participants provided their consent to participate in the study, which was approved by the Ethics Committee of the Universidad Rey Juan Carlos.

Variables and Instruments

The following sociodemographic variables were assessed: Gender, age, education level, years of married/partner relationship, and having offspring (*yes/no*). In addition, *economic stress* was measured using the question "Currently, are you worried about your financial situation?", with answers ranging from 0 (*not at all*) to 3 (*a lot*).

Physical health. Physical health was assessed through the Spanish version (Alonso et al., 1995) of the physical functioning subscale (10 items, e.g., "Does your health now limit you in walking more than a mile?") of the Short Form 36 Health Survey (SF–36 scale, Brazier et al., 1992), with possible answers ranging from 1 (No, not limited at all) to 3 (Yes, limited a lot), that measures generic health-related quality of life. Cronbach's alpha for this subscale in the present study was .85.

Marital satisfaction. Marital satisfaction was measured using the Spanish version (Castro-Díaz, 2012) of the Marital Satisfaction Questionnaire for Older Persons (MSQFOP; Haynes et al., 1992). The MSQFOP is a self-report measure that consists of 20 items (e.g., "The way affection is expressed"). The answers are presented in a 6-point scale, ranging from 1 (very unsatisfied) to 6 (very satisfied). Cronbach's alpha in the current study suggests excellent internal consistency (.97).

Self-perception of aging. Self-perception of aging was assessed through the Attitudes Toward Own Aging subscale from Liang and Bollen (1983) following the method proposed by Levy et al. (2002). It has five items

(e.g., "As you get older, you are less useful") with a dichotomous response format (*Yes* or *No*), where higher scores indicate more negative self-perceptions of aging. Cronbach's alpha for this scale in the present study was .66, similar to that found in previous studies (e.g., Losada-Baltar et al., 2022; Siebert et al., 2018).

Stress associated with the COVID-19 pandemic. As an indicator of perceived stress associated with the COVID-19 pandemic, the item "Is the situation generated by the pandemic being stressful for you?" was included, with possible answers ranging from 0 (not at all) to 3 (a lot).

Anxious symptomatology. Anxiety symptoms were assessed through the Spanish version (Márquez-González et al., 2012) of the Geriatric Anxiety Inventory (GAI; Pachana et al., 2007). This scale consists of a 20-item (e.g., "I worry a lot of time") with a dichotomous response format (*Yes* or *No*). High levels of anxious symptomatology are considered with scores higher than or equal to 9. The internal consistency or Cronbach's alpha of the scale in the present study was .93.

Depressive symptomatology. Depressive symptoms were assessed through the Spanish version (Losada et al., 2012) of the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). This scale is composed of 20 items (e.g., "I felt sad") which measure the level to which the subject manifested different depressive symptoms during the previous week. Response options consisted of a 4-point Likert-type scale with a range from 0 (rarely or none of the time) to 3 (most or all of the time). High levels of depressive symptomatology are considered with scores higher than or equal to 16. The internal consistency o Cronbach's alpha of the scale in the present study was .92.

Data Analysis

First, descriptive analysis and associations between the assessed variables were tested. Then, following the main objectives of the study, we tested a path analysis to determine the goodness-of-fit of the two models using IBM SPSS Amos 23 software. Sociodemographic variables (gender, age, education level, years of married/partner relationship, offspring, physical health, and economic stress) were controlled as contextual variables, and self-perception of aging and stress derived from the COVID–19 situation were proposed as significant mechanisms of action in the relationship between marital satisfaction and distress. The dependent variables were depressive symptomatology (Model 1) and anxious symptomatology (Model 2).

Only those significant associations between variables that were observed once the model was run were included in the final model. This model and its configural invariance across gender were performed. The following indices were used to assess the fit of the data from the model: Chi-square (χ^2), chi-square value divided by the degrees of freedom (χ^2/df) incremental fit index (IFI), comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Indications of values under .06 (RMSEA) and over .95 (CFI and IFI) indicated excellent fit of the data to the model (Hu and Bentler, 1998). Indirect effects were analyzed following Preacher and Hayes's (2004) recommended bootstrapping approach, using 1,000 bootstrap samples.

Results

Descriptive Data

The characteristics of the sample and the associations between the measured variables are shown in Table 1. More than half of the sample (59.8%) had university studies or higher degrees, and 66.5 % were worried about their economic situation. Most of the participants were at least a little satisfied with their partner (79.3%) and reported stress caused by the COVID-19 pandemic situation (80.4%), with 38.2% reporting being quite or very stressed. High anxious symptomatology (scores over 8 on the GAI scale) was reported by 29% of the participants, and 19% had high levels of depressive symptoms (with scores over 15 on the CES-D scale).

Individuals who reported lower marital satisfaction reported higher scores in anxious and depressive symptomatology (Hypothesis 1). Individuals who reported lower marital satisfaction also reported higher negative self-perception of aging and higher levels of COVID-19related stress scores (Hypothesis 2). Higher scores on negative self-perception of aging and stress associated with the COVID-19 pandemic were associated with higher scores in anxious and depressive symptomatology (Hypothesis 3). In addition, worse physical health was significantly related to higher levels of COVID-19related stress, negative self-perceptions of aging, and anxiety and depressive symptoms. A higher level of education was negatively associated with anxious and depressive symptoms. Finally, female gender and higher concern about the economic situation were negatively associated with marital satisfaction and positively associated with stress related to the pandemic situation, worse self-perception of aging, and more anxious and depressive symptomatology.

Indirect Effects of Marital Satisfaction on Anxious Symptoms

As shown in Figure 1, when all the variables were considered, lower education level, higher concern about the economy, more stress from COVID–19 situation, and negative self-perceptions of aging were directly associated with anxious symptomatology.

The direct associations between gender, physical health, and marital satisfaction with anxious symptomatology, and between marital satisfaction and stress from the COVID-19 situation, which were significant in the correlational analysis, were no longer significant once all the assessed variables were considered in the model. The results of the bootstrap analysis showed that the indirect effect of marital satisfaction, standardized indirect effect = -.09; p < .01; SE = .03; 95% CI [-.16, -.05], and self-perception of aging, standardized indirect effect = .07; p < .01; SE = .025; 95% CI [.03, .13], on anxious symptomatology were statistically significant. Thus, it appears that the association of marital satisfaction with stress from the COVID-19 situation and anxious symptoms was not direct. These findings suggest that reporting lower marital satisfaction was associated with negative self-perceptions of aging, and both factors were associated with higher COVID-19 related stress. These links were significantly associated with higher scores in anxious symptomatology.

The obtained model explained 31% of anxious symptomatology. The unstandardized regression weights are shown in Supplementary Material Table 1. The obtained fit indices suggest an excellent fit of the model to the data ($\chi^2 = 24.613$; p = .10; $\chi^2/df = 1.45$; RMSEA = .042; IFI = .97 and CFI = .96). Model comparison revealed that it was plausible to assume the same structural path estimates for men and women as there was not a relevant decrease in model fit between the unconstrained model and the structural model, $\Delta\chi^2(9) = 6.87$, p = .65.

Indirect Effects of Marital Satisfaction on Depressive Symptoms

As shown in Figure 2, when all the variables were considered, lower education level, higher concern about the economic, lower marital satisfaction, more stress from the COVID–19 situation, and more negative self-perceptions of aging were directly associated with depressive symptomatology.

The direct associations between gender and physical health with depressive symptomatology and between marital satisfaction and stress from the COVID–19 situation, which were significant in the correlational analysis, were no longer significant once all the assessed variables were considered in the model. The results of the bootstrap analysis showed that the indirect effect of marital satisfaction, standardized indirect effect = -.14; p < .01; SE = .03; 95% CI [0.21, 0.08], and self-perception of aging, standardized indirect effect = .05; p < .02; SE = .021; 95% CI [.02, .10], on depressive symptomatology were significant. Thus, it appears that the association of marital satisfaction with depressive symptoms was still significant and negative after controlling for the two proposed mechanisms of action. These findings suggest

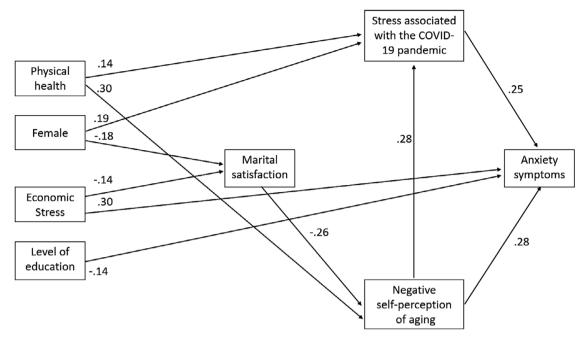


Figure 1. Indirect Effects of Marital Satisfaction on Anxious Symptoms. *Note.* All associations are significant (p < .05). The errors have been omitted for ease of presentation.

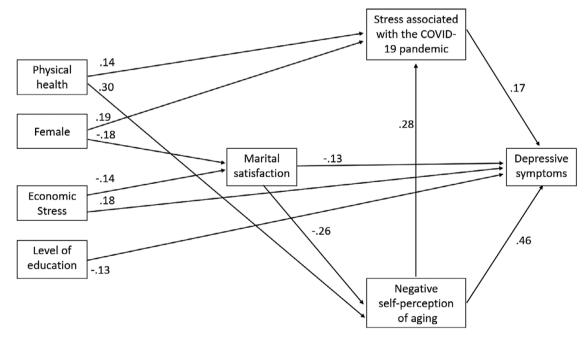


Figure 2. Indirect Effects of Marital Satisfaction on Depressive Symptoms. *Note.* All associations are significant (p < .05). The errors have been omitted for ease of presentation.

that, besides the direct effect, there is a significant indirect path. Reporting lower marital satisfaction was associated with more negative self-perception of aging, and both factors were associated with COVID-19-related

stress. These links were significantly associated with higher scores in depressive symptomatology.

The obtained model explained 42% of the depressive symptomatology. The unstandardized regression

weights are shown in Supplementary Material Table 2. The obtained fit indices suggest an excellent fit of the model to the data ($\chi^2 = 26.07$; p = .05; $\chi^2/df = 1.63$; RMSEA = .051; IFI = .96, and CFI = .96). Model comparison revealed that it was plausible to assume the same structural path estimates for men and women as there was not a relevant decrease in model fit between the unconstrained model and the structural model, $\Delta\chi^2(10) = 6.85$, p = .74.

Discussion

The main objective of this study was to analyze the association between marital satisfaction, self-perceptions of aging, stress related to the COVID-19 pandemic, and anxiety and depressive symptoms in adults over 40 years old. The study population was highly educated and worried about their economic situation. In general, participants were satisfied with their partner and reported being stressed by the pandemic situation. The average levels of anxiety and depressive symptoms were higher than for the general population in studies done prior to COVID-19 (Charles et al., 2003; Gould et al., 2014). Regarding the level of negative self-perception of aging, it was similar to previous studies done during the COVID-19 pandemic (Losada-Baltar et al., 2020), but lower than studies done prior to the pandemic (Levy et al., 2002).

Consistent with previous research (e.g., Goldfarb & Trudel, 2019; Kamp Dush et al., 2008; Proulx et al., 2007), our findings provide further support for the association between marital satisfaction and lower anxiety and depressive symptoms. In addition, this study aimed to explore paths through which marital satisfaction may influence middle-aged and older adults' mental health. Specifically, our results suggest that the association between marital satisfaction and anxiety and depressive symptoms in middle-aged and older adults was indirect. The indirect path was through self-perceptions of aging and perceived stress (associated with the COVID–19 pandemic). The path analysis tested in the present study explained a non-negligible percentage variance of anxiety (31%) and depressive (42%) symptoms.

The obtained findings suggest that lower perceived marital satisfaction was associated with higher levels of negative self-perceptions of aging and with higher anxiety and depressive symptoms. Chronological age did not play a significant role in the explanation of mental health in the assessed models. Our findings thus suggest that self-perceptions of aging, but not age, contribute significantly to the understanding of the associations between marital satisfaction and mental health in the sample composed of middle-aged and older adults. To our knowledge, this is the first study to analyze the associations between marital satisfaction and negative

self-perceptions of aging. Our findings are in line with previous research showing that close relationships contribute to understanding relevant variables for aging development. For instance, higher levels of spousal support have been found to be associated with better perceptions of aging, and spousal strain has been found to be associated with aging anxiety (Barrett & Toothman, 2017; Kim et al., 2018). Likewise, our results support the widely reported association in previous studies between negative self-perceptions of aging and anxiety and depressive symptoms (e.g., Bryant et al., 2012; Freeman et al., 2016; Levy, 2003; Losada-Baltar et al., 2020; Wurm & Benyamini, 2014). In addition, previous studies indicated that couple relationships seem to be especially relevant for understanding psychological phenomena such as self-perception of aging (Bryant et al., 2012; Kim et al., 2018; Mejía et al., 2020) and stress perception (Dagan et al., 2011; Randall & Bodenmann, 2017). Our findings suggest that the association between marital satisfaction and anxiety and depressive symptoms may be explained by its associations with selfperceptions of aging and lower perceived stress. This link may contribute to understanding the development or worsening of mental health problems in adults over 40 years old.

Consistent with previous studies (Balzarini et al., 2020; Pierce et al., 2020; Reizer et al., 2020), statistically significant associations were found between marital satisfaction and stress related to the COVID-19 pandemic also associated with anxiety and depressive symptomatology. Couple dynamics and psychological distress appear to condition the association between marital satisfaction and stress related to the COVID-19 pandemic (Balzarini et al., 2020). In the current study, the indirect effect found among marital satisfaction and mental health through the stress associated with the pandemic alone was no longer significant once the association between marital satisfaction and selfperceptions of aging was controlled for. Our findings suggest that the significant indirect effect of marital satisfaction on stress associated with the pandemic is through negative self-perceptions of aging. This significant association between negative self-perceptions of aging and higher levels of distress during the COVID-19 pandemic was also found in a longitudinal study by Losada-Baltar et al. (2022) with a sample of 1,549 participants. Hence, it is plausible that lower marital satisfaction may lead to worse perceived mental health by increasing the chances of having negative selfperceptions of aging and perceiving more stress associated with a critical external situation such as the COVID-19 pandemic. Therefore, the obtained findings suggest that individuals who report lower marital satisfaction also report more negative self-perceptions of aging and more stress associated with the pandemic.

Thus, these factors may jointly contribute to an increase in their levels of anxiety and depression symptoms. Even though women have been affected to a greater extent by the COVID–19 pandemic situation (Pierce et al., 2020), the proposed model fitted well for both men and women.

This study has several limitations that need to be noted. First, the cross-sectional design does not allow causal predictions to be made between variables. The associations may have alternative directions, including the possibility that people more stressed or with higher negative self-perceptions of aging may be less satisfied with their partner (Cheng, 2020; Bodenmann, 2005). Further, self-perceptions of aging and stress associated with the pandemic may generate anxious and depressive symptoms, and these may contribute to marital dissatisfaction, as suggested by other authors (Goldfarb & Trudel, 2019; Proulx et al., 2007). Longitudinal studies are needed in order to advance our knowledge regarding the causal relationships between the variables. Related to this is the limitation that prior levels of marital satisfaction and mental health conditions have not been controlled for.

In addition, participants were a convenience sample consisting of middle-aged and older adult volunteers who were recruited by social media, so only individuals who manage new technologies properly could complete the questionnaire. The sample may therefore not be representative of the general sample of middle-aged people and, more specifically, older adults. Even though the use of single-items for measuring the stress associated with the COVID-19 pandemic may be considered a limitation, there are studies that provide support for the use of single-items in surveys and even clinical contexts (e.g., Zimmerman et al., 2006). Moreover, it should be noted that, although not all the individuals evaluated were older adults, the GAI was used in order to avoid biases in the measurement of anxiety in older adults (Pachana et al., 2007).

Finally, although several known variables associated with depression and anxiety among partners were measured in this study, other relevant variables have not been measured. For example, neuroticism and sense of mastery have been previously found to be associated with marital satisfaction (Claxton et al., 2012; Huber et al., 2010), self-perceptions of aging (Jang et al., 2004), and perception of stressful situations (Abbasi, 2016; Jang et al., 2004).

Despite the above-mentioned limitations, the present study is the first to analyze the joint effects of marital satisfaction, self-perceptions of aging, and stress associated with facing a critical stressful situation (the COVID–19 pandemic).

Marital satisfaction seems to be especially relevant for understanding the association of individuals' selfperceptions of aging and stress associated with the pandemic on anxious and depressive feelings. Quality of communication, spousal support or shared leisure are factors of marital satisfaction that may be relevant to assess as they play a significant role in reducing anxiety and depression symptomatology. Our findings suggest that marital satisfaction may be an important variable for understanding why people have negative selfperceptions of aging. Marital satisfaction may be considered a source for both emotional and problemsolving support, buffering the impact of negative life events and psychological distress that may prompt the embodiment of negative self-perception of aging. Thus, prevention of marital dissatisfaction or targeting this variable in interventions focused on reducing negative self-perceptions of aging (Laidlaw & Kishita, 2015; Laidlaw & McAlpine, 2008) may contribute buffering the effects of stressors that people face, increasing their well-being.

Supplementary Material

To view supplementary material for this article, please visit http://doi.org/10.1017/SJP.2023.13.

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