



RESEARCH ARTICLE

How Perceived Partner Responsiveness Moderates the Relationship between Metacognitive Beliefs about Health Anxiety and COVID-19 Anxiety?

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ABSTRACT

While previous studies have explored the links between COVID-19 anxiety and metacognitive beliefs, scant attention has been given to the relationship between metacognitive beliefs about health anxiety and COVID-19 anxiety, and the potential influencers of this relationship. Existing research underscores the importance of perceiving understanding, validation, and sensitivity from romantic partners in managing stress and anxiety effectively. The aim of this study is to examine the relationships between metacognitive beliefs about health anxiety and COVID-19 anxiety as well as the perceived partner responsiveness. Another objective is to assess the potential moderating effect of perceived partner responsiveness. Our research involved 210 individuals, aged 18 to 65, engaged in romantic relationships between November 2020 and May 2021. Participants completed the Perceived Partner Responsiveness Scale, Coronavirus Anxiety Scale, and Metacognition Questionnaire-Health Anxiety Scale. Our findings reveal a positive association between metacognitive beliefs regarding uncontrollable thoughts, COVID-19 and general anxiety symptoms. Contrary to expectations, heightened perceived partner responsiveness exacerbated the impact of uncontrollable thought beliefs on coronavirus anxiety. Nevertheless, this effect does not manifest in general anxiety symptoms. This moderating role of perceived partner responsiveness differs from existing literature, emphasizing the need for further research into metacognition, anxiety, and relationship dynamics.

Since it first appeared in December 2019, COVID-19 pandemic has resulted in significant levels of illness and death, as well as substantial physical and psychological effects. According to many recent research on COVID-19, it has been shown that some people experience anxiety (e.g., Lakhani et al., 2020), depression (e.g., Bueno-Nativol et al., 2021), sleep disorders (e.g., Sher, 2020), and somatization (e.g., Huang et al., 2020) during pandemic. Moreover, numerous research have highlighted the appearance of anxiety specifically related to COVID-19 (e.g., Ahorsu et al., 2020). Anxiety about COVID-19 and related factors has been predominantly investigated in the relevant research. Prior studies have highlighted a positive association between metacognitive beliefs and anxiety related to COVID-19 (e.g. Hashemi et. al., 2020).

The metacognitive theory of psychological disorders suggests that the presence of dysfunctional metacognitive beliefs, which trigger the 'Cognitive Attention Syndrome' (CAS), holds a pivotal position in the

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development and persistence of emotional disturbances (Wells & Matthews, 1996). The CAS involves various maladaptive self-referential processes, such as increased self-focused attention, attentional bias, rumination, worry and threat monitoring (Wells & Matthews, 1996; Wells, 2000). According to the model, these maladaptive processes (e.g. “What if I become infected? Do I have fewer?”) may intensify emotional difficulties, such as anxiety, including COVID-19 anxiety specifically. For instance, individuals with maladaptive metacognitive beliefs, characterized by an excessive preoccupation with the uncontrollability of COVID-19 or their own competence in managing the situation, are prone to developing symptoms of anxiety arising from the pandemic (Satici et al., 2021). Within the context of the COVID-19 crisis, individuals may adopt dysfunctional coping strategies, including compulsively searching the internet for information about COVID-19, excessively monitoring bodily sensations, and seeking unnecessary medical examinations (e.g. Han et al., 2021). As a result, when metacognitive beliefs are activated, they could contribute to the onset of COVID-19 anxiety and the adoption of dysfunctional behaviors as a way of coping with triggered health-related worries.

Three distinct types of metacognitive beliefs associated with health cognitions were outlined in the research by Bailey and Wells (2015): beliefs that thoughts could cause illness (beliefs proposing that illness-related thoughts can result in adverse health effects), beliefs about biased thinking (pertain to the notion that certain thought patterns can either mitigate or induce illness, and beliefs that thoughts are uncontrollable (thinking about illness is beyond one's control). Empirical evidence suggests that metacognitive beliefs regarding the uncontrollability of thoughts are significantly related with increased health anxiety. A longitudinal study additionally revealed that both beliefs concerning cognitive bias and the perceived uncontrollability of thoughts served as significant variable associated with health anxiety. A cross-sectional study conducted with a non-clinical population demonstrated a positive relationship between three dimensions of metacognition related to health anxiety and COVID-19 related anxiety (Mohammadkhani et. al., 2023). In a similar vein, prior research indicated that general metacognitive beliefs regarding health anxiety are positively correlated with both anxiety about COVID-19 and health-related cognitions (Eşkisü et. al., 2023). While numerous studies have explored how metacognitive beliefs relate to anxiety about COVID-19, only a limited number have focused specifically on the link between such beliefs and health anxiety in the context of the pandemic. Although metacognitive beliefs appear to be a risk factor for COVID-19 anxiety, there are also protective factors that can buffer its impact such as a supportive partner. Within this context, perceived partner responsiveness may have a relevant role in the association between metacognitive beliefs and COVID-19 related anxiety.

Perceived partner responsiveness pertains to an individual's subjective perception of their partner as caring, understanding, and supportive (Reis & Clark, 2013). Perceived partner responsiveness may have an important function in reducing anxiety and arousal by fostering feelings of security and peace. Facing stress or perceived danger, people often seek comfort and a sense of security from their romantic partners, which serves as a key mechanism of coping (Mikulincer & Shaver, 2007). Supportive and responsive behaviors from partners in such situations, such as during the COVID-19 pandemic, can ease distress and reduce feelings of anxiety. Previous studies suggest that when individuals view their partners as highly responsive, they tend to experience less anxiety in stressful situations (Maisel & Gable, 2009). Experimental studies that induced anxiety in laboratory settings found that receiving responsive support from a partner was linked to reductions in both self-reported anxiety (Collins & Feeney, 2000) and anxiety assessed by observers (Simpson, Rholes, & Nelligan, 1992). Over time, repeated experiences of such responsiveness contribute to enduring decreases in anxiety, affecting not only psychological well-being but also physiological processes, including endocrine system function (Feeney & Collins, 2015). A current daily experience study revealed that a high degree of partner responsiveness predicted a more pronounced decrease in diurnal cortisol levels after a decade (Slatcher et al., 2015). The significance of this result is underscored by prior research connecting more pronounced diurnal cortisol patterns to reduced anxiety-related physiological activation (Doane et al., 2013).

The presence of a responsive partner can serve as a protective factor, aiding individuals in managing COVID-19 related anxiety. By perceiving their partner as responsive, individuals may gain enhanced

confidence in their capacity to navigate pandemic-induced stressors, resulting in reduced levels of anxiety. Prior studies have indicated the potential association between health related metacognitions and COVID-19 related anxiety (e.g. Eşkisü et. al., 2022), additionally partner responsiveness and anxiety (e.g. Maisel & Gable, 2009). Despite this, as far as we are aware there are no studies examining the association between health-related metacognitions, partner responsiveness along with heightened anxiety specifically related to COVID-19 throughout the pandemic period. Overall, we hypothesized that metacognitive beliefs concerning health anxiety are likely to be linked with increased levels of COVID-19 anxiety and perceived partner responsiveness may have a moderator role between metacognitions about health anxiety and COVID-19 anxiety. Additionally, we aimed to explore the differences between anxiety and COVID-19 anxiety in terms of metacognitions related to health anxiety. The term COVID-19 anxiety describes a form of anxiety centered on concerns about contracting the disease. Compared to the general anxiety level, it is expected that people's perceptions about partner's responsiveness would be more effective in regulating anxiety, since COVID-19 anxiety is acute and contextual, people experience this anxiety simultaneously with their partners, and COVID-19 concerns are on the agenda of their relationships. As a result, it was proposed that perceived partner responsiveness may act as a moderating factor in the association between metacognitive beliefs regarding health anxiety and COVID-19 anxiety.

Method

Recruitment and Participants

The study recruited individuals from Turkey, with a total of 210 participants. The data were collected from the participants through convenient sampling. The mean age of the participants was 34.33 (SD: 12.33), 161 participants were women and 49 participants were men, participated in the study. Participants who were over 18 years of age and in a romantic relationship were included in the study. Those who did not meet these criteria were excluded. Table 1 shows sociodemographic characteristics of the participants.

Table 1. Sociodemographic Characteristics of Participants

	n	%
Gender		
Female	161	76.7
Male	49	23.3
Highest educational level		
Middle school	6	2.9
High school	13	6.2
University or postgraduate degree	191	91
Perceived socioeconomic status		
Low	11	5.3
Middle	166	79
High	32	15.2
Relationship status		
Married	140	66.7
Partnered	70	33.4

Procedure

Ethical approval was granted by Aydın Adnan Menderes University Social and Human Sciences Research Ethics Committee for this study. The prepared measurement tools were applied through Google Forms between November, 2020 and May, 2021.

Measures

Demographic Information Form

The purpose of this form was to collect demographic data from the participants such as age, gender, marital status.

Coronavirus Anxiety Scale (CAS)

This scale was developed by Lee (2020) to measure COVID-19 anxiety. In this scale, participants were asked to evaluate the anxiety due to coronavirus in the last two weeks with 5 items rated on five points (eg., “I had trouble falling or staying asleep because I was thinking about the coronavirus.”) The Turkish adaptation of the scale was made by Evren et al. (2020) and Cronbach's alpha coefficient was found to be .80 in this adaptation study.

Beck Anxiety Inventory (BAI)

This scale, which was developed by Beck et al. (1988) to differentiate anxiety symptoms from depression symptoms, consists of 21 items rated on four-points Likert scale. Participants were asked to make an evaluation considering the last week, including today. Total scores range from 0 to 6 with higher scores means higher level of anxiety symptoms. Ulusoy (1993) made the Turkish adaptation of this scale.

Metacognitions Questionnaire-Health Anxiety (MCQ-HA)

This is a 14 items developed by Bailey and Wells (2015) to evaluate metacognitive beliefs specific to health anxiety. It consists of three factors: Beliefs that thoughts can cause illness (MCQ-HAC) (eg., “Some thoughts have the power to make me ill.”), Beliefs about biased thinking (MCQ-HAB)(eg., “Thinking the worst about symptoms will keep me safe.”), and Beliefs that thoughts are uncontrollable (MCQ-HAU) (eg., “Dwelling on thoughts of illness is uncontrollable.”). This scale was adapted into the Turkish language by Kıran (2020). Higher scores indicate higher levels of dysfunctional metacognitive beliefs about health anxiety. Cronbach's alpha coefficient of the scale was .90 for the whole scale, .78 for MCQ-HAC, .83 for MCQ-HAB, and .81 for MCQ-HAU (Kıran, 2020).

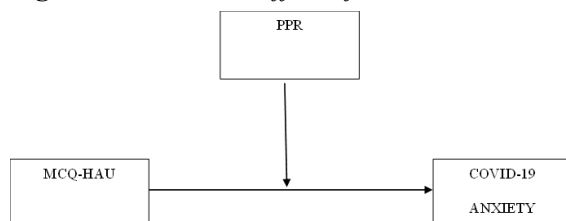
Perceived Partner Responsiveness Scale (PPRS)

This scale was developed by Reis (2003) to measure perceived partner responsiveness in romantic relationships. Single factor scale items are evaluated on a 9-point Likert scale (1 = Not at all true, 9 = Completely true). This scale measures how romantic partners understanding (eg., “...shows his love for me and encourages me.”), caring (eg., “...aware of what I am thinking and feeling.”) and affirming (eg., “...for better or worse, values and respects everything that makes up the real me.”) for themselves. Higher scores represent higher levels of perceived partner responsiveness. Turkish adaptation of this scale by Taşfiliz et al. (2020) and Cronbach's alpha coefficient was found to be .93 in this adaptation study.

Data Analysis

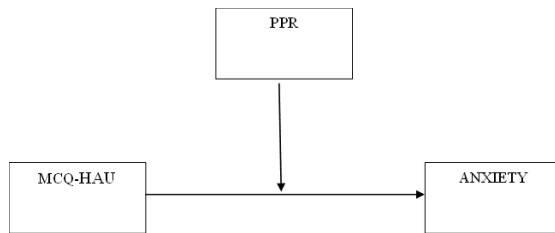
We utilized SPSS 22.0 to conduct descriptive statistics and bivariate correlation analyses for all variables (age, gender, beliefs that thoughts cause illness (MCQ-HAC), beliefs about biased thinking (MCQ-HAB), beliefs that thoughts are uncontrollable (MCQ-HAU), perceived partner responsiveness (PPR), anxiety, and COVID-19 anxiety). Two separate hierarchical regression analyses were performed to identify predictors of COVID-19 anxiety symptoms and predictors of anxiety symptoms. This analysis aimed to test the hypothesis that the predictors of COVID-19 anxiety and general anxiety differ. In the first step of the hierarchical regression, age and gender were included as control variables. Metacognition variables (MCQ-HAC, MCQ-HAB, and MCQ-HAU) were added in the second step. In the final step, PPR was included. Subsequently, we employed Hayes' PROCESS macro for SPSS (Hayes, 2013) to conduct simple moderation models (PROCESS Model 1) to our hypothesis that moderation effects of PPR on the association between metacognitive variables and both COVID-19 anxiety and anxiety symptoms (Figure 1 & Figure 2).

Figure 1. Moderator effect of PPR on the relationship between MCQ-HAU and COVID-19 Anxiety



Note: MCQ-HAU: Beliefs that thoughts are uncontrollable, PPR = Perceived partner responsiveness

Figure 2. Moderator effect of PPR on the relationship between MCQ-HAU and Anxiety



Note: MCQ-HAU: Beliefs that thoughts are uncontrollable, PPR = Perceived partner responsiveness

Results

Correlations and means among study variables are provided in Table 2.

Table 2. Descriptive Statistics and Correlations

Variable	<i>M</i>	<i>SD</i>	<i>α</i>	Range	1	2	3	4	5	6	7	8
1. Gender	-	-	-	-	-							
2. Age	34.33	12.33	-	18-65	.16*	-						
3. Covid-anx	.37	.53	.79	0-20	-.35**	-.14	-					
4. BAI	.82	.61	.93	0-63	-.30**	-.29**	.58**	-				
5. MCQ-HAC	2.48	.82	.88	5-20	-.13	-.07	.16**	.23**	-			
6. MCQ-HAB	1.54	.55	.74	5-20	.02	.10	.20**	.23**	.34**	-		
7. MCQ-HAU	2.00	.69	.67	3-12	-.11	-.06	.33**	.35**	.50**	.70**	-	
8. PPR	6.66	1.84	.98	18-162	-.07	-.24**	.07	.04	-.00	-.15*	-.10	-

Note. Covid-anx = Covid-19 anxiety, BAI= Beck Anxiety Inventory, MCQ-HAC = Beliefs that thoughts cause illness, MCQ-HAB = Beliefs about biased thinking, MCQ-HAU = Beliefs that thoughts are uncontrollable, PPR = Perceived partner responsiveness

* $p < .05$, ** $p < .01$, *** $p < .001$

Results of the hierarchical regression models regarding COVID-19 anxiety and anxiety symptoms are presented in Table 3. In the first model, COVID-19 anxiety was a dependent variable and participants' age and gender were control variables which entered stage one. Also, metacognitive variables (beliefs that thoughts cause illness (MCQ-HAC), beliefs about biased thinking (MCQ-HAB), and beliefs that thoughts are uncontrollable (MCQ-HAU)) were entered stage two and perceived partner responsiveness (PPR) was entered stage third. Results revealed that participants' age and gender contributed significantly to the regression model, $F(2,206) = 15.05$, $p < .001$ and accounted for 12% of the variation in COVID-19 anxiety. Introducing the metacognitive beliefs explained an additional 9% of variation in COVID-19 anxiety and this change in R^2 was significant, $F(3,203) = 7.74$, $p < .001$. Lastly, adding PPR to the regression model change in R^2 was not significant, $F(1,202) = 1.82$, $p = .179$. Results of stage third show that gender and MCQ-HAU were significantly associated with COVID-19 anxiety. Higher levels of MCQ-HAU were associated with higher levels of COVID-19 anxiety ($\beta = 0.30$, $p = 0.002$). Also, females reported higher COVID-19 anxiety ($\beta = -0.31$, $p < 0.001$).

In the second model, participants' age and gender contributed significantly to the regression model, $F(2,206) = 17.52$, $p < .001$ and accounted for 15% of the variation in anxiety symptoms. Introducing the metacognitive variables explained an additional 11% of variation in anxiety and this change in R^2 was significant, $F(3,203) = 9.46$, $p < .001$. Lastly, adding PPR to the regression model change in R^2 was not significant, $F(1,202) = 1.82$, $p = 0.790$. There was a significant association between participants' anxiety and age ($\beta = -0.24$, $p < 0.001$), gender ($\beta = -0.22$, $p < 0.001$), and MCQ-HAU ($\beta = 0.24$, $p = 0.008$). Parallel to the result of the previous model, higher levels of MCQ-HAU were associated with higher levels of anxiety symptoms. Participants' age was negatively associated with anxiety level. Females reported higher anxiety symptoms.

Table 3. Results of multiple regression analysis of variables for predicting covid-19 anxiety and anxiety symptoms.

Hierarchical Multiple Regression Final Step Summary		
Predictors	Covid-19 Anxiety	Anxiety (BAI)
Gender	-.31***	-.22***
Age	-.05	-.24***
MCQ-HAC	-.03	.05
MCQ-HAB	.04	.08
MCQ-HAU	.30**	.24**
PPR	.09	.02
R^2	.22	.25
Change in R^2	.02	.00
Significant F change	$p > .05$	$p > .05$

Note. Covid-anx = Covid-19 anxiety, BAI= Beck Anxiety Inventory, MCQ-HAC = Beliefs that thoughts cause illness, MCQ-HAB = Beliefs about biased thinking, MCQ-HAU = Beliefs that thoughts are uncontrollable, PPR = Perceived partner responsiveness

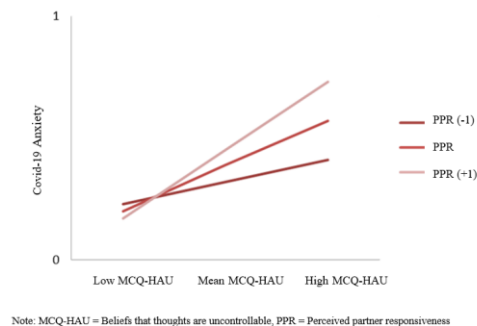
* $p < .05$, ** $p < .01$, *** $p < .001$

Perceived partner responsiveness as a moderator of anxiety symptoms.

To identify the moderating effects of PPR between MCQ-HAU and COVID-19 anxiety, Hayes (2019) process macro was used. The predictors accounted for significant variation in COVID-19 anxiety, $R^2 = .15$, $F(3, 206) = 12.135$, $p < .001$. There was a significant interaction found by PPR on MCQ-HAU and Covid-19 anxiety, $b = 0.07$, $SE = .03$, 95% CI [0.02, 0.13], $p = .007$. At 1 sd below the mean on PPR, the slope was not significant ($b = .13$, $SE = .07$, $p = .054$). It was found that participants who reported higher than average levels (1 Sd above) of PPR experienced a greater effect of MCQ-HAU on COVID-19 anxiety ($b = 0.40$, $SE = .07$, 95% CI [.256, .541], $p < .001$), when compared to average levels of PPR ($b = .27$, $SE = .05$, 95% CI [.169, .362], $p < .001$).

The predictors accounted for significant variation in anxiety symptoms, $R^2 = .14$, $F(3, 206) = 10.85$, $p < .001$. However, there was not a significant interaction found by PPR on MCQ-HAU and anxiety symptoms, $b = 0.04$, $SE = .03$, 95% CI [-0.025, 0.098], $p = .254$.

Figure 3. Moderator role of Perceived Partner Responsiveness



Discussion

This study aimed to examine if metacognitive beliefs about health anxiety and perceived partner responsiveness are associated with both COVID-19 anxiety and general anxiety symptoms in a non-clinical Turkish sample. Furthermore, the study examined whether perceived partner responsiveness played a moderating role between metacognitive beliefs about health anxiety and both COVID-19 anxiety, as well as general anxiety symptoms.

Hierarchical regression analysis was conducted to evaluate the relationship between the variables. The results showed that the belief that thoughts are uncontrollable is the only metacognitive variable significantly

associated with both COVID-19 anxiety and general anxiety symptoms. Although belief that thoughts are uncontrollable factor is primarily associated with health anxiety, the current study reported that this factor is also related with general anxiety symptoms. This may be due to the fact that beliefs about uncontrollable thoughts align more closely with transtheoretical metacognitive model of psychological disorders (Melli et al., 2016). In addition, it can be discussed that uncontrollable thoughts contribute to misinterpretation of mental events and physical complaints resulting in diverse emotional distress not only health-related problems but also psychological disorders. These results are however in line with previous studies showing positive association between metacognitive beliefs, especially uncontrollable illness thoughts and health anxiety related symptoms (Bailey & Wells, 2015); prospective health anxiety (Bailey & Wells, 2016), and general anxiety symptoms (Melli et al., 2016). There are some studies using Metacognition Questionnaire-30 (MCQ-30) to explore relationships between COVID-19 anxiety and dysfunctional metacognitive beliefs. Similarly, these studies also reported positive relationships between metacognitive beliefs (including negative beliefs about uncontrollability and danger) and COVID-19 phobia (e.g. Ay & Hızlı-Sayar, 2022). As a result, our findings demonstrate that metacognitive beliefs about health anxiety (especially beliefs about uncontrollability) are not only associated with general health anxiety but also with anxiety specific to the coronavirus and general anxiety symptoms, highlighting their relevance in both contexts.

The remaining sub-scales of MCQ-HA (beliefs that thoughts can cause illness, beliefs about biased thinking) were not found to be associated with COVID-19 anxiety and general anxiety symptoms despite their initial correlation. Similarly, one study claimed that belief that thoughts are uncontrollable are the strongest predictor of health anxiety (Melli et al., 2016). Although there are studies which have shown that beliefs that thoughts can cause illness and beliefs about biased thinking were positively associated with health anxiety (e.g. Bailey & Wells, 2016a), there are few studies that examine the direct relationship between metacognitive beliefs about health anxiety and COVID-19 anxiety. For instance, Eşkisu et al. (2022) observed positive correlation coefficients across all subscales of MCQ-HA and fear of COVID-19, aligning with our findings in the present study. In contrast to our approach, however, their investigation delved into the indirect relationships between these variables through the application of a structural equation model. So there are few studies to compare with the current research. This lack of association between these variables in this study could be attributed to level of COVID-19 anxiety. The data of this study were collected over a long period of time. Because of this, participants' COVID-19 anxiety was found to be below mean. It can be argued that uncontrollable illness thoughts may manifest at lower levels of general anxiety and COVID-19 anxiety. On the other hand, beliefs about biased thinking and thoughts that can cause illness may be associated with higher levels of anxiety. Another possible explanation for this is that a different measure of COVID-19 anxiety, i.e. COVID-19 Phobia Scale (Ay & Hızlı-Sayar, 2022), Fear of Covid-19 Scale (Eşkisu et al., 2022) was used in these studies as opposed to the COVID-19 Anxiety Scale in ours.

Through the moderation analysis investigating the influence of perceived partner responsiveness on the relationship between metacognitive beliefs about health anxiety and both COVID-19 anxiety and general anxiety symptoms, a significant moderation effect of perceived partner responsiveness was observed in relation to the belief that thoughts are uncontrollable and COVID-19 anxiety. However, this effect did not manifest in general anxiety symptoms. This indicates that the role of perceived partner responsiveness in moderating anxiety symptoms varies depending on the specific context of COVID-19 anxiety versus general anxiety symptoms. According to the functioning of the attachment model in adulthood, when individuals feel in danger and uncertainty, they tend to seek closeness and support from their attachment figures, exhibit proximity seeking behaviors (Mikulincer and Shaver, 2007). This helps them alleviate distress and strengthen their sense of security in the attachment relationship (i.e., partner, parent, close friend) (Cassidy and Shaver, 2008).

In light of the stressful and threatening circumstances surrounding the COVID-19 pandemic, individuals might have exhibited greater tendencies to seek closeness and support from their adult attachment figures, particularly their spouses. However, contrary to expectations, this study did not find evidence to suggest that such proximity-seeking behavior resulted in relief or a reduction in anxiety symptoms. Interestingly, in the present study, it has been observed that the belief that thoughts are uncontrollable has a higher effect on coronavirus anxiety in people who perceive higher partner responsiveness. This finding highlights a deviation from the existing literature that commonly emphasizes the role of perceived partner

responsiveness in mitigating stress and anxiety (Selçuk, Zayas, & Hazan, 2010; Doane et al., 2013; Feeney & Collins, 2015; Slatcher et al., 2015).

Contrary to the positive effects of perceived partner responsiveness, the impact of social support on stress reactions varies depending on the level of stress experienced. In high-stress situations, social support appeared to exacerbate stress reactions, while in low-stress situations, it had a stress-reducing effect (Buunk, 1989). Given the perception of COVID-19 as a highly stressful event, the support received from partners may have increased individuals' stress responses during this time. Additionally, it is crucial to acknowledge that social support can be perceived negatively. For instance, receiving support may be seen as a threat to one's self-esteem, a reminder of inferiority, or a violation of autonomy and self-control values. The act of receiving support may lead to decreased self-esteem, increased attention to the problem, or the support received may be inadequate or lacking in skill (Shrout, Herman, & Bolger, 2006). These factors can contribute to a negative perception of partner responsiveness and potentially impede its effectiveness in reducing stress within the context of this study.

An alternative interpretation for this study's results may be explained by the fact that perceived partner responsiveness reveals people's feelings of anxiety more. For instance, Ruan et al. (2019)'s study supports this idea. Ruan et al. (2019) found that when participants perceived greater responsiveness from their partner, they were more likely to express various emotions, including joy, excitement, contentment, pride, gratitude, anger, anxiety, and sadness. On high-stress days, participants expressed more anxiety to their responsive partner.. Participants who believed their partners were highly responsive in a stressful situation experienced increased anxiety and sought more support compared to those in the control group. These participants also used more anxiety words in their messages and expressed a slightly higher sense of closeness to their partner.

Perceived partner responsiveness has been examined in several studies regarding its impact on stress and mental health during the COVID-19 pandemic. Specifically, it has been found to have a mitigating effect on the relationship between stress and mental health, particularly among individuals who were dating (Soares et al., 2021). However, it should be noted that in the context of financial strain caused by job loss, perceived partner responsiveness alone may not be adequate in alleviating the financial burden (Balzarini et al., 2023). These findings suggest that while partner responsiveness can be beneficial for mental health during stressful times, its effectiveness may vary depending on the specific stressor or circumstance being experienced. In future studies, it would be highly beneficial to take into account the contextual influences of the stresses encountered by individuals, as well as the relational status of partners, when investigating the relationship between stress and perceived partner responsiveness. Exploring the moderation effects of these variables could provide valuable insights into how perceived partner responsiveness operates in the context of stressful situations.

Perceived partner responsiveness was found to have a moderating effect solely on COVID-19 anxiety concerning the association between the belief that thoughts are uncontrollable and anxiety. However, no such moderating effect was evident in relation to general anxiety. This difference can be attributed to the heightened perception of threat and uncontrollability during the COVID-19 period, leading to increased state anxiety and a greater inclination to seek social resources as coping mechanisms. Uncertainty contributes to exaggerated negative consequences and increased anxiety symptoms. Intolerance to uncertainty, a cognitive bias, heightens stress and anxiety in uncertain situations (Oglesby et al., 2016; Yook et al., 2010). Uncertainty diminishes individuals' sense of control and triggers maladaptive psychological reactions (Bomyea et al., 2015; Carleton, 2016). Perceived threats, such as illness or financial difficulties, also contribute to heightened state anxiety (Panayiotou & Karekla, 2013). During times of perceived threats, individuals engage in a secondary evaluation process, assessing psychological, personal, and social resources to enhance resilience and coping abilities (McCauley et al., 2013). In this study, the uncertainty surrounding the COVID-19 period and the perceived threats it presented were found to elevate individuals' state anxiety. Moreover, these circumstances may have also heightened the frequency of seeking social resources, such as perceived partner responsiveness.

There are several significant limitations to the current study. Firstly, the majority of participants were women, and our sample size was relatively small. Additionally, due to quarantine and COVID-19 prevention measures, we were limited to using online self-report scales, which may affect the generalizability of our findings to those with internet access. Furthermore, we collected data cross-sectionally, making it impossible to establish a cause-and-effect relationship between the variables under investigation. A longitudinal approach could offer more insight into the dynamic nature of these associations. Future studies with a longitudinal design would provide a better understanding of the direction of causality and how these factors may change over time. Moreover, we did not gather dyadic data from couples, which is crucial to understanding how relationships function in challenging circumstances. Further studies are required to examine the dynamics and interactions within couples during challenging circumstances, such as a pandemic or acute health problems, as they can significantly impact the well-being of individuals and the overall stability of relationships. Another limitation is that the study was conducted on a non-clinical Turkish sample, limiting the applicability of the findings to clinical populations or individuals with diagnosed anxiety disorders. Including clinical participants would help us understand how metacognitive beliefs and perceived partner responsiveness affect anxiety in those with mental health conditions. This insight could lead to more effective therapeutic interventions. Lastly, self-report tools may have inherent limitations, such as self-report biases and reliance on subjective perceptions of anxiety. In future research, incorporating objective measures such as physiological markers of anxiety or behavioral observations alongside self-report assessments could offer a more comprehensive understanding of the relationships between metacognitive beliefs, perceived partner responsiveness, and anxiety symptoms.

Given the significant association between the belief that thoughts are uncontrollable and both COVID-19 anxiety and general anxiety symptoms, therapeutic interventions could target this specific metacognitive belief. Cognitive-behavioral approaches that address maladaptive beliefs about thought control may be beneficial in reducing anxiety symptoms. Also, the study's findings highlight the potential moderating role of perceived partner responsiveness in COVID-19 anxiety. For individuals experiencing heightened anxiety during pandemic-related stressors, involving partners in therapy or providing couples-focused interventions might be beneficial in navigating anxiety-related challenges. When assessing anxiety symptoms and their underlying factors, it is essential to consider both individual-level metacognitive beliefs and perceived partner responsiveness. A thorough evaluation of these factors may help design personalized treatment plans and improve therapeutic outcomes. As a result, these findings indicate the need for further exploration of the partner's influence on the relationship between metacognition and anxiety within various stress contexts. In future studies, in addition to perception, the real behavior of partners could also be a topic of discussion. Additionally, it is important to examine the mechanisms of this influence in greater detail.

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Data Availability. The dataset is available from the corresponding author upon reasonable request.

Ethical Approval. Ethical approval for this study was obtained from the **Aydın Adnan Menderes University ... Ethics Committee** (Meeting No: **31906847/050.04.04-08**, Decision No: **19** Date: **22/07/2020**).

Informed Consent. Informed consent was obtained from all participants for inclusion in the study.

Conflict of Interest. The authors declare no competing financial or personal interests.

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