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COVID-19 and Sexual Desire: Perceived Fear is Associated with Enhanced Relationship
Functioning

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Abstract

Lifestyle changes caused by the COVID-19 pandemic had mostly negative consequences for individual, relationship, and sexual functioning. However, some individuals have reported increases in sexual desire and made new additions to their sex lives. Given that stress-provoking situations can sometimes make mortality more salient and heighten sexual desire, it is possible that lifestyle changes and fear of COVID-19 infection may have benefited some relationships. We conducted a cross-sectional study with 303 romantically involved adults (58.1% men) and found that lifestyle changes were associated with negative changes in one's sex life, unrelated to wanting to spend time with one's partner, and positively associated with relationship quality. Lifestyle changes were also positively associated with sexual desire, but only for participants with high (vs. low) fear of COVID-19 infection. For these participants, sexual desire was associated with positive changes in one's sex life and wanting to spend time with one's partner, but not with overall relationship quality. Results were consistent after controlling for pandemic-related anxiety and demographic variables. This study advances literature focused on the importance of romantic relationships in stress-provoking situations such as the COVID-19 pandemic by shedding light on the association between sexual desire and personal and relational well-being.

Keywords: COVID-19; sexual desire; perceived fear; relationship quality; health and well-being

COVID-19 and Sexual Desire: Perceived Fear is Associated with Enhanced Relationship Functioning

Governments worldwide issued confinement and social distancing policies in the wake of the COVID-19 global pandemic (e.g., Balmford et al., 2020), which caused several social and financial disruptions (United Nations, 2020; WHO, 2020). For example, people had to spend more time at home either alone or with others (e.g., family members, romantic partners, roommates), some had to adjust how they worked (e.g., working from home) or lost their jobs (e.g., Blustein et al., 2020; Carnevale & Hatak, 2020), and in some cases had to find a new balance between work life and household management (e.g., having to work with children at home; Craig & Churchill, 2021; Del Boca et al., 2020).

Changes in routines and lifestyle imposed by these social isolation measures have been associated with poorer adjustment and individual functioning (e.g., Brooks et al., 2020; Ettman et al., 2020; Gualano et al., 2020; Pellegrini et al., 2020; Torales et al., 2020; Xiong et al., 2020). For example, some people have reported less physical activity (Giuntella et al., 2021) and poorer sleep quality since the outbreak (López-Moreno et al., 2020), and those who changed their daily routines were more likely to develop depressive symptomatology (Shanahan et al., 2020; Stanton et al., 2020). The distress caused by the pandemic also led to an overall decrease in sexual functioning. For example, individuals who experienced more disruptions in their lifestyle (e.g., forced into lockdown) reported decreases in their sexual desire, arousal, and frequency of sexual intercourse, and an overall worsening of their sex life (e.g., Ballester-Arnal et al., 2020; Hensel et al., 2020; Karagöz et al., 2020; Ko et al., 2020). Lifestyle disturbances also affected how people function in their relationship (Goodwin et al., 2020; Pietromonaco & Overall, 2021). For example, Balzarini and colleagues (2020) found that social isolation—among other stressors—was associated with worse relationship quality and more conflicts with the partner. Notably, people who experienced more conflicts related

to the pandemic also reported fewer intimate and sexual behaviors with their partners (Luetke et al., 2020).

Changes in sexual desire may help explain why COVID-19-related lifestyle changes are associated with worse relationship functioning. Research has shown that individuals with lower sexual desire and sexual activity reported less sexual and relationship satisfaction (Dosch et al., 2016; Mark, 2014; Pascoal et al., 2018; Santtila et al., 2007). A similar trend was observed at the onset of the pandemic, such that individuals who experienced declines in their sexual desire also reported declines in intercourse frequency (Karsiyakali et al., 2021; Lehmiller et al., 2021). To the extent that sexual desire predicts sexual activity (Vowels & Mark, 2020) and is associated with relationship quality (Dewitte & Mayer, 2018; Kim et al., 2021), individuals whose lives have been disrupted by the pandemic may experience lower sexual and relationship quality due to a decrease in sexual desire.

These findings notwithstanding, research has also shown that a sizeable number of individuals have also reported increases in sexual functioning and sexual desire during the pandemic (Ballester-Arnal et al., 2020; Coombe et al., 2020; Karagöz et al., 2020; Panzeri et al., 2020). For example, Lehmiller and colleagues (2021) found that one in five of their participants started to experiment with their sexuality and included new activities when having sex with their partners (e.g., sharing and acting on their sexual fantasies, having sex in different positions or locations). Making these new additions was associated with more desire for sex and one's partner, and with enhanced quality of one's sex life. The authors also found that new sexual additions were more likely among those who felt more stressed, and reasoned that sexual activity might act as a buffer against the negative experiences caused by the pandemic (see also Mollaioli et al., 2021; Pennanen-Iire et al., 2021). Even though there is evidence showing that stress is negatively associated with sexual desire in general (Bodenmann et al., 2010; Mark & Lasslo, 2018; Træen et al., 2007), negative experiences

caused by the environment can also paradoxically enhance sexual desire for some individuals. This may be particularly evident when individuals are forced to adjust their lifestyles in response to a life-threatening context.

As argued by Pyszczynski and colleagues (2021), having to adhere to social isolation and confinement while being continuously exposed to news and information related to the COVID-19 pandemic (e.g., daily reports from health authorities shared on social media) can increase fear and make personal vulnerability more salient. For example, perceiving greater risks caused by the pandemic has been associated with more death obsession and less happiness (Yıldırım & Güler, 2021). Drawing from Terror Management Theory (Greenberg et al., 1986; for a review, see Pyszczynski et al., 2015), becoming aware of life threats also motivates some individuals to pursue symbolic immortality through life meaning, purpose, and significance. Indeed, when faced with situations in which their mortality is more salient, individuals tend to enact behaviors that help them cope with uncertainty (Burke et al., 2010; Mikulincer et al., 2003). For example, Liu and colleagues (2021) found that individuals for whom mortality was more salient during the pandemic perceived less control over the context (e.g., feeling helpless). As a coping mechanism, these individuals were then more likely to use tools to monitor their health (e.g., body fat scales, apps to control calorie intake).

This theory is particularly relevant in the context of COVID-19 because it can help us understand how stressors imposed by the pandemic (e.g., social isolation), together with mortality and health threat awareness, shaped individual responses at the onset of the pandemic (for discussions, see Ahmed et al., 2021; Courtney et al., 2020). Of particular interest to our research, coping mechanisms to deal with fear and threat also include relationship processes (for a review, see Plusnin et al., 2018). Previous research has shown that, after being reminded of their mortality (vs. control condition), individuals desired more intimacy in romantic relationships (Hirschberger et al., 2003; Mikulincer & Florian, 2000)

and reported an increased desire for sex (Birnbaum et al., 2011). To the extent that mortality salience motivates individuals to pursue meaning and commitment in relationships (Florian & Mikulincer, 2002), and sexual desire signals value and compatibility in the relationship and motivates its maintenance (Birnbaum & Reis, 2019), the perception of fear caused by the pandemic (a proxy for mortality salience and health threats) may be a condition in which individuals dealing with more lifestyle changes experience heightened sexual desire and, in turn, positive relationship functioning.

Overview and Hypotheses

This study was conducted in Portugal at the onset of the pandemic. On March 19th, 2020, the Portuguese government declared a State of Emergency and mandated a nationwide lockdown to prevent the spread of infections. On May 2nd, the government declared a State of Calamity and implemented the first phase of the deconfinement plan with several restrictions (e.g., confinement was advised; circulation restrictions; gatherings of more than 10 individuals were not allowed; working from home was advised). These restrictions were gradually lifted in mid-May (e.g., opening of stores, restaurants, and cafes with terraces, and high schools) and every other week throughout June (e.g., opening of malls, kindergartens, and pre-schools). The deconfinement plan was revised for critical regions of the country, where infection rates were highest. Throughout this period, public health measures such as wearing face masks, social distancing, and preventive behavior enactment (e.g., use of hand sanitizer) were mandated for everyone.

Building upon past findings (e.g., Ballester-Arnal et al., 2020; Karagöz et al., 2020; Lehmiller et al., 2021; Luetke et al., 2020), we tested whether lifestyle changes caused by the pandemic (e.g., enforced lockdown) were associated with detriments in sex life quality and relationship functioning. Specifically, we expected greater lifestyle changes in response to the

pandemic to be negatively associated with changes in one's sex life quality since the outbreak, wanting to spend time with the partner, and relationship quality (H1).

Most individuals have reported less sexual desire during lockdown (e.g., Hensel et al., 2020; Ko et al., 2020). However, some have reported increases in their sexual desire during the same period (e.g., Coombe et al., 2020; Lehmiller et al., 2021). To the extent that increased sexual desire can be experienced when health threats become more salient (Birnbaum et al., 2011), individuals who have reported increases in their sexual desire during lockdown are arguably those who experienced more perceived health threats when adjusting to the pandemic. Hence, we expected lifestyle changes to be associated with less sexual desire for participants with less fear of COVID-19 infection (H2a), and with more sexual desire for those who were more fearful of infection (H2b).

Lastly, given that sexual desire is typically associated with greater relationship quality (Dewitte & Mayer, 2018; Kim et al., 2021), we expected desire to mediate the associations between lifestyle changes and sexual and relationship functioning. However, this mediation was expected to vary (i.e., be conditioned) by the level of fear of infection. For participants with less fear of infection, less sexual desire should explain why lifestyle changes were associated with *worse* sexual and relationship functioning (H3a). By contrast, for participants with more fear of infection, more sexual desire should explain why lifestyle changes were associated with *better* sexual and relationship functioning (H3b). Figure 1 depicts the hypothesized conditional mediation model.

-- Figure 1 about here --

Knowing that individual experiences during the pandemic (e.g., pandemic-related anxiety) shape daily functioning (e.g., Dawel et al., 2020; Gallagher et al., 2020), and to rule out potential confounds with fear of COVID-19 infection, we examined our hypotheses while controlling for anxiety levels to eliminate potential confounds. Furthermore, knowing that

demographic variables (e.g., gender, age) shape sexual behavior and relationship functioning (e.g., Birnbaum & Laser-Brandt, 2002; Herbenick et al., 2010; Kontula & Haavio-Mannila, 2009; Santtila et al., 2007), we examined whether our findings were consistent even after controlling for these variables.

Method

Participants

A power analysis using G*Power (Faul et al., 2007) indicated that 288 participants would be needed to estimate a linear regression model with three predictors with a small effect size ($f^2 = .05$) and 90% power. In total, 652 individuals accessed the online survey. Of these, 40 failed to provide informed consent, and 202 abandoned before survey completion. Given our aim to examine how the COVID-19 pandemic was associated with relationship dynamics, we excluded 107 participants who were not in a romantic relationship. The final sample was comprised of 303 individuals living in Portugal (58.1% men), with ages ranging from 18 to 69 years ($M = 31.40$, $SD = 10.52$). Most participants identified as heterosexual (84.5%; 9.6% gay or lesbian; 5.9% bisexual), lived in metropolitan areas (81.3%), and had more than 12 years of education (74.0%). All participants were in a romantic relationship (33.2% married) for an average of 8.66 years ($SD = 8.68$).

Measures

The survey included a total of 19 items assessing changes in personal and interpersonal functioning since the COVID-19 outbreak. Items that are relevant to the present study are described below, and additional measures and will not be discussed further.

Reactions to the COVID-19 Pandemic

We assessed lifestyle changes using two items: “To what extent have you adhered to the governmental policies of social isolation?” (1 = *Did not adhere at all* to 7 = *Adhered completely*) and “How much has your lifestyle changed since the COVID-19 outbreak?” (1 =

Did not change at all to 7 = *Changed completely*). Responses to these items were averaged into a single index, $r = .35$, $p < .001$, such that higher scores indicate greater lifestyle changes as a result of the COVID-19 pandemic. We also assessed perceived fear by asking participants “To what extent do you feel at danger of becoming infected with COVID-19?” (1 = *Not at all* to 7 = *Extremely*). Lastly, we assessed anxiety levels with the item “Since the COVID-19 outbreak, how would you rate your anxiety?” (1 = *Poor* to 5 = *Excellent*).

Sexual Functioning During the COVID-19 Pandemic

We assessed sexual desire by asking “Since the COVID-19 outbreak, how would you rate your desire to have sex?” (1 = *Weak* to 5 = *Excellent*), and changes in sex life by asking “Since the COVID-19 outbreak, your sex life...” (1 = *Got worse* to 7 = *Got better*).

Relationship Functioning During the COVID-19 Pandemic

We asked participants “Since the COVID-19 outbreak, I wanted to spend time with my partner” (1 = *Not at all* to 7 = *Completely*). We also assessed relationship quality by asking participants to describe their relationship (“Thinking about your relationship, how would you rate your [...] toward your partner?”) using four items: satisfaction, love, commitment, and intimacy (1 = *Very low* to 7 = *Very high*). These items were selected based on past research showing these components to be among the most representative of relationship quality (e.g., Fletcher et al., 2000; Hassebrauck & Fehr, 2002). Responses to these items were averaged into a single index ($\alpha = .93$), such that higher scores indicate more relationship quality.

Procedure

This study was conducted following the Ethics guidelines of [host institution]. Data were collected between May and June 2020 using a snowball sampling approach. A research assistant advertised the study through public posts on their social networking pages (e.g., Facebook and Instagram), inviting individuals to participate in a study about sexual functioning during the COVID-19 confinement in Portugal. The survey was administered in

Portuguese and individuals had to be over the age of 18 and sexually active to participate.

After accessing the link to the survey, prospective participants were informed about their rights as participants (e.g., confidentiality, anonymity, possibility to withdraw from the study without penalties), and had to indicate their agreement to be enrolled in the study.

Participation in this study was voluntary and no compensation was offered. The survey started with standard demographic information (e.g., gender, age, sexual orientation), after which participants were asked to think about their reactions, feelings, and experiences at the onset of the COVID-19 pandemic. Throughout the survey, participants were reminded of questions left unanswered but were allowed to proceed with the survey. In the end, participants were thanked and debriefed.

Data Analysis

We first computed descriptive statistics and overall correlations between our main variables. Then, we tested our main hypotheses through conditional mediation models (for discussions, see Hayes, 2018; Muller et al., 2005; Preacher et al., 2007) using the PROCESS macro (Model 7) with 10,000 bootstrap samples (Hayes, 2017). In all models, lifestyle disruption was the predictor variable (X), sexual desire was the mediator variable (M), perceived fear of COVID-19 infection was the moderator variable (W), and anxiety level was the covariate. Outcome variables were changes in sex life (Model A), wanting to spend time with one's partner (Model B), and relationship quality (Model C). Variables were mean centered for the construction of products. Lastly, we explored differences in our main variables according to sociodemographic variables using *t*-tests, ANOVAS, and correlations to determine whether any additional covariates should be included in the conditional mediation analyses.

Results

Preliminary Analyses

Overall descriptive statistics and correlations between measures are presented in Table 1. Participants who indicated greater lifestyle changes caused by the pandemic also perceived more fear of COVID-19 infection, $p = .019$. These participants reported negative changes in their sex life, $p < .001$, but also greater relationship quality, $p = .001$. Participants who experienced more sexual desire also reported lower anxiety levels, $p = .033$, positive changes in their sex life, $p = .001$, and wanted to spend time with their partner, $p < .001$.

-- Table 1 about here --

Main Analyses

Results of the conditional mediation models are summarized in Table 2. As expected (H1), direct effects showed that lifestyle changes were associated with negative changes in one's sex life, $p < .001$ (Model A). Unexpectedly, no significant association was observed with wanting to spend time with one's partner, $p = .234$ (Model B), and a positive association emerged with relationship quality, $p = .002$ (Model C).

-- Table 2 about here --

As expected, the association between lifestyle changes and sexual desire was moderated by perceived fear of COVID-19 infection, $p = .034$ (H2; see Figure 2). A closer inspection of the simple slopes revealed that participants with greater lifestyle changes reported more sexual desire, but only if they also perceived more fear of infection ($+1 SD$), $p = .014$. That association was non-significant for participants who perceived less fear of infection ($-1 SD$), $p = .774$. Interestingly, planned contrasts showed no differences in sexual desire for participants with more lifestyle changes, $t(303) = 0.53$, $p = .597$, $d = 0.06$, whereas participants with fewer lifestyle changes reported more sexual desire when they reported less (vs. more) fear, $t(303) = -2.27$, $p = .024$, $d = 0.26$.

-- Figure 2 about here --

Lastly, sexual desire was associated with positive changes in one's sex life, $p < .001$ (Model A), and wanting to spend time with one's partner, $p < .001$ (Model B), but not with relationship quality, $p = .32$ (Model C). As expected, indexes of conditional mediation revealed that the indirect effect through sexual desire on changes in sex life (Model A) and wanting to spend time with the partner (Model B) occurred only for participants with more (vs. less) fear of COVID-19 infection (H3). By contrast, no conditional mediation emerged for relationship quality (Model C). All results were not dependent on including anxiety as a covariate.

Additional Analyses

There were some differences according to sociodemographic variables worth noting. Specifically, results showed that women reported more lifestyle changes, $p = .018$, and perceived more fear of becoming infected, $p = .017$, whereas men reported more sexual desire, $p < .001$, and more positive changes in their sex life, $p = .023$. No other differences reached significance, $ps > .055$. Results also showed that heterosexual (vs. non-heterosexual) participants wanted to spend more time with their partner, $p = .023$, and reported greater relationship quality, $p < .001$. No other differences reached significance, $ps > .063$. There were also no differences according to area of residence, $ps > .188$, or education, $ps > .248$. Lastly, results showed that older participants reported positive changes in their sex life, $p = .002$, and more relationship quality, $p = .018$. Entering gender, sexual orientation, and age as additional covariates in our models, however, did not change our findings, such that indexes of moderated mediation were significant for Model A, $b = 0.03$, $SE = .01$, 95% CI [0.002, 0.059], and Model B, $b = 0.05$, $SE = .03$, 95% CI [0.007, 0.105], but not Model C, $b = 0.02$, $SE = .01$, 95% CI [-0.005, 0.050].

Discussion

In a cross-sectional study conducted at the onset of the pandemic with individuals in romantic relationships, we tested whether lifestyle changes caused by the pandemic and perceived fear of infection were linked to sexual and relationship functioning, due to changes in sexual desire. We found mixed support for our hypotheses. Overall, our results showed that individuals who experienced more disruptions to their lifestyle as a result of the COVID-19 pandemic experienced a deterioration in their sex life quality, but not relationship quality (partially supporting H1). This finding is aligned with other relevant studies (e.g., Ballester-Arnal et al., 2020; Hensel et al., 2020; Karagöz et al., 2020; Ko et al., 2020; Lehmiller et al., 2021; Luetke et al., 2020) and suggests that being forced to adjust daily routines and to cope with the distress caused by the pandemic likely interfered with both sexual functioning and the desire to pursue (or to be receptive) to sexual activity with one's partner, at least at the aggregate level.

We also found that lifestyle changes were associated with more sexual desire among individuals who were more fearful of COVID-19 infection (partially supporting H2b). Corresponding with their heightened sexual desire, these individuals reported more positive changes in their sex lives and wanting to spend time with their partners, but not better relationship quality (partially supporting H3b). No significant associations emerged for those who were less fearful of infection (not supporting H2a or H3a). These findings align with the premises advanced by Terror Management Theory (Pyszczynski et al., 2015), whereby individuals tend to enact behaviors that help them cope with the threat of mortality (Burke et al., 2010; Mikulincer et al., 2003), which sometimes includes increased desire for intimacy and sex with one's partner (Florian & Mikulincer, 2002; Hirschberger et al., 2003; Mikulincer & Florian, 2000; Plusnin et al., 2018). In our sample, this was translated into feelings of sexual desire and wanting to spend more time with one's partner(s). For these individuals, being confined with one's partner to the same physical space could have

potentially promoted relational self-expansion (Raposo et al., 2020) and motivated partners to explore their sexuality, especially given that individuals' usual opportunities for self-expansion outside of the home were limited due to social restrictions. To the extent that this reasoning holds true, our findings may help explain why some individuals have experienced more sexual desire, more sexual novelty, better sex life quality, and more frequent sexual activity with their partners during the pandemic (e.g., Coombe et al., 2020; Lehmiller et al., 2021; Panzeri et al., 2020).

However, at the same time, and contrary to our predictions, more lifestyle changes were associated with greater relationship quality (not supporting H1), and this association was unrelated to the perceived fear of COVID-19 infection and sexual desire (not supporting H2 or H3). These results are not aligned with past evidence showing that experienced difficulties (e.g., Williams et al., 2015) and relationship turbulence (e.g., Weigel & Shrout, 2020) are associated with individual and relational distress. However, our findings resonate with evidence showing that partner responsiveness and support can help individuals cope with stressful situations (e.g., Balzarini et al., 2020; Holt-Lunstad et al., 2010). Arguably, individuals may have relied more on their partners for emotional and instrumental support at the onset of the pandemic (and may have continued to do so over the following months) than they did previously, helping them to protect their relationship against external strains and feel closer to their partner. More broadly, having greater relationship quality has been shown to favor psychological health and well-being (e.g., Dush & Amato, 2005), and this has also been reported in the context of the COVID-19 pandemic (Pieh et al., 2020).

The fact that lifestyle changes had a positive direct association with relationship quality and, simultaneously, a direct negative association with the appraisal of one's sex life suggests that sexual distress caused by the pandemic is not entirely accounted for by a lack of dyadic adjustment or an increase in relationship conflicts (e.g., Luetke et al., 2020), at least

considering our evidence at the onset of the pandemic. Moreover, perceived fear of infection was not a condition under which sexual desire explained greater relationship quality for individuals having to deal with lifestyle changes. Hence, this finding is not aligned with the terror management perspective, suggesting that its premises may be specific to sexual functioning and not necessarily for other, broader relationship processes. Indeed, we found that sexual desire did not account for other processes underlying relationship quality, nor did it determine the experiences individuals have with their partners when dealing with a stressful context like the COVID-19 pandemic. That said, there may be other potential ways in which mortality salience might have shaped relationship quality perceptions that were not assessed in the present research. For example, a recent study showed that partnered individuals reported less frequent condom use during the pandemic, in comparison to pre-pandemic times (Dacosta et al., 2021). Based on Terror Management Theory premises, mortality salience might have motivated some of these individuals to abandon condom use with their partners, or at least discuss this possibility, as a way to increase their relational intimacy (e.g., Bolton et al., 2010; Umphrey & Sherblom, 2007) or to signal a desire for offspring (Fritzsche et al., 2007). Such behaviors could potentially convey a sense of commitment, defined by feelings of positive affect and a long-term orientation toward relationship maintenance (Rusbult et al., 2006).

Limitation and Future Directions

This study was conducted during a unique historical period and offers valuable insight into the myriad impacts of the COVID-19 pandemic, while also offering an explanation for discrepancies in the effects experienced across relationships. However, it does have some important limitations that must be acknowledged. First, we assessed our main variables using one-item or two-items measures developed for this study, which might limit the generalizability and ecological validity of our findings, and we used fear of COVID-19

infection as a proxy for mortality salience. In this line of reasoning, future studies should seek to replicate our hypotheses in a different cultural context and using other, more direct, and more psychometrically sound instruments. Future studies should also seek to rule out alternative explanations for our findings. For example, studies have shown that pandemic-related difficulties (e.g., feeling lonely or having more financial strains) increase relationship conflicts among individuals with unresponsive partners (Balzarini et al., 2020), and pandemic-related conflicts decrease intimate and sexual activity (Luetke et al., 2020). Following this, individuals who had to deal with more changes in their lifestyle and who feared COVID-19 infection might have experienced more sexual desire *and* more conflicts, potentially increasing relationship-related insecurities. For these individuals, acting upon sexual desire might be a way to foster intimacy and alleviate some of the strains caused by the pandemic, as opposed to being a product of fear of COVID-19 infection or mortality salience. The need to rule out alternative explanations is particularly relevant when considering recent discussions about the replicability of Terror Management Theory predictions (Klein et al., 2019).

Also, our findings rely on cross-sectional, individual-level data, which therefore prevents us from establishing causality and determining how these processes unfold over time (Maxwell & Cole, 2007; O’Laughlin et al., 2018), or examining dyadic processes. Past research has shown that individuals highly committed to their relationships are more likely to activate different relationship protection mechanisms, including constructive accommodation to deal with a conflict (Rusbult et al., 2012). Hence, it is possible that individuals who were highly (vs. less) committed to their relationship before the COVID-19 pandemic might have felt better equipped to discuss and adjust their lifestyle to context demands. Given that relationship functioning is intrinsically associated with sexual desire (e.g., Birnbaum, 2018), one could also argue that sexual and relationship functioning could shape perceived changes

in sexual desire at the onset of the pandemic. However, research has suggested that changes in sexual desire reliably predict relationship quality over time (Dewitte & Mayer, 2018; Kim et al., 2021) and is a stronger predictor of sexual satisfaction (Vowels & Mark, 2020). Moreover, our inferences were based on the premise that both partners shared similar perspectives about the pandemic and were equally motivated to cope and to protect their relationship. However, sometimes individual goals are not aligned with relationship goals and partners experience conflicts (e.g., Gere & Schimmack, 2013). For example, one individual may have struggled with unprecedented lifestyle changes (e.g., a teacher working from home), whereas their partner may have had to maintain their daily routines (e.g., a health professional working at a hospital). Situations like this may create unique dynamics that impact daily functioning and household management that spill over into relationship functioning; however, exploring such impacts is something that can only be addressed using dyadic studies. Lastly, these data were collected relatively early on in the pandemic, and it is possible that patterns of sexual and relationship behavior changed over time along with changing circumstances of the pandemic (e.g., exiting versus re-entering lockdowns). Longitudinal data would therefore be particularly useful for capturing potential fluctuations, as well as how long these changes are likely to persist.

Future studies should also account for gender-specific roles and other individual differences in how individuals react and adapt to contextual demands. For example, in mixed-sex relationships, women (vs. men) are often expected or assumed to be the primary caregiver in the family and responsible for domestic chores (Haines et al., 2016). This can create additional sources of conflict and distress for women when they have to balance job demands and household management without the help of (or with only minimal help from) their male partner (Claffey & Mickelson, 2009; Power, 2020). Similarly, individuals struggling with health adversities caused by COVID-19 (e.g., those who were infected; those

who had to assist others who were infected), and those who had to direct their efforts and attention elsewhere (e.g., frontline workers) were likely not volunteering to participate in surveys. Moreover, certain groups of individuals seem to perceive greater risk/threat from the COVID-19 pandemic, depending on both demographic variables (e.g., based on their political orientation; Bruine de Bruin et al., 2020) and individual differences (e.g., based on their regulatory focus; Rodrigues et al., 2020). Such differences might be associated with differential impact on sexual functioning due to lifestyle changes.

Conclusion

Our study demonstrates that adjustments to a novel and stressful environmental context have both negative and positive associations with sexual functioning—depending on mortality salience cues—and, at the same time, a positive association with relationship functioning. These findings advance our understanding of Terror Management Theory by showing that mortality salience can potentially boost sexual functioning—but not relationship quality—while also contributing to relationship science more broadly by highlighting the importance of individual, interpersonal, and contextual factors that have implications for well-being. More broadly, our research offers insights into why and under which conditions individuals are more able to cope and flourish in their relationships at the onset of the COVID-19 pandemic. These findings can inform professionals from different areas (e.g., sex therapy, family therapy, emotion-focused therapy) to develop strategies and potentially help patients flourish in their relationships in future anxiety-provoking contexts.

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Figure 1

Conditional Mediation Theoretical Model

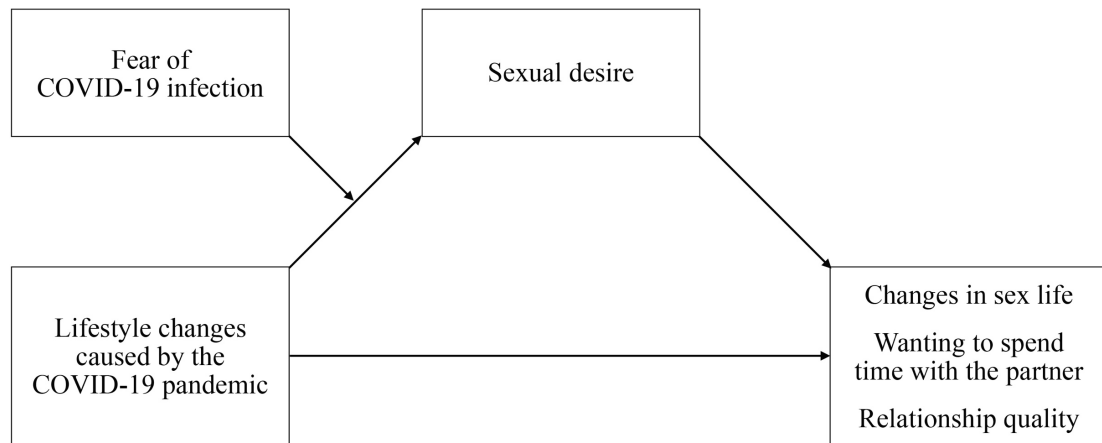


Table 1*Overall Descriptive Information and Correlations Between Variables*

	<i>M (SD)</i>	Correlations					
		1	2	3	4	5	6
1. Lifestyle changes	3.92 (0.69)	-					
2. Fear of COVID-19 infection	4.13 (1.67)	.14*	-				
3. Anxiety levels	2.38 (1.08)	.02	-.10	-			
4. Sexual desire	3.66 (1.09)	.07	-.06	.12*	-		
5. Changes in sex life	4.26 (1.45)	-.22*	-.14*	.10	.18***	-	
6. Spend time with the partner	4.66 (2.26)	.09	-.08	.14*	.23***	.36***	-
7. Relationship quality	5.14 (1.93)	.18***	-.07	.13*	.08	.33***	.49***

* $p \leq .050$. ** $p \leq .010$. *** $p \leq .001$.

Table 2*Conditional Mediation Analyses*

	Sexual desire (M)		Model A		Model B		Model C	
			Changes in sex life (Y)		Spend time with the partner (Y)		Relationship quality (Y)	
	<i>b</i> (<i>SE</i>)	95% CI	<i>b</i> (<i>SE</i>)	95% CI	<i>b</i> (<i>SE</i>)	95% CI	<i>b</i> (<i>SE</i>)	95% CI
Lifestyle changes (X)	0.15 (.09)	[-0.035; 0.325]	-0.50*** (.12)	[-0.726; -0.270]	0.22 (.18)	[-0.143; 0.580]	0.49** (.16)	[0.182; 0.805]
Fear of COVID-19 infection (W)	-0.05 (.04)	[-0.122; 0.027]	-	-	-	-	-	-
X x W	0.11* (.05)	[0.008; 0.206]	-	-	-	-	-	-
Less fear of infection (-1 <i>SD</i>)	-0.03 (.12)	[-0.263; 0.196]	-	-	-	-	-	-
More fear of infection (+1 <i>SD</i>)	0.32* (.13)	[0.066; 0.582]	-	-	-	-	-	-
Sexual desire (M)	-	-	0.25*** (.07)	[0.106; 0.396]	0.44*** (.12)	[0.206; 0.666]	0.10 (.10)	[-0.099; 0.297]
Anxiety levels (Cov.)	0.12* (.06)	[0.007; 0.233]	0.10 (.07)	[-0.041; 0.250]	0.24* (.12)	[0.010; 0.473]	0.22* (.10)	[0.022; 0.419]
Index of moderated mediation	-	-	0.03 (.01)	[0.002; 0.059]	0.05 (.02)	[0.005; 0.098]	0.01 (.01)	[-0.013; 0.40]
Moderated indirect effects								
Less fear of infection (-1 <i>SD</i>)	-	-	-0.01 (.03)	[-0.075; 0.051]	-0.01 (.05)	[-0.119; 0.092]	-0.00 (.02)	[-0.042; 0.031]
More fear of infection (+1 <i>SD</i>)	-	-	0.08 (.04)	[0.015; 0.164]	0.15 (.07)	[0.031; 0.292]	0.03 (.04)	[-0.038; 0.119]

Note. Cov. = covariate.

* $p \leq .050$. ** $p \leq .010$. *** $p \leq .010$.

Figure 2

Interaction Between Lifestyle Changes and Fear of COVID-19 Infection on Sexual Desire

