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Security Motives and Negative Affective Experiences During the Early Months of the  
COVID-19 Pandemic

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### Abstract

**Objective:** Self-regulation can help individuals cope during stressful events, but little is known about why and when this might occur. We examined if being more focused on prevention was linked to negative affective experiences during the COVID-19 pandemic. We also examined possible underlying mechanisms for this association, and whether social support buffered it.

**Design:** Pre-registered longitudinal study, with surveys every two weeks over one month ( $N = 1,269$ ).

**Main outcome measures:** Regulatory focus and worry for health (T1), adherence to self-isolation and preventive health behaviors (T2), negative affective experiences, positive affect, frequency of online interactions, and perceived social support (T3).

**Results:** Prevention focus was associated with health worries at baseline and linked to greater adherence to preventive health behaviors (T2). Only adherence to self-isolation was linked to more negative affective experiences (T3). Exploratory analyses showed that prevention focus was linked to more negative affective experiences (T3), but only for participants with fewer online interactions with their family and less perceived social support from family and friends.

**Conclusions:** Prevention motives in threatening times can be a double-edged sword, with benefits for health behaviors and consequences for negative affective experiences. Having a strong social network during these times can alleviate these consequences.

**Keywords:** COVID-19; Regulatory focus; Prevention focus; Loneliness; Health behaviors; Negative affect; Social support

## **Security Motives and Negative Affective Experiences During the Early Months of the COVID-19 Pandemic**

The first wave of the COVID-19 pandemic posed several challenges to physical and psychological health, and social connectedness. Social distancing policies that were put in place to reduce the spread of the virus led to individuals experiencing a host of external stressors, including financial, social, and interpersonal disruptions (Clemente-Suárez et al., 2020). The way individuals perceived and reacted to pandemic-related threats had mixed consequences to how they felt. For example, individuals who were more threatened by the pandemic reported more negative affective experiences (e.g., sadness, anxiety, anger; Pérez-Fuentes et al., 2020), whereas those who successfully reappraised their negative responses experienced less fear and better mental health later on, but at the same time were less likely to enact preventive health behaviors (Smith et al., 2021). This highlights a potential trade-off between physical health outcomes and affective experiences.

The COVID-19 pandemic provided a unique opportunity to investigate how high levels of external stressors and threats impacted how individuals felt. Past research has shown that the ability to regulate one's feelings and control over one's actions (i.e., self-regulation) is crucial for well-being, as it shapes individuals' coping strategies, health behaviors, and affective experiences (Aspinwall, 2004; de Ridder & de Wit, 2006; Mann et al., 2013). This ability may be particularly crucial in times of greater stress. We argue that self-regulation played a key role in helping individuals cope with the pandemic, particularly at its onset when less information was available and there was more uncertainty about the possible health consequences (e.g., Koffman et al., 2020). Hence, a broader understanding of how the pandemic impacted individuals' lives must take into consideration *if* and *why* individual differences in self-regulation determined negative affective experiences, and *when* these impacts were more likely to occur. Because individuals' reactions to external stressors can

change over time, such understanding must also consider how these processes unfold longitudinally.

### **Regulatory Focus, Health, and Negative Affective Experiences**

Regulatory Focus Theory (for a review, see Higgins, 2015) proposes that goal pursuit is driven by two motivational systems that serve distinct survival needs (security vs. nurturance). Individuals who are more focused on prevention are driven by security and seek to maintain the absence of negative outcomes from risky situations, whereas those who are more focused on promotion are driven by growth and seek to obtain gains (Scholer & Higgins, 2012). Relevant to our current purposes, this theory rests on the assumption that individuals more focused on prevention are more aware of threats and are risk averse in several domains of their life (e.g., health and safety, financial decisions), strive to protect themselves from harm (e.g., enact diverse preventive health behaviors), believe they have greater control over their behaviors, and feel calmer when a safe state is achieved (Ferrer et al., 2017; Fuglestad et al., 2013; Leder et al., 2015; Lemarié et al., 2019; Rodrigues et al., 2019, 2020; Rodrigues, Lopes, et al., 2021).

The belief that one's health is vulnerable to threats has been associated with health protective behaviors (Ferrer et al., 2018), including during the COVID-19 pandemic (e.g., Harper et al., 2020; Shiloh et al., 2021; Stangier et al., 2021). Acting in accordance with one's security motives helps individuals feel they are successful at maintaining a state of security and avoiding COVID-19 infection, therefore experiencing an absence of negativity. Aligned with this reasoning, research has found that individuals who perceived a lower (vs. higher) likelihood of contracting COVID-19 also reported having more coping strategies and were less stressed (Lawal, 2021). Likewise, being more focused on prevention motivated risk perception and preventive behaviors during the pandemic (Rodrigues, 2021), which contributed to less pandemic-related anxiety (Rodrigues et al., 2022). Being more focused on

prevention also motivated individuals to retrieve pandemic-related information from more objective and scientific sources and increased threat perceptions later on (Rodrigues, 2021; Rodrigues et al., 2022; Rodrigues, Balzarini, et al., 2021).

Despite its benefits for health (e.g., avoiding potentially risky social gatherings) and anxiety at the onset of the pandemic, having a predominant focus on prevention can also have costs and foster negative affective experiences (e.g., Delegach & Katz-Navon, 2021; Schmalbach et al., 2017). Indeed, individuals who perceived themselves to be more vulnerable to COVID-19 also reported greater isolation (Boyraz et al., 2020), those who were more worried at the onset of the pandemic felt lonelier later on (Okruszek et al., 2020), and those who feared the pandemic felt less happiness, more negative emotions, and had worse interactions with close others (Sit et al., 2021). This conflicting evidence uncovers a possible paradox between the benefits and costs of regulatory focus on health decisions and negative affective experiences during the pandemic. Hence, not only must we seek to understand the reasons behind this trade-off in health-threatening contexts and its implications for negative affective experiences over time (see also Smith et al., 2021), we must also explore conditions under which such effects are more likely to occur.

Research has consistently shown that social relationships can help buffer negative experiences (e.g., Holt-Lunstad et al., 2010; Morina et al., 2021). Given that protective health behaviors during the COVID-19 pandemic required less in-person contact and greater physical distancing, the extent to which individuals more focused on prevention experienced more social connections might have been key in determining whether they incurred more costs or benefits related to their preventative behaviors.

### **Social Relationships During the Pandemic**

The stress-buffering hypothesis suggests that social support helps to reduce or eliminate the negative effects of a stressful situation by helping individuals to reinterpret it as

less threatening and activate adequate coping strategies (Cohen & Wills, 1985; for a review, see Cohen, 2004). Indeed, research has shown that social support buffers threat appraisals and negative affective experiences (e.g., Che et al., 2018; Lüscher et al., 2015). In a health-threatening context like the COVID-19 pandemic, social relationships were also a protective factor against external stressors. For example, having more social connections (e.g., living with others; connecting over the phone/internet) and perceiving more social support during the pandemic were associated with less loneliness and depression, better sleep quality, greater happiness, and higher life satisfaction (e.g., Bu et al., 2020; Cantarero et al., 2021; Grey et al., 2020; Groarke et al., 2020; Haliwa et al., 2021; Hubbard et al., 2021). In contrast, spending more time socially isolated and receiving less support from family and friends was associated with poorer psychological health (e.g., Szkody et al., 2020; Xu et al., 2020). This may have been particularly relevant for individuals more focused on prevention, for whom threat awareness tends to be more salient, and who are more likely to protect their health. In the case of the COVID-19 pandemic, prevention-focused individuals may have protected themselves by physically isolating more from others, thus reducing their chance of infection, but they may have also suffered from the psychological consequences of greater physical isolation. Indeed, individuals who perceived more risk from the pandemic also reported more depressive symptomatology, particularly if they received less support from their friends and family (Liu et al., 2021).

### **Overview and Hypotheses**

In a pre-registered longitudinal study that drew its data from the *blinded for review* study (<http://blinded for review>), we examined for the first time if having a greater focus on prevention (i.e., having more security motives) had costs and benefits for negative affective experiences over time, and if adherence to self-isolation and preventive health behaviors

explained these effects. We further examined if social connections during this period determined when these effects occurred.

Being more focused on prevention during the pandemic has been associated with more threat perceptions and a greater likelihood of engaging in preventive health behaviors (Rodrigues, 2021; Rodrigues, Balzarini, et al., 2021; Rodrigues et al., 2022). Aligned with this reasoning, then, we expected individuals more focused on prevention (T1) to also be more worried about contracting COVID-19 at baseline (Hypothesis 1), and to report greater adherence to self-isolation and preventive health behaviors two weeks later (T2; Hypothesis 2). Individuals more focused on prevention feel calmer when acting according to their security motives (Higgins, 2015; Scholer & Higgins, 2012). Indeed, for individuals more focused on prevention, enacting preventive behaviors during the pandemic contributed to them feeling less anxiety (Rodrigues et al., 2022). As such, we expected preventive health behaviors enactment to predict fewer negative affective experiences two weeks later (at T3; Hypothesis 3). As prevention focus has been mostly associated with negative—and not positive—affect (e.g., Gödöllei & Beck, 2020), we did not advance any a priori hypothesis for positive affect and controlled for these effects. The hypothesized mediation model is depicted in Figure 1.

-- Figure 1 --

Drawing from research showing the importance of social relationships to cope with the pandemic (e.g., Bu et al., 2020; Hubbard et al., 2021; Szkody et al., 2020; Xu et al., 2020), we conducted exploratory analyses to examine the role of social connectedness and perceived social support. Specifically, we examined if being more connected to, or perceiving to have more social support from, family and friends moderated the expected temporal effects of being more focused on prevention on affective experiences. Lastly, we ruled out potential confounds by examining *a priori* differences in demographic characteristics and local



physical distancing policies. All hypotheses and exploratory analyses were pre-registered on our Open Science Framework ([OSF](#)) page.

## Method

### Participants and Procedure

The *blinded for review* study is an ongoing study that aims to examine how individuals all over the world cope and relate to others throughout the COVID-19 pandemic (for details, see *blinded for review*). This study was launched on March 27<sup>th</sup>, 2020, in English and made available in 10 other languages shortly after. Prospective participants were invited through social media posts (e.g., Facebook, Instagram), by word of mouth, and through the project's website (*blinded for review*) to complete a baseline online survey and follow-up online surveys every two weeks. Participation was voluntary and no compensation was offered. All study materials and procedures (see [OSF](#)) were approved by the Institutional Review Board of the primary university before the project was launched (IRB ID: PROJECT00002117).

To be eligible for this study, individuals had to provide their consent to participate and had to be 18 years or older. A total of 5,441 eligible participants completed the survey at T1, 1,940 eligible participants completed the survey at T2, and 1,464 eligible participants completed the survey at T3. As our analysis focused on the first three waves of data collection (T1-T3), we considered only participants who completed all three waves and had less than 10% missing data on our main measures across waves. This yielded 1,291 individuals. As commonly employed in the literature (e.g., Berinsky et al., 2014; Curran, 2016), we also included four attention check questions. At T1, two items asked participants to select a particular answer choice for that question (e.g., "Please select "Agree a little." This is not a trick question."). At T2 and T3, we asked "How much attention did you pay to this questionnaire while you were completing it?" (1 = *No attention*, 2 = *Very little attention*, 3 = *Moderate amount of attention*, 4 = *Very close attention*). Participants who failed at least one

of the attention checks at T1 ( $n = 12$ ), and those who paid very little or no attention to the survey at T2 ( $n = 6$ ) or T3 ( $n = 4$ ) were excluded from the sample. This resulted in a final sample size of 1,269 participants from 46 countries. Participants had a mean age of 33 years ( $M = 33.22$ ,  $SD = 12.07$ ), and were mostly heterosexual (79.1%), identified as women (82.6%), were university graduates (29.2%), and were seriously dating (34.3%) or in a long-term romantic relationship (36.2%) for an average length of 9 years ( $M = 8.92$ ,  $SD = 10.24$ ) (for details, see Supplemental Materials S1).

### Measures

As this study was part of a larger research project that included several other measures, we used shorter versions of previously validated measures when possible. This allowed us to reduce the burden associated with participation, and minimize attrition between waves (Bolger et al., 2003).

**Regulatory Focus.** We used the two most face valid items from the General Regulatory Focus Measure (validated by Lockwood et al., 2002) to assess prevention focus (“In general, I am focused on preventing negative events in my life”) and promotion focus (“In general, I am focused on achieving positive outcomes in my life”) at T1. Responses were given on 9-point scales (1 = *Not at all true of me* to 9 = *Very true of me*). Analyses of publicly available data from recent research showed strong correlations between the prevention focus item we used and its composite score,  $r = .60$ ,  $p < .001$ , and between the promotion focus item we used and its composite score,  $r = .74$ ,  $p < .001$  (Oiknine et al., 2021). Higher scores indicated a greater focus on prevention or promotion goals. As in the original scale validation study, both items had a small positive correlation,  $r = .22$ ,  $p < .001$ , and were treated separately in our analyses.

**Worry for Health.** We adapted two items from The Pandemic Project (<https://utpsyc.org/covid19/>) to assess the extent to which individuals were worried for their

health (“To what degree are you worried about getting or having COVID-19?”) and the health of close others (“To what degree are you worried about family members or friends getting COVID-19?”) at T1. Responses were given on 5-point scales (1 = *Not at all* to 5 = *Completely*). Items were mean aggregated,  $r = .60$ ,  $p < .001$ , with higher scores indicating more health worries.

**Adherence to Self-Isolation and Preventive Health Behaviors.** We adapted two items from The Pandemic Project (<https://utpsyc.org/covid19/>) to assess how much individuals adhered to self-isolation (“Over the past two weeks, to what degree have you self-isolated [staying at home, avoiding public spaces]?”) and other preventive health behaviors (“Over the past two weeks, to what degree have you practiced other preventative measures [e.g., washing hands]?”) at T2. Responses were given on 5-point scales (1 = *Not at all* to 5 = *Completely*). Both items had a small positive correlation,  $r = .29$ ,  $p < .001$ , and were treated as two distinct variables.

**Negative Affective Experiences.** We included items assessing feelings of loneliness (“Over the past two weeks, I’ve felt lonely”; 1 = *Very slightly or not at all* to 5 = *Extremely*), isolation (“Over the past two weeks, I’ve felt isolated”; 1 = *Very slightly or not at all* to 5 = *Extremely*), and time spent feeling alone (“Over the past two weeks, on average, roughly how many hours have you spent each day feeling alone”; 1 = 0, 2 = *Up to 1 hour*, 3 = *1-3 hours*, 4 = *3-7 hours*, 5 = *8 hours or more*) at T3. We also used nine items from the Positive and Negative Affect Schedule-Expanded Form (PANAS-X; Watson & Clark, 1999) assessing negative (five items: “Over the past two weeks, I’ve felt...” distressed, scared, angry, irritable, and stressed) and positive affect (four items: “Over the past two weeks, I’ve felt...” happy, excited, inspired, and active) at T3. Responses were also given on 5-point rating scales (1 = *Very slightly or not at all* to 5 = *Extremely*). Items assessing loneliness and negative affect were mean aggregated ( $\alpha = .88$ ), with higher scores indicating more negative

affective experiences<sup>1</sup>. Items for positive affect were mean aggregated, with higher scores indicating the experience of more positive affect ( $\alpha = .76$ ).

**Frequency of Online Interactions.** We developed three items to assess how many social interactions individuals had at T3. We asked participants to indicate their living arrangement (“How many individuals other than you are staying in the same place you are now”; 0 = 0 to 10 = 10+), and how much time they spent interacting online with family (“Indicate how often over the past two weeks you have spent time with family online [e.g., Skype, Facetime]”) and friends (“Indicate how often over the past two weeks you have spent time with friends online [e.g., Skype, Facetime]”). Responses to the latter items were given in 4-point scales (1 = *Never*, 2 = *Few days*, 3 = *Most days*, 4 = *Everyday*). Items were z-scored but showed low reliability ( $\alpha = .25$ ). Moreover, the online interaction items were only moderately correlated,  $r = .35, p < .001$ . Hence, items were treated separately in our analyses.

**Perceived Social Support.** We developed four items to assess how much social support individuals perceived to have from close others at T3. We asked participants “Since the pandemic began, I have had the emotional help and support I needed from my family”, “Since the pandemic began, I have had the emotional help and support I needed from my friends”, “Since the pandemic began, I feel like I can count on my family if things go wrong”, and “Since the pandemic began, I feel like I can count on my friends if things go wrong”. Responses were given in 7-point scales (1 = *Strongly disagree* to 7 = *Strongly agree*). Items were mean aggregated according to the source of support, with higher scores indicating more perceived support from family,  $r = .76, p < .001$ , and friends,  $r = .74, p < .001$ .

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<sup>1</sup> In the pre-registration, we proposed to examine experiences of loneliness and negative affect separately. However, items were highly correlated and therefore aggregated in a single index.

**Personality.** As a control measure, we used 15 items from the extra-short form Big Five Inventory-2 (BFI-2-XS; Soto & John, 2017) at T1 to assess extraversion (three items,  $\alpha = .58$ ; e.g., “Is full of energy”), agreeableness (three items,  $\alpha = .47$ ; e.g., “Is compassionate, has a soft heart”), conscientiousness (three items,  $\alpha = .52$ ; e.g., “Is reliable, can always be counted on”), negative emotionality (three items,  $\alpha = .70$ ; e.g., “Worries a lot”), and openness (three items,  $\alpha = .50$ ; e.g., “Is original, comes up with new ideas”). Responses were given on 5-point rating scales (1 = *Strongly disagree*, 2 = *Disagree a little*, 3 = *Neutral, no opinion*, 4 = *Agree a little*, 5 = *Strongly agree*). We mean aggregated the items for each personality trait (for overall means see Supplemental Materials).

**Local Physical Distancing Policies.** As a control measure, we asked participants to indicate the policies in effect at T3 (“In the last two weeks, what policies are your local or national government currently enacting.”). Participants selected “There are no restrictions that I am aware of” (0.4%), “Social distancing has been encouraged” (35.6%), “Social distancing has been ordered” (33.3%), and “Social distancing is being enforced by the police” (30.7%).

### **Data Analytic Plan**

We used bivariate correlations to test Hypothesis 1 and the PROCESS 4.0 macro for SPSS (Hayes, 2017) to test the remaining pre-registered hypotheses. We computed one mediation model with 10,000 bootstrap samples (for a discussion, see Hayes, 2009) by estimating the effect of prevention focus while controlling for the effect of promotion focus (see Hayes, 2017). This procedure allowed us to determine the unique effect of having a predominant focus on our outcome variables. Adherence to self-isolation (T2) and adherence to preventive behaviors (T2) were included as parallel mediator variables<sup>2</sup>, and negative

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<sup>2</sup> In the pre-registration, we proposed two mediation models examining loneliness and negative affect separately, each with a different mediator variable. Given the computation of a single index of negative affective experiences, we decided to include both mediator variables in a single analysis.

affective experiences (T3) was the outcome variable. We included positive affect as an additional covariate in our models.

Moreover, we advanced the possibility that some of the effects of regulatory focus on negative affective experiences one month later could be buffered or enhanced by how frequently individuals interacted online with others, or the social support they perceived to have at that time. To examine this, we conducted exploratory analyses and computed four moderation models with 10,000 bootstrap samples. In all models, prevention focus (T1) was the predictor variable, negative affective experiences (T3) were the outcome variable, and promotion focus (T1) and positive affect (T3) were the covariates. Two models tested frequency of online interactions with family (T3) and perceived social support from family (T3) as moderator variables in separate analyses. Two other models tested frequency of online interactions with friends (T3) and perceived social support from friends (T3) as moderator variables in separate analyses. When significant interactions were found, simple slope analyses determined the effects of prevention focus on negative affective experiences at lower ( $-1 SD$ ) and higher ( $+1 SD$ ) levels of the moderator variable. Variables that defined products were grand mean-centered prior to analyses.

To rule out potential confounds, we examined if any *a priori* demographic differences explained some of our findings. We computed correlations with age and personality traits and explored differences according to gender (for sake of parsimony, we removed three participants from the “other” category for this analysis), sexual orientation differences (for sake of parsimony, we categorized non-heterosexual participants as LGBTQI+), relationship status (for sake of parsimony, we categorized participants as single vs. in a relationship), and living arrangement (for sake of parsimony, we categorized participants as living alone vs. living with other people) using *t*-tests. When significant results were obtained, we re-ran the

models entering additional covariates. Lastly, we examined if our results were consistent after controlling for differences in local physical distancing policies.

## Results

### Pre-registered Analyses

#### *Correlations*

Descriptive statistics and correlations are presented in Table 1. As expected, prevention focus was positively associated with health worries at baseline,  $r = .18, p < .001$ , and adherence to preventive health behaviors at T2,  $r = .09, p = .005$ . Participants more focused on prevention at baseline had more online interactions with their family at T3,  $r = .06, p = .049$ . Unexpectedly, prevention focus was not associated with adherence to self-isolation at T2,  $r = .04, p = .197$ , but was associated with more negative affective experiences at T3,  $r = .11, p < .001$ . Worth noting, promotion focus was associated with more adherence to preventive health behaviors at T2,  $r = .08, p = .010$ , less negative affective experiences,  $r = -.09, p = .003$ , and more positive affect at T3,  $r = .20, p < .001$ . Furthermore, participants more focused on promotion at baseline had more online interactions with their family,  $r = .12, p < .001$ , and friends,  $r = .07, p = .011$ , and perceived to have more support from their family,  $r = .14, p < .001$ , and friends at T3,  $r = .09, p = .004$ . Note that all significant correlations were small in magnitude (Cohen, 1988).

-- Table 1 --

#### *Mediation Analysis*

Results of the mediation model are summarized in Table 2. Contrary to our predictions, prevention focus was not linked to adherence to self-isolation at T2,  $b = .01, SE = .01, p = .419$ , but was linked to greater adherence to preventive health behaviors at T2,  $b = .03, SE = .01, p = .022$ . However, more negative affective experiences at T3 were only linked with adherence to self-isolation at T2,  $b = .09, SE = .03, p = .006$ , and not adherence to preventive

health behaviors at T2,  $b = .03$ ,  $SE = .03$ ,  $p = .353$ . Both indirect effects were non-significant. Instead, prevention focus at T1 was linked to more negative affective experiences at T3,  $b = .05$ ,  $SE = .01$ ,  $p < .001$  (model  $R^2 = .18$ ). These findings suggest that having a predominant focus on prevention was linked to negative affective experiences one month later, but this was not explained by having more health protective behaviors.

-- Table 2 --

### Exploratory Analyses

Building upon our finding that stronger prevention focus was linked to *more* negative affective experiences, we explored whether online interactions or perceived social support moderated these effects.

As shown in Table 3, the effect of prevention focus on negative affective experiences was buffered by the frequency of online interactions with family,  $b = -0.03$ ,  $SE = .01$ ,  $p = .024$  (model  $R^2 = .18$ ), but not with friends,  $b = -0.00$ ,  $SE = .01$ ,  $p = .832$  (model  $R^2 = .18$ ). As depicted in Figure 1, simple slope analyses showed that participants more focused on prevention had more negative affective experiences if they interacted online with their family less often,  $b = 0.07$ ,  $SE = .02$ ,  $p < .001$  (but not more often,  $b = 0.02$ ,  $SE = .02$ ,  $p = .257$ ). Notably, planned contrast revealed that participants who were *less* focused on prevention at T1 experienced less negative affect at T3 if they interacted online less (vs. more) often with their family,  $t(1269) = 2.14$ ,  $p = .033$ ,  $d = 0.12$ , whereas no differences were found among participants who were *more* focused on prevention at T1,  $t(1269) = 0.99$ ,  $p = .322$ ,  $d = 0.06$ .

-- Table 3 --

-- Figure 2 --

As shown in Table 4, the effect of prevention focus on negative experiences was also buffered by the perceived support from family,  $b = -0.08$ ,  $SE = .02$ ,  $p = .015$  (model  $R^2 = .19$ ), and friends,  $b = -0.03$ ,  $SE = .01$ ,  $p = .002$  (model  $R^2 = .18$ ). As depicted in Figure 2,



participants more focused on prevention had more negative affective experiences if they perceived to have less support from their family,  $b = 0.06$ ,  $SE = .02$ ,  $p = .001$  (but not more support,  $b = 0.00$ ,  $SE = .02$ ,  $p = .971$ ), and less support from their friends,  $b = 0.07$ ,  $SE = .02$ ,  $p < .001$  (but not more support,  $b = -0.01$ ,  $SE = .02$ ,  $p = .463$ ). Unlike the previous analyses, planned contrast revealed that participants who were *more* focused on prevention at T1 experienced less negative affect at T3 if they perceived to have less (vs. more) support from family,  $t(927) = 5.23$ ,  $p < .001$ ,  $d = 0.34$ , and friends,  $t(927) = 3.71$ ,  $p < .001$ ,  $d = 0.24$ . For participants who were *less* focused on prevention at T1, perceiving less (vs. more) support from their family was also linked to negative affective experiences,  $t(927) = 2.08$ ,  $p = .038$ ,  $d = 0.14$ , whereas no differences emerged for perceived support from friends,  $t(927) = 0.70$ ,  $p = .482$ ,  $d = 0.05$ .

-- Table 4 --

-- Figure 3 --

These results indicate that having a predominant focus on prevention at the onset of the pandemic was linked to more negative affective experiences one month later, but only if participants had fewer online interactions with their family or felt less supported by their family and friends. In other words, online interactions and social support buffered against the negative effect of having a prevention focus on negative affective experiences.

### **Controlling for Demographics and Alternative Explanations**

Results showed significant correlations with age and personality traits (see Supplemental Materials S2), as well as differences according to gender, sexual orientation, relationship status, and living arrangement (see Supplemental Materials S3), and physical distancing policies (see Supplemental Materials S4). However, controlling for these variables did not change the overall results of the pre-registered and exploratory models.

## **Discussion**

Participants from different countries around the world took part in a large-scale longitudinal study with pre-registered hypotheses. Overall, our hypotheses received mixed support. We found that being more focused on prevention—while controlling for individuals' promotion focus scores—was associated with health worries at baseline (Hypothesis 1) and was linked to greater adherence to preventive health behaviors later on (Hypothesis 2). However, this was not linked to negative affective experiences two weeks later (Hypothesis 3). Our exploratory analyses further showed that having a greater focus on prevention was linked to more negative affective experiences one month later. However, this occurred only for those with fewer online connections with their family, and who perceived to have less social support from their close network. These findings highlight the protective role of social relationships when it comes to the benefits and costs associated with regulatory focus in a health threatening context. These results were largely consistent across demographic differences and were not explained by local physical distancing policies.

Regulatory Focus Theory assumes that having a prevention focus increases threat perceptions and decreases risk-taking (Higgins, 2015; Zou & Scholer, 2016). Aligned with this conceptualization, we found that individuals more focused on prevention were also more worried for their health at the onset of the COVID-19 pandemic and more often enacted preventive behaviors two weeks later. These findings also show the key role of security motives in health protection (e.g., Fuglestad et al., 2013; Leder et al., 2015; Rodrigues et al., 2020; Rodrigues, Lopes, et al., 2021; Uskul et al., 2008). However, enacting these behaviors was not linked to negative affective experiences two weeks later. This finding contrasts with those reported in Rodrigues and colleagues (2022), where prevention focus predicted less pandemic-related anxiety later on, in part because individuals enacted more preventive behaviors. Differences between samples, specific geographical constraints, or time of measurement at different stages during the pandemic might help explain distinct patterns in

perceptions, affective reactions, and behaviors. Also, individuals more focused on prevention were not more likely to adhere to self-isolation. This lack of temporal association could be explained by several factors, including variability between broader health policies in effect (other than physical distancing) to contain the spread of infection (e.g., Balmford et al., 2020; McKenzie & Adams, 2020), or the need that some individuals had to break confinement to get to work (e.g., unable to work remotely from home), get supplies and groceries, or assist others who became infected with COVID-19. If so, some individuals were forced to expose themselves to risk and interact with others, regardless of whether or not they preferred to do so. Although there was no evidence of an indirect effect, adherence to self-isolation was linked to more negative affective experiences. Again, while more research is needed to assess this possibility, this may be explained by external factors, including the need to adjust to a new reality forced upon by the pandemic (e.g., having to find a work-life balance while confined at home; Graham et al., 2021).

Unexpectedly, we found that having a greater focus on prevention prompted negative affective experiences (i.e., fostered loneliness and negative affect) one month later. This converges with the argument that regulatory focus—and particularly prevention focus—has mixed consequences for the way people feel and react to events. Indeed, even though being more focused on prevention increases the likelihood of enacting protective behaviors (e.g., cancer screening or condom use; Ferrer et al., 2017; Rodrigues, Lopes, et al., 2021) and improves the effectiveness of health messages (for a review, see Ludolph & Schulz, 2015), it can also lead individuals to have less pleasurable interactions with others (e.g., less sexual satisfaction; Evans-Paulson et al., 2021) or miss out on the interaction with others (e.g., more negative affective experiences, as we found). Notwithstanding, our exploratory analyses provided valuable insights, such that active close social networks were likely a protective factor against the negative consequences of the pandemic (Bu et al., 2020; Hubbard et al.,

2021; Szkody et al., 2020; Xu et al., 2020). Specifically, having less online contact with their family lead individuals more focused on prevention to experience more negative affective experiences, similar to the experiences reported by those who interacted with their family more often. On the other hand, being less focused on prevention and having less contact with one's family was linked to less negative affective experiences. Arguably, being more concerned with the consequences of the pandemic and sharing those concerns with family members might have increased the costs of having to deal with the uncertainty. In contrast, individuals more focused on prevention experienced more negative affective experiences if they perceived themselves as receiving less social support from their friends and family. These findings are aligned with the stress-buffering hypothesis (Cohen & Wills, 1985) and converge with other studies conducted during the pandemic (e.g., Bu et al., 2020; Szkody et al., 2020; Xu et al., 2020). In other words, prevention focus might be most effective in threatening contexts when individuals are able to safeguard their health but, at the same time, rely on the support of others to keep their course of action. In this way, when feeling supported by their social network, prevention focused individuals may be able to reap the benefits of their behaviors without experiencing the associated costs.

### **Strengths, Limitations, and Future Directions**

Our longitudinal study was conducted during a unique context wherein individuals were particularly threatened and disrupted by external pandemic-related stressors. The way in which individuals responded to these unique challenges was likely shaped by their regulatory focus. Overall, our results showed that having a prevention focus is a double-edge sword for health behaviors and negative affective experiences, particularly when lacking social connections. Not only are these findings potentially relevant to other studies conducted during the ongoing COVID-19 pandemic (e.g., how individuals react and adhere to vaccination; how individuals behave and connect to others after they get vaccinated), but also

to better understand the nuances in the role of social interactions and social support during other health-threatening or stressful times (e.g., how individuals connect to others who are coping with a chronic illness). Despite the strengths of this study, there were also some limitations that could limit the generalizability of our findings. We found limited empirical support to the proposed mediation model and some of our key findings were based on exploratory moderation analyses. The high adherence to preventive behaviors at T2 might have restricted the variability of responses and created a ceiling effect that compromised some of the expected effects. Also, the exploratory analyses were based on past research examining the buffering role of social support on negative affective experiences but should be interpreted with caution. Lastly, and despite our large sample size, we must acknowledge that most of our findings were small in magnitude. As such, we highlight the need to replicate and extend these findings in other health threatening contexts, while also considering additional variables that can help understand (or better account for) some of our associations or effects. For example, even though levels of adherence to self-isolation and preventive health behaviors were high, we did not assess if our participants were in situations that did not allow them to physically confine at home or follow other distancing policies, and instead expose themselves to risk (e.g., essential workers or frontline health workers). Regardless of this possibility, we found that safety motives (i.e., prevention focus) had positive and negative consequences for health and negative affective experiences that must be noted.

Other limitations pertained to demographic characteristics. First, there was a gender and sexual orientation imbalance in our sample, as well as differences in physical distancing policies across countries and regions. However, our findings were robust after controlling for these differences. Also, most of our participants were currently involved in some type of romantic relationship, which may have provided an additional source of support over and above friends and family. Research has already shown the crucial role of romantic partners to

cope with external strains imposed by the pandemic (e.g., Balzarini et al., 2022), whereas single individuals were more at risk of added stress and negative affective experiences (Kowal et al., 2020), and decreased their sexual activity (Rodrigues, Balzarini, et al., 2021). Even though our results did not change after controlling for relationship status, future studies could explore if the implications of prevention focus were particularly evident for individuals who had to deal with the pandemic alone and less so for those who shared the burden of the pandemic with a romantic partner. Future studies could also seek to examine whether distinct perspectives with friends and family over the threats posed by the pandemic disrupted the implications of regulatory focus. For example, individuals more focused on prevention could consciously decide not to act in accordance with their security motives, if their friends or family have a different regulatory focus and fail to adhere to restrictive policies.

Furthermore, we mostly used single item measures to assess each variable. Although this enabled us to reduce participant fatigue and minimize attrition in the longitudinal design, we acknowledge this as a limitation compared to full scale measurements. That being said, we believe this was a worthwhile trade-off, and previous studies have also made strategic decisions to reduce the burden associated with the participation in large-scale studies with reliable results (e.g., Bolger et al., 2003). Lastly, there is still a generalized lack of knowledge regarding the coping mechanisms activated by individuals with a predominant focus on promotion during the pandemic. Research has shown that individuals more focused on promotion perceived to be well-informed about the pandemic and had stronger intentions to have casual sex, particularly when they felt safer with partners (Rodrigues, 2021). Aligned with this, we found that promotion focus scores were linked to greater adherence to preventive health behaviors (T2). Arguably, having a predominant focus on promotion may have driven these individuals to take some controlled risks (e.g., kept face masks while outside with friends but forgo social distance) and decided to deal with possible

consequences of their behavior afterward (e.g., more frequent testing; for a similar argument, see Rodrigues, Lopes, et al., 2021). Future studies could seek to examine this hypothesis and determine why individuals more focused on promotion were driven toward health risk-taking, how they construct the threats caused by the pandemic, and under which conditions (or for which type of behaviors) were these effects more likely to occur (e.g., pursue casual sex to cope with loneliness).

### **Conclusion**

In a longitudinal study, we found mixed consequences of having a predominant focus on prevention for perceptions, behaviors, and affective reactions during the first months of the COVID-19 pandemic. Still, these negative consequences for affective experiences were alleviated by social relationships. Being focused on security can help individuals to protect themselves from physical harm at the cost of psychological well-being but maintaining an active and supportive close network of family and friends can be key to buffer some of these costs. Past evidence has already shown that having a predominant focus on prevention can help individuals enact health protective behaviors (e.g., maintain smoking cessation and having fewer relapses over time; Fuglestad et al., 2013) and that having a congruence between individual's regulatory focus and the motives highlighted in health messaging campaigns (e.g., messaging flu vaccines as a way to achieve personal goals or to avoid illness, for promotion or prevention focused individuals respectively) can help improve the efficacy of health messages (Fridman & Higgins, 2017). Our findings highlight how, and under which conditions, some individuals react and behave in health-threatening contexts, which could potentially provide interesting insight for practitioners or intervention researchers seeking to develop effective health messaging campaigns. We encourage future research to address this possibility.

### **Data Availability Statement**

The anonymized data, syntaxes, and outputs that support all analyses reported for this paper are available on our [OSF](#) page.



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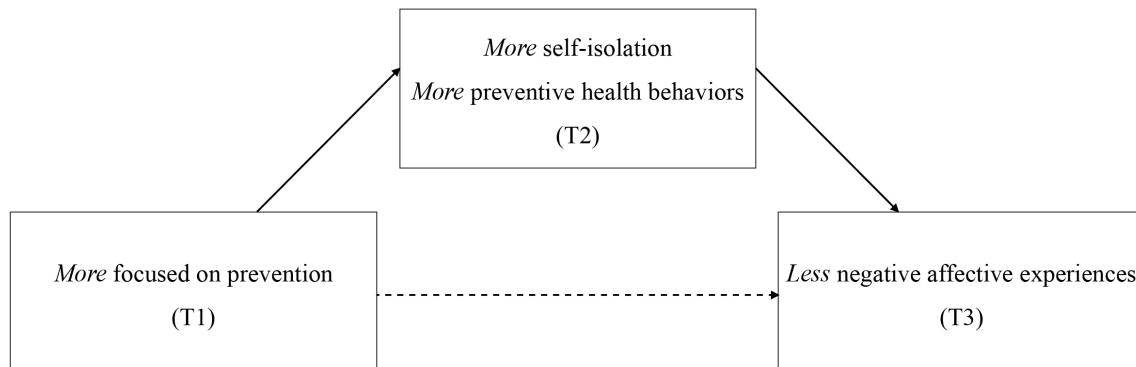


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## Security motives and negative affective experiences

**Figure 1**

*Hypothesized Mediation Model*



Security motives and affective experiences during COVID-19

**Table 1**

*Descriptive Statistics and Overall Correlations*

	<i>M (SD)</i>	Correlations											
		1	2	3	4	5	6	7	8	9	10		
1. Prevention scores (T1)	6.58 (1.96)	-											
2. Promotion scores (T1)	7.63 (1.36)	.22***	-										
3. Worry for health (T1)	3.50 (0.98)	.18***	.05	-									
4. Adherence to self-isolation (T2)	4.30 (0.78)	.04	.03	.25***	-								
5. Adherence to preventive health behaviors (T2)	4.46 (0.73)	.09**	.08**	.28***	.29***	-							
6. Negative affective experiences (T3)	2.48 (0.88)	.11***	-.09**	.22***	.14***	.06	-						
7. Positive affect (T3)	2.56 (0.79)	-.04	.20***	-.08**	-.12***	.00	-.41***	-					
8. Frequency of online interactions with family (T3)	2.04 (0.89)	.06*	.12***	.13***	.12***	.10**	-.01	.07*	-				
9. Frequency of online interactions with friends (T3)	2.12 (0.79)	-.02	.07*	-.03	.01	.04	.02	.11***	.35***	-			
10. Perceived support from family (T3)	5.40 (1.68)	.04	.14***	.11***	.06	.16***	-.26***	.31***	.23***	.06	-		
11. Perceived support from friends (T3)	5.34 (1.50)	-.03	.09**	.08*	.06	.18***	-.17***	.25***	.15***	.24***	.41***	-	

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

Security motives and affective experiences during COVID-19

**Table 2**

*Mediation Analysis: Predicting Negative Affective Experiences from Prevention Scores*

	Adherence to self-isolation (T2)			Adherence to preventive health behaviors (T2)			Negative affective experiences (T3)		
	<i>b</i> (SE)	95% CI	<i>B</i>	<i>b</i> (SE)	95% CI	<i>B</i>	<i>b</i> (SE)	95% CI	<i>B</i>
Prevention focus scores (T1)									
Direct effect	0.01 (.01)	[-0.01; 0.03]	0.02	0.03* (.01)	[0.00; 0.05]	.07	0.05*** (.01)	[0.03; 0.08]	.11
Total effect	-	-	-	-	-	-	0.05*** (.01)	[0.03; 0.08]	.12
Adherence to self-isolation (T2)									
Indirect effect	-	-	-	-	-	-	0.09** (.03)	[0.03; 0.15]	.08
Adherence to preventive health behaviors (T2)									
Indirect effect	-	-	-	-	-	-	0.03 (.03)	[-0.04; 0.10]	.03
Promotion focus scores (Cov.)	0.03 (.02)	[-0.01; 0.06]	.05	0.03* (.02)	[0.00; 0.07]	.06	0.00 (.00)	[-0.00; 0.01]	-
Positive affect (Cov.)	-0.13 (.03)	[-0.19; -0.07]	-.13	-.01 (.03)	[-0.06; 0.05]	-.01	-0.03 (.02)	[-0.06; 0.01]	-.04
							-0.43*** (.03)	[-0.49; -0.37]	-.39

*Note.* Cov. = covariate. *b* = unstandardized coefficients. *B* = standardized coefficients. CI = confidence interval.

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

**Table 3**

*Moderation Analyses: Buffering Effect of Online Interactions Frequency*

	Negative affective experiences (T3)	
	<i>b</i> ( <i>SE</i> )	95% CI
Prevention focus scores (T1)	0.04*** (.01)	[0.02; 0.07]
Frequency of online interactions with family (T3)	0.02 (.03)	[-0.03; 0.07]
Interaction between variables	-0.03* (.01)	[-0.05; -0.00]
Less frequent online interactions with family (-1 <i>SD</i> )	0.07*** (.02)	[0.04; 0.10]
More frequent online interactions with family (+1 <i>SD</i> )	0.02 (.02)	[-0.01; 0.05]
Promotion focus scores (Cov.)	-0.02 (.02)	[-0.06; 0.01]
Positive affect (Cov.)	-0.45*** (.03)	[-0.51; -0.39]
Prevention focus scores (T1)	0.04*** (.01)	[0.02; 0.07]
Frequency of online interactions with friends (T3)	0.08** (.03)	[0.02; 0.13]
Interaction between variables	-0.00 (.01)	[-0.03; 0.02]
Less frequent online interactions with friends (-1 <i>SD</i> )	-	-
More frequent online interactions with friends (+1 <i>SD</i> )	-	-
Promotion focus scores (Cov.)	-0.02 (.02)	[-0.06; 0.01]
Positive affect (Cov.)	-0.46*** (.03)	[-0.51; -0.40]

*Note.* Cov. = covariate. *b* = unstandardized coefficients. CI = confidence interval. The significant interaction

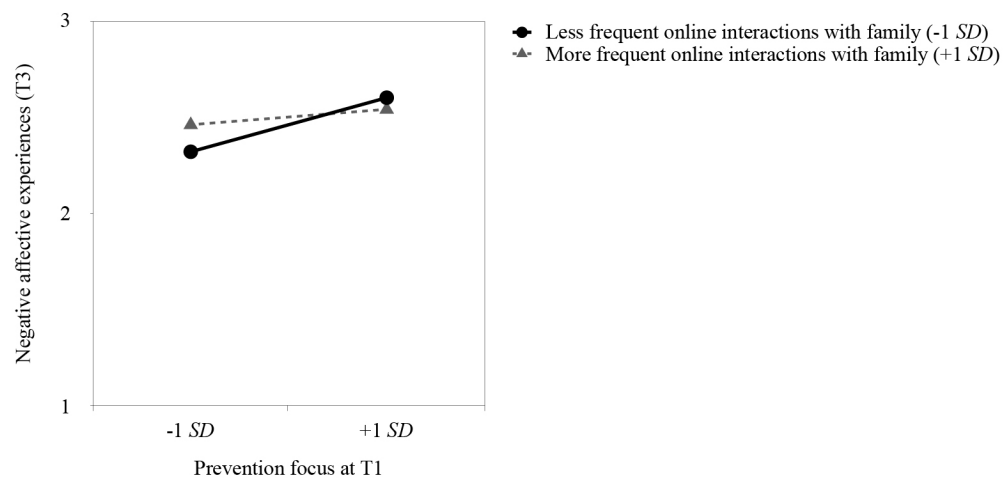
should be taken with caution if we adjust the significance threshold according to the number of exploratory models ( $p = .050/4 = .013$ ; see Benjamini & Hochberg, 1995).

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

## Security motives and negative affective experiences

**Figure 2**

*Prevention and Negative Affective Experiences: Online Interactions with Family as a Buffer*



**Table 4**

*Moderation Analyses: Buffering Effect of Perceived Social Support*

	Negative affective experiences (T3)	
	<i>b</i> ( <i>SE</i> )	95% CI
Prevention focus scores (T1)	0.04* (.01)	[0.00; 0.06]
Perceived support from family (T3)	-0.08*** (.02)	[-0.12; -0.05]
Interaction between variables	-0.02* (.01)	[-0.03; -0.00]
Less perceived support from family (-1 <i>SD</i> )	0.06*** (.02)	[0.03; 0.10]
More perceived support from family (+1 <i>SD</i> )	0.00 (.02)	[-0.04; 0.04]
Promotion focus scores (Cov.)	-0.01 (.02)	[-0.05; 0.03]
Positive affect (Cov.)	-0.40*** (.04)	[-0.47; -0.32]
Prevention focus scores (T1)	0.03* (.01)	[0.0; 0.06]
Perceived support from friends (T3)	-0.04* (.02)	[-0.07; -0.00]
Interaction between variables	-0.03** (.01)	[-0.05; -0.01]
Less perceived support from friends (-1 <i>SD</i> )	0.07*** (.02)	[0.03; 0.11]
More perceived support from friends (+1 <i>SD</i> )	-0.01 (.02)	[-0.05; 0.02]
Promotion focus scores (Cov.)	-0.01 (.02)	[-0.05; 0.04]
Positive affect (Cov.)	-0.44*** (.04)	[-0.51; -0.37]

*Note.* Cov. = covariate. *b* = unstandardized coefficients. CI = confidence interval. The significant interactions

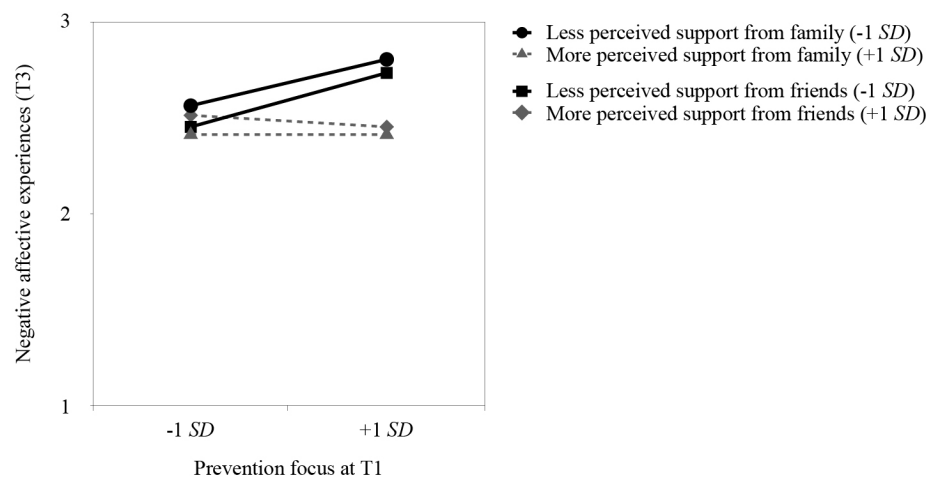
should be taken with caution if we adjust the significance threshold according to the number of exploratory models ( $p = .050/4 = .013$ ; see Benjamini & Hochberg, 1995).

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

## Security motives and negative affective experiences

**Figure 3**

*Prevention and Negative Affective Experiences: Perceived Social Support as a Buffer*





**Supplemental Materials****S1***Demographic Characteristics*

	<i>N</i>	<i>M (SD) or %</i>
Age	758	33.22 (12.07)
Gender		
Male	192	15.1
Female	1048	82.6
Other (e.g., non-binary)	29	2.3
Sexual orientation		
Heterosexual	1002	79.1
Lesbian/Gay	59	4.7
Bisexual	166	13.1
Other (e.g., asexual, queer, pansexual)	40	3.2
Education level		
Less than 6 years	1	0.1
Less than 12 years	1	0.1
High school graduate	117	9.2
Some university	180	14.2
Associates degree	90	7.1
University graduate	370	29.2
Master level degree	353	27.9
Doctoral degree	153	12.1
Relationship status		
Single	251	19.8
Casually dating	88	6.9
Seriously dating	435	34.3
Long-term, engaged or married	460	36.2
Divorced or separated	27	2.1
Widowed	7	0.6
Relationship length (in years)	851	8.92 (10.24)
Survey Language		
Chinese	13	1
Dutch	28	2.2
English	701	55.2
French	72	5.7
German	28	2.2
Indonesian	17	1.3
Italian	43	3.4
Portuguese	42	3.3
Spanish	235	18.5
Thai	29	2.3
Turkish	61	4.8
Country		
Australia	7	0.6
Austria	3	0.2
Azerbaijan	1	0.1
Belarus	1	0.1
Belgium	2	0.2

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Brazil	1	0.1
Canada	96	7.6
Central African Republic	1	0.1
Chile	1	0.1
China	9	0.7
Colombia	3	0.2
Costa Rica	1	0.1
Croatia	2	0.2
Czech Republic	1	0.1
Denmark	3	0.2
Ecuador	1	0.1
Finland	1	0.1
France	16	1.3
Germany	11	0.9
Greece	1	0.1
Honduras	1	0.1
Indonesia	14	1.1
Ireland	2	0.2
Italy	31	2.4
Kazakhstan	1	0.1
Luxembourg	1	0.1
Macao Special Administrative Region of China	3	0.2
Mexico	5	0.4
Nepal	1	0.1
Netherlands	44	3.5
New Zealand	2	0.2
Nigeria	1	0.1
Norway	1	0.1
Portugal	39	3.1
Romania	1	0.1
Slovenia	1	0.1
South Africa	1	0.1
South Korea	2	0.2
Spain	222	17.5
Sweden	4	0.3
Switzerland	99	7.8
Taiwan	1	0.1
Thailand	29	2.3
Turkey	62	4.9
United Kingdom	14	1.1
United States of America	523	41.2

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## S2

*Correlations with Age and Personality Traits*

	Correlations															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Prevention scores (T1)	-															
2. Promotion scores (T1)	.22***	-														
3. Worry for health (T1)	.18***	.05	-													
4. Adherence to self-isolation (T2)	.04	.03	.25***	-												
5. Adherence to preventive health behaviors (T2)	.09**	.08**	.28***	.29***	-											
6. Negative affective experiences (T3)	.11***	-.09**	.22***	.14***	.06	-										
7. Positive affect (T3)	-.04	.20***	-.08**	-.12***	.00	-.41***	-									
8. Frequency of online interactions with family (T3)	.06*	.12***	.13***	.12***	.10**	-.01	.07*	-								
9. Frequency of online interactions with friends (T3)	-.02	.07*	-.03	.01	.04	.02	.11***	.35***	-							
10. Perceived support from family (T3)	.04	.14***	.11***	.06	.16***	-.26***	.31***	.23***	.06	-						
11. Perceived support from friends (T3)	-.03	.09**	.08*	.06	.18***	-.17***	.25***	.15***	.24***	.41***	-					
12. Age (T1)	.01	-.03	-.00	-.10***	.05	-.21***	.06*	.01	-.18***	.07*	.04	-				
13. Extraversion (T1)	-.07*	.25***	-.01	.01	.06	-.07*	.20***	.11***	-.12***	.10**	.12***	.07**	-			
14. Agreeableness (T1)	-.03	.17***	.03	-.02	.08**	-.09**	.15***	.07*	.08**	.15***	.16***	.04	.06*	-		
15. Conscientiousness (T1)	.08**	.29***	.01	.06*	.15***	-.20***	.20***	.08**	.01	.12***	.11***	.11***	.23***	.18***	-	
16. Negative emotionality (T1)	.13***	-.24***	.23***	.08**	.02	.38***	-.22***	.02	-.04	-.14***	-.12***	-.22***	-.27***	-.18***	-.25***	-
17. Openness (T1)	-.02	.10***	.01	.05	.10***	-.03	.11***	-.01	.05	.01	.05	.08**	.21***	.05	.04	-.06*

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

Results showed that older participants reported lower adherence to physical isolation,  $p < .001$ , felt less lonely,  $p < .001$ , reported less negative affective experiences,  $p < .001$ , and more positive affect,  $p = .023$ , had less frequent online interactions with friends,  $p = .001$ , and perceived more support from family,  $p = .045$ . Controlling for age did not change any of the results from the pre-registered or exploratory models.

Results also showed a number of significant correlations with personality traits. For example, participants who were more focused on prevention scored lower in extraversion,  $p = .027$ , higher in conscientiousness,  $p = .004$ , and higher in negative emotionality,  $p < .001$ . Also, participants who adhered to physical isolation at T2 scored higher in negative emotionality,  $p = .007$ , and participants who experienced more negative affective reactions scored lower on extraversion,  $p = .020$ , agreeableness,  $p = .002$ , and conscientiousness,  $p < .001$ , and scored higher in negative emotionality,  $p < .001$ . Controlling for all personality traits did not change any of the results from the pre-registered models. However, there were two changes in our exploratory models. Specifically, the buffering effects of online interactions with family,  $p = .167$ , and perceived support from family,  $p = .093$ , became non-significant. Even though personality explained, in part, why individuals who were more focused on prevention felt lonelier and more negative affect later on, it did not change the finding that perceived support—particularly from friends—buffered the negative effects of having a prevention focus on negative affective experiences.

## S3

*Differences According to Gender and Sexual Orientation*

	Gender		Sexual Orientation		Relationship status		Living arrangement	
	Women <i>M (SD)</i>	Men <i>M (SD)</i>	Heterosexual <i>M (SD)</i>	LGBTQI+ <i>M (SD)</i>	Single <i>M (SD)</i>	In a relationship <i>M (SD)</i>	Alone <i>M (SD)</i>	With other(s) <i>M (SD)</i>
1. Prevention scores (T1)	6.58 (1.97)	6.49 (1.95)	6.60 (1.98)	6.46 (1.88)	6.54 (1.91)	6.59 (1.98)	6.53 (2.00)	6.59 (1.95)
2. Promotion scores (T1)	7.67 <sup>a</sup> (1.34)	7.45 <sup>b</sup> (1.49)	7.68 <sup>a</sup> (1.34)	7.47 <sup>b</sup> (1.47)	7.43 (1.50)	7.69 (1.31)	7.60 (1.34)	7.65 (1.38)
3. Worry for health (T1)	3.54 <sup>a</sup> (0.95)	3.25 <sup>b</sup> (1.07)	3.49 (0.99)	3.49 (0.94)	3.44 (1.01)	3.52 (0.97)	3.51 (0.97)	3.50 (0.98)
4. Adherence to self-isolation (T2)	4.33 <sup>a</sup> (0.75)	4.16 <sup>b</sup> (0.93)	4.29 (0.80)	4.35 (0.70)	4.30 (0.83)	4.30 (0.76)	4.30 (0.74)	4.31 (0.80)
5. Adherence to preventive health behaviors (T2)	4.48 <sup>a</sup> (0.69)	4.27 <sup>b</sup> (0.88)	4.47 (0.72)	4.38 (0.77)	4.35 (0.77)	4.49 (0.71)	4.50 (0.71)	4.44 (0.73)
6. Negative affective experiences (T3)	2.51 <sup>a</sup> (0.88)	2.23 <sup>b</sup> (0.82)	2.42 <sup>b</sup> (0.88)	2.69 <sup>a</sup> (0.88)	2.59 (0.88)	2.45 (0.88)	2.38 <sup>b</sup> (0.87)	2.53 <sup>a</sup> (0.89)
7. Positive affect (T3)	2.55 <sup>a</sup> (0.78)	2.65 <sup>b</sup> (0.86)	2.60 <sup>a</sup> (0.79)	2.42 <sup>b</sup> (0.79)	2.52 (0.82)	2.57 (0.78)	2.46 <sup>b</sup> (0.75)	2.62 <sup>a</sup> (0.81)
8. Frequency of online interactions with family (T3)	2.05 (0.90)	2.01 (0.83)	2.08 <sup>a</sup> (0.91)	1.90 <sup>b</sup> (0.81)	1.93 (0.90)	2.08 (0.87)	2.15 <sup>a</sup> (0.88)	1.99 <sup>b</sup> (0.89)
9. Frequency of online interactions with friends (T3)	2.09 <sup>b</sup> (0.78)	2.24 <sup>a</sup> (0.85)	2.11 (0.81)	2.12 (0.81)	2.21 (0.79)	2.09 (0.79)	1.99 <sup>b</sup> (0.71)	2.18 <sup>a</sup> (0.82)
10. Perceived support from family (T3)	5.42 (1.69)	5.29 (1.62)	5.55 <sup>a</sup> (1.59)	4.89 <sup>b</sup> (1.85)	5.29 (1.73)	5.43 (1.66)	5.39 (1.63)	5.40 (1.70)
11. Perceived support from friends (T3)	5.36 (1.49)	5.23 (1.57)	5.39 <sup>a</sup> (1.47)	5.16 <sup>b</sup> (1.56)	5.28 (1.65)	5.36 (1.45)	5.28 (1.52)	5.37 (1.49)

*Note.* Different superscripts within the Gender, Sexual Orientation, or Relationship Status columns indicate significant differences at  $p < .050$ .

Women were more focused on promotion,  $p = .041$ ,  $d = 0.16$ , were more worried for their health,  $p < .001$ ,  $d = 0.30$ , reported greater adherence to physical isolation,  $p = .012$ ,  $d = 0.21$ , and to preventive health behaviors,  $p = .001$ ,  $d = 0.29$ , and reported more negative affective experiences,  $p < .001$ ,  $d = 0.32$ . In contrast, men had more frequent online interactions with friends,  $p = .019$ ,  $d = 0.18$ . Controlling for gender did not change the results from the pre-registered or exploratory models. The only exception was that the buffering effect of online interactions with family became non-significant,  $p = .062$ . However, this did not change the finding that perceived social support buffered the negative effects of having a prevention focus on negative affective experiences.

Heterosexual participants were more focused on promotion,  $p = .028$ ,  $d = 0.15$ , experienced more positive affect,  $p = .001$ ,  $d = 0.23$ , had more frequent online interaction with their family,  $p = .003$ ,  $d = 0.21$ , and perceived more support from their family,  $p < .001$ ,  $d = 0.40$ , and friends,  $p = .045$ ,  $d = 0.16$ . In contrast, LGBTQI+ participants reported more negative affective experiences,  $p < .001$ ,  $d = 0.31$ . Controlling for sexual orientation did not change any of the results from the pre-registered or exploratory models.

Participants who were single reported more negative affective experiences,  $p = .014$ ,  $d = 0.17$ , and had more frequent online interaction with friends,  $p = .031$ ,  $d = 0.15$ . In contrast, participants who were in a relationship were more focused on promotion,  $p = .002$ ,  $d = 0.19$ , reported greater adherence to preventive health behaviors,  $p = .009$ ,  $d = 0.19$ , and had more frequent online interaction with their family,  $p = .012$ ,  $d = 0.17$ . Controlling for relationship status did not change any of the results from the pre-registered or exploratory models.

Participants living alone reported more frequent online interactions with their family,  $p = .001$ ,  $d = 0.18$ . In contrast, participants living with other people reported more negative affective experiences,  $p = .003$ ,  $d = 0.17$ , but also more positive affect,  $p < .001$ ,  $d = 0.20$ , and more online interactions with friends,  $p < .001$ ,  $d = 0.24$ . Controlling for relationship status did not change any of the results from the pre-registered or exploratory models.

## S4

*Differences According to Local Physical Distancing Policies*

	No restrictions <i>M (SD)</i>	Encouraged <i>M (SD)</i>	Ordered <i>M (SD)</i>	Enforced <i>M (SD)</i>
1. Prevention scores (T1)	5.80 (1.79)	6.71 (1.88)	6.62 (2.00)	6.44 (1.97)
2. Promotion scores (T1)	7.80 (1.30)	7.60 (1.39)	7.66 (1.32)	7.63 (1.39)
3. Worry for health (T1)	3.70 (1.10)	3.49 (0.97)	3.49 (0.98)	3.55 (0.98)
4. Adherence to self-isolation (T2)	3.40 <sup>a</sup> (0.89)	4.15 <sup>a</sup> (0.79)	4.37 <sup>b</sup> (0.72)	4.43 <sup>b</sup> (0.75)
5. Adherence to preventive health behaviors (T2)	4.20 (1.10)	4.46 (0.71)	4.49 (0.71)	4.44 (0.75)
6. Negative affective experiences (T3)	2.40 <sup>a</sup> (1.10)	2.37 <sup>a</sup> (0.83)	2.52 <sup>a</sup> (0.90)	2.56 <sup>a,b</sup> (0.91)
7. Positive affect (T3)	2.85 (1.28)	2.61 (0.80)	2.56 (0.78)	2.51 (0.78)
8. Frequency of online interactions with family (T3)	1.40 (0.55)	2.02 (0.89)	2.08 (0.89)	2.02 (0.89)
9. Frequency of online interactions with friends (T3)	2.00 (0.71)	2.06 (0.79)	2.12 (0.78)	2.13 (0.79)
10. Perceived support from family (T3)	5.63 (1.31)	5.38 (1.71)	5.43 (1.57)	5.34 (1.77)
11. Perceived support from friends (T3)	4.63 (1.93)	5.32 (1.59)	5.31 (1.40)	5.37 (1.52)

Note. Different superscripts indicate significant differences at  $p < .050$ .

There was a main effect on local physical distancing policies,  $F(3, 1071) = 11.31, p < .001$ ,  $\eta_p^2 = .031$ . Post-hoc comparisons with Bonferroni correction showed no differences in adherence to physical isolation among participants who reported no restrictions and for whom physical distancing was encouraged,  $p = .164$ . Both groups reported significantly lower adherence to physical isolation when compared to participants for whom physical distancing was ordered, both  $p \leq .028$ , or enforced, both  $p \leq .016$ . No differences emerged between these latter two groups,  $p = 1.00$ . There was also main effect on negative affective experiences,  $F(3, 1229) = 3.48, p = .015, \eta_p^2 = .008$ . Post-hoc comparisons with Bonferroni correction showed that participants for whom physical distancing was ordered reported more negative affective experiences than those for whom physical distancing was encouraged,  $p = .013$ . No other comparisons reached significance, all  $p \geq .122$ . Controlling for local physical distancing policies did not change any of the results from the pre-registered or exploratory models.