Daily stress, family functioning and mental health among Palestinian couples in Israel during COVID-19: A moderated mediation model

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Abstract

The COVID-19 pandemic created a range of stressors, among them difficulties related to work conditions, financial changes, lack of childcare, and confinement or isolation due to social distancing. Among families and married individuals, these stressors were often expressed in additional daily hassles, with an influence on mental health. This study examined two moderated mediation models based on Bodenmann’s systemic-transactional stress model. Specifically, the models tested the hypothesis that intra-dyadic stress mediates the association between extra-dyadic stress and mental health, while two measures of family functioning, cohesion and flexibility, moderate the relationship between extra and intra-dyadic stress. Participants were 480 Palestinian adults in Israel who completed self-report questionnaires. All were in opposite-sex marriages and identified as either cisgender women or cisgender men. The results showed partial mediation patterns supporting both models, indicating that family cohesion and flexibility weakened the mediating effect of intra-dyadic stress on the relationship between extra-dyadic stress and mental health. These findings increase our understanding of the variables that affected mental health during the pandemic, and suggest that when faced with extra-dyadic stress, married individuals with good family environments are less likely to experience high levels of intra-dyadic stress, which is in turn associated with preserved mental health. Limitations and implications for planning interventions for couples and families during the pandemic are discussed.

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Like other large-scale adversities, the COVID-19 pandemic created a range of stressors, among them difficulties related to work conditions, such as doing paid work while caring for family at home, financial changes, lack of childcare, and confinement or isolation due to social distancing (Craig & Churchill, 2020; Prime et al., 2020). Among families and married individuals, these stressors were often expressed in additional daily hassles. Not surprisingly, the months following the outbreak of the pandemic were also characterized by a clear rise in negative psychological outcomes, including anxiety, depression, and distress among both individuals (Barzilay et al., 2020; Forte et al., 2020; Kimhi et al., 2020; Polizzi et al., 2020; Ye et al., 2022) and families (e.g., Goldberg et al., 2021; Gray et al., 2020).

Several decades of research have consistently shown that hassles, which have been associated with perceived daily stress (Bodenmann et al., 2006), pose risks both for family relationships and for the functioning and mental health of individuals within families (Falconier et al., 2015). High levels of perceived daily stress are related to greater anxiety and depression, lower mental health in general (D’Angelo & Wierzbicki, 2003; Parrish et al., 2011), increased psychopathological symptoms, and decreased subjective well-being (Schönfeld et al., 2019).

The systemic-transactional model (STM; Bodenmann, 1995; 1997, 2005), is a systems-oriented model addressing stress processes in couples’ relationships, including the association between hassles and mental health. The approach is based on the work of Folkman and Lazarus (1980), which highlighted the subjectivity of coping with stress. According to their prominent and internationally recognized transactional theory of stress (Lazarus & Folkman, 1984), the perceived stress experienced by an individual is largely determined by how that individual appraises the situation and her or his own resources to cope with it. As such, individuals with different coping capacities will experience different levels of perceived stress under similar objective environmental stressors.

The STM emphasizes the distinction between extra-dyadic stress and intra-dyadic stress. The former refers to tension that originates outside of a relationship, such as social and economic strains, work stress, conflicts with neighbors, friends, or problems with authorities. Meanwhile, intra-dyadic stress refers to tension within the relationship, such as problems with the partner, overload with family responsibilities, insufficient time for family, disagreements about task-sharing in the household, and feeling bothered by some of partner’s habits. According to the STM, extra-dyadic stress from daily hassles can have a direct negative impact on individual health and on the couples’ relationship (Bodenmann, 1997). This claim has been supported in several studies with a range of outcomes related to psychological well-being (Falconier et al., 2015; Serido et al., 2004).
Furthermore, according to the STM, external stress affects mental health not only directly but also indirectly by increasing intra-dyadic stress (Bodenmann et al., 2016; Falconier et al., 2015; Neff & Karney, 2017). Namely, when extra-dyadic stress spills over into the dyad, the couple’s dynamics can be negatively affected, which also contributes to decreased mental health (Falconier et al., 2015). In this context, Neff and Karney (2017) have argued that stressful contexts undermine marital well-being through two routes. In the first route, external stressors create additional problems by diverting time and attention away from activities that promote intimacy between partners in the marriage. In the second, external stress can make it difficult for spouses to cope with the increased problems by draining them of the energy and resources necessary for responding constructively. When individuals have to cope with greater external demands, they report being more distracted and less responsive when interacting with their partners (Story & Repetti, 2006), and when they do manage to make time for interacting, they often allocate that time to resolving their stressors (Randall & Bodenmann, 2009). In an example provided by Neff and Karney (2017), a couple experiencing serious financial strains might spend their limited time together negotiating the household budget, instead of more pleasurable pursuits that foster intimacy.

It follows that when extra-dyadic stress does not increase intra-dyadic stress, better outcomes can be expected. According to the STM, there are mechanisms that prevent extra-dyadic stress from increasing intra-dyadic stress, for example, provision of support and joint efforts to deal with common stressors (Bodenmann et al., 2016). Accordingly, we can assume that additional characteristics of family functioning interact with extra-dyadic stress in determining intra-dyadic stress. The current study therefore examined the possibility that two family functioning measures, cohesion and flexibility, would influence the association between extra-dyadic stress and intra-dyadic stress. This analysis was part of a broader model examining the ways in which extra-dyadic stress from daily hassles affects individual mental health through increased intra-dyadic stress. Essentially, family functioning is considered a potential protective factor that can buffer the adverse effects of extra-dyadic stress on intra-dyadic stress.

The family functioning measures examined here, cohesion and flexibility, are broadly discussed in the Circumplex Model of Marital and Family Systems (Olson et al., 1979), as central variables that define family interactions (Olson, 2000). Cohesion, which involves emotional bonding between family members, is positively correlated to the provision of functional and emotional support (Wang et al., 2015). Flexibility relates to the quality and expression of the family’s leadership, organization, roles, and rules. It has been associated with effective adaptation to life changes and stressful events among families (García-Huidobro et al., 2012; Koutra et al., 2016; Wang et al., 2015). Together, cohesion and flexibility have been shown to create a balance between stability and adaptation to change, leading to optimal functioning (Olson, 1993; Olson & Gorall, 2006). The theoretical premise of the current study is that families that adapt to change while remaining close experience less perceived stress.

Various studies examining family functioning during times of distress support this premise. For example, earlier work on the family environments of patients with traumatic brain injuries shows that positive family functioning improves coping and enables
thriving (Perrin et al., 2013; Sander et al., 2002; Stevens et al., 2013). Studies have also shown that better family functioning encouraged effective coping processes during major epidemics (Chang et al., 2015; Neo et al., 2016) and when a family member had a life-threatening medical condition (Harris & Zakowski, 2003). Berryhill et al. (2018) also found that cohesive-flexible family functioning was associated with better coping resources, including positive communication and self-compassion.

Other work has shown direct relationships between measures of family functioning and perceived daily stress. Pollock et al. (2015) found that cohesion and flexibility were directly and negatively related to perceived stress from daily hassles. Sheidow et al. (2014) showed that youths from struggling families, which were low in family cohesion, positive communication, support, and organization, were less resilient to stress from daily hassles.

Studies specifically addressing the COVID-19 pandemic have also shown family functioning to be associated with perceived stress, both directly and as presumably moderated by coping. Salin et al. (2020) showed that agreement regarding everyday practices, sharing responsibilities, and confidence in managing life pressures promoted better coping with lockdown-related stressors, with flexibility emerging as a crucial facilitator. Goldberg et al. (2021) showed that use of strategies aimed at maintaining or enhancing relationship health decreased relationship and parenting stress. Similarly, both Hu et al. (2020) and Mohindra et al. (2020) showed that healthy family environments were associated with the provision of family support, which encouraged effective coping among individual family members. Finally, Ye et al. (2022) showed a direct negative association between family cohesion and perceived stress during the pandemic.

**Cultural context**

The main goal of the current study was not cultural comparison. Indeed, the literature supporting the proposed models is not limited to a particular cultural group. However, it is noteworthy that the study sample comprised married individuals from the Palestinian society in Israel, a population that has rarely been studied. A short description of broad sociocultural characteristics is therefore provided, with a focus on stress and family functioning, to contextualize the study.

At 21% of Israel’s total population, Palestinian society constitutes a minority (Israeli Central Bureau of Israel Central Bureau of Statistics, 2019) and is therefore subjected to the stress involved in balancing the ubiquitous demands of the dominant and minority cultures (Hennon et al., 2008; Peterson, 2017). This stress has been shown to affect family relationships and functioning (Peterson, 2017). While Palestinian society in Israel tends to have traditional attitudes toward marriage and gender roles, with an unequal division of labor in the home and family (Abu-Baker, 2003), its proximity to the more modern views of the majority population has led to demographic, social, and economic changes, including the educational and economic empowerment of women. In addition, Palestinian society, like other Arab cultures, is largely collectivistic, and thus often characterized by close relationships between relatives, friends, and neighbors (Azaiza, 2008a). Furthermore, the Palestinian population has more limited access to professional mental
healthcare services (Al-Krenawi & Graham, 2005), though as an ethnic minority they have a greater need for such services (Azaiza, 2008b). Due in part to this increased vulnerability, we might expect the limitations on extended family support experienced during the COVID-19 pandemic to affect the Palestinian population disproportionately, making cohesion and flexibility in the nuclear family particularly important.

**Current study and hypotheses**

Based on the aforementioned findings, the current study addressed the interplay between extra-dyadic stress, intra-dyadic stress, family functioning, and mental health among married individuals during the COVID-19 pandemic. Specifically, the study examined whether intra-dyadic stress mediated the relationship between extra-dyadic stress and mental health, and whether family functioning, as measured by cohesion and flexibility, moderated the relationship between extra-dyadic and intra-dyadic stress. Two models were tested, one for each of the moderator variables (family cohesion and family flexibility). The hypotheses were as follows: (1) extra-dyadic stress would be negatively associated with mental health, (2) intra-dyadic stress would partially mediate the relationship between extra-dyadic stress and mental health, and (3) family functioning (cohesion and flexibility) would moderate the relationship between extra-dyadic stress and intra-dyadic stress.

**Methods**

**Participants and procedure**

Data for this study were taken from a larger survey on family coping during the COVID-19 pandemic among 480 Palestinian adults in opposite-sex marriages, who identified as either cisgender women or cisgender men (see Table 1), from different regions in Israel. Participants were recruited through social media to complete an online survey. To be included, participants had to be married and living with their spouse (divorced, separated, and widowed individuals were excluded), have at least one child, and have access to a smartphone, personal computer, or laptop and an Internet connection. An attempt was made to represent a broad sociodemographic range, with respect to age, gender, years of marriage, number of children, place of residence, and socioeconomic status. The sociodemographic characteristics of the sample are presented in Table 1.

The COVID-19 pandemic began to spread in Israel in January 2020. Between March 15 and May 7, 2020, the Israeli government implemented an overall lockdown policy and required the entire population, with the exception of essential service providers, to leave their homes only for necessary provisions. Data for this study were collected just after the general lockdown was lifted, when the public was gradually allowed to resume routine functioning. Participants were asked to complete self-report questionnaires that addressed coping and stress since the outbreak of the pandemic, including the first lockdown.

The study was approved by the institutional Ethics Committee at the college where it was conducted. Participants received a brief explanation regarding the study and were
Table 1. Socio-demographic Characteristics of the Sample.

| Variable                          | N    | %   | M (SD) |
|-----------------------------------|------|-----|--------|
| Gender                            |      |     |        |
| Male                              | 141  | 29% |        |
| Female                            | 339  | 71% |        |
| Age                               |      |     | 38.3 (9.7) |
| 18–29                             | 89   | 18.5% |        |
| 30–39                             | 190  | 39.6% |        |
| 40–49                             | 143  | 29.8% |        |
| 50+                               | 58   | 12.1% |        |
| Education                         |      |     |        |
| Elementary/high school            | 149  | 31% |        |
| Post-secondary education          | 43   | 9%  |        |
| B.A.                              | 165  | 35% |        |
| M.A.+                             | 107  | 22% |        |
| Other                             | 16   | 3%  |        |
| Religion                          |      |     |        |
| Muslim                            | 353  | 74% |        |
| Christian                         | 34   | 7%  |        |
| Druze                             | 91   | 19% |        |
| Other                             | 2    | 0%  |        |
| Marriage duration (1–54)          |      |     | 14.7 (9.5) |
| Number of children (1–10)         |      |     | 2.8 (1.3) |
| Participant employment            |      |     |        |
| Unemployed                        | 74   | 15.4% |        |
| Employed                          | 273  | 56.8% |        |
| Self-employed                     | 82   | 17.1% |        |
| Student                           | 19   | 4%  |        |
| Pensioner                         | 3    | .6% |        |
| Soldier                           | 5    | 1%  |        |
| Other                             | 24   | 5%  |        |
| Average family income before the pandemic | |     |        |
| Far below average                 | 75   | 16% |        |
| Under average                     | 83   | 17% |        |
| Average                           | 162  | 34% |        |
| Above average                     | 122  | 25% |        |
| Far above average                 | 38   | 8%  |        |
| Financial damage due to the pandemic |    |     |        |
| None at all                       | 122  | 26% |        |
| Minor damage                      | 139  | 29% |        |
| Medium damage                     | 119  | 25% |        |
| High damage                       | 63   | 13% |        |
| Major damage                      | 37   | 7%  |        |
assured that anonymity and confidentiality would be maintained. All participants signed an informed consent form before completing the study questionnaire.

**Instruments**

As part of the larger study, participants completed a self-administered multi-component questionnaire addressing a range of family-related issues. The components used in the current study are described below. Apart from the sociodemographic variables, which were originally written in Arabic, all the measures were translated from English into Arabic using the following method. In the first phase, the questionnaire was translated into Arabic by the author. In the second stage, another professional in the field was asked to compare the Arabic version with the English version, to assess the questionnaire with respect to overall clarity and the clarity of specific words and instructions. In the third stage, the author prepared the final Arabic version of the questionnaire based on comments received from the additional professional.

**Family functioning**

The third edition of the *Family Adaptability and Cohesion Evaluation Scale* (FACES III, 1985), developed by Olson et al. (1985), provided the two measures of perceived family functioning: cohesion and flexibility. The 20-item scale includes 10 items for each of the two factors. Family cohesion items address perceived within-family connectedness, unity, and emotional bonding (e.g., “we ask each other for help”; “we feel close to each other”; “togetherness is a top priority”). Family flexibility items address the perceived ability of the family to adjust its rules, provide structure, and adjust relationship patterns in response to changes (e.g., “it is hard to identify the leaders in our family”; “we shift household responsibilities from person to person”; “we try new ways of dealing with problems”). Participants rated the relative truth of each statement on a 5-point Likert scale ranging from 1 (Almost never) to 5 (Almost always). The scale was analyzed as a linear measure, with high scores in cohesion and flexibility indicating more functional family relationships (Olson, 1991). In the current study, Cronbach’s alpha values for cohesion and flexibility were .92 and .85, respectively.

**Extra-dyadic and intra-dyadic stress from daily hassles**

The basis for the daily stress measure used in the current study was the Hassles Scale developed by Kanner et al. (1981), which includes 118 items that assess various aspects of perceived daily stress. Bodenmann et al. (2006) previously employed a shortened version of the original Hassles Scale, called the Multidimensional Stress Questionnaire for Couples (MSQ-C; see also Falconier et al., 2015). Of the 37 items, they defined 29 as representing stress “external to the dyad” and 8 as representing stress “internal to the dyad.” In the current study, 8 items from each of the two categories proposed by Bodenmann et al. (2006) were employed. The intra-dyadic stress items addressed
issues such as problems with the partner, overload with family responsibilities, not enough time for family, task sharing in the household, and feeling bothered by some of partner’s habits. The extra-dyadic stress items were chosen for their relevance to the COVID-19 pandemic period, and included concerns about events in the news, concerns about health in general, financial security, troublesome neighbors, too many things to do, concerns about job security, and dissatisfaction with work duties. Participants were asked if they had experienced each item during the lockdown period. If they had not, they were instructed to choose “0”; if they had, they rated the perceived severity of the item on a 3-point scale: 1 “somewhat stressful,” 2 “moderately stressful,” or 3 “extremely stressful.” Cronbach’s alpha for extra-dyadic and intra-dyadic stress were .71 and .74, respectively.

Three summary scores each were generated for extra-dyadic and intra-dyadic stress: (1) frequency – a simple count of the number of items checked, which could range from 0 to 8; (2) cumulated severity – the sum of the 3-point severity ratings, which ranged from 0 to 24; and (3) intensity – cumulated severity divided by frequency, which ranged from 0 to 3. The latter scores, which provided an index of how intensely the average hassle was experienced regardless of the number (frequency) of hassles experienced, were used as the outcome measures for extra-dyadic and intra-dyadic stress.

**General mental health**

The MHI-18 (henceforth, MHI), a shortened version of the original 36-item Mental Health Inventory developed by Veit and Ware (1983), was used to assess the general mental health. It includes four subscales: anxiety (e.g., “Have you been a very nervous person?”), depression (e.g., “Have you been in low or very low spirits?”), behavioral/emotional control (e.g., “Have you been in firm control of your behavior, thoughts, emotions, feelings?”), and positive affect and emotional ties (e.g., “Has your daily life been full of things that were interesting to you?”; “Have you felt loved and wanted?”; “Have you felt cheerful, light-hearted?”). Participants were asked to indicate how often they had experienced various emotions during the lockdown period, using a 6-point scale ranging from 1 (all of the time) to 6 (none of the time).

The MHI has four subscale scores and one total score. The subscale and total scores range from 0–100. Before computing the total MHI score, 8 of the items were converted to make negative and positive scores consistent. Mean MHI score was then computed based on all 18 items, yielding a range from 1 to 6. Next, total MHI total score (a transformation score) was computed as follows: [(Mean MHI - 1) * 100]/5. Thus, the range for total MHI score was from 0 (based on a mean MHI score of 1) to 100 (based on a mean MHI score of 6), with higher scores indicating better mental health. In the current study, Cronbach’s alpha for general mental health was .75.
Sociodemographic variables

The following sociodemographic variables were examined: gender, age, religion, level of education, marriage duration, number of children, employment, average family income before the pandemic, and COVID-19-related financial damage.

Statistical analysis

Data were analyzed using SPSS 26. First, descriptive statistics and bivariate correlations (see Table 2) were calculated for the study variables, including extra-dyadic stress, intra-dyadic stress, family cohesion, family flexibility, mental health, and the sociodemographic variables (age, education, marriage duration, number of children, average family income before the pandemic, and financial damage due to the pandemic). Next, to address the main study objective and test the proposed models, moderated mediation analysis was conducted in SPSS version 26 using the PROCESS macro (model 7; Hayes, 2018). The macro regressed the dependent variable, mental health, on the following variables: (a) the independent variable, extra-dyadic stress; (b) the mediating variable, intra-dyadic stress; and (c) any sociodemographic covariates that were significantly correlated with at least one of the study variables (these included age, marriage duration, number of children, family income before the pandemic, and financial damage due to the pandemic). The mediator was also regressed on the independent variable and on the covariates. The moderators were also regressed on the independent variable and on the covariates. This procedure was run for each of the moderator variables (cohesion and flexibility).

To assess mediation and determine whether it was partial or complete, direct effects and indirect effects were estimated. Direct effects represent the direct pathways from an independent variable (e.g., extra-dyadic stress) to a dependent variable (mental health). Indirect effects represent the pathway from the independent variable (extra-dyadic stress) to the dependent variable (mental health) through a mediator (intra-dyadic stress). To determine the significance of the mediation effects, a bootstrapping technique was used (Preacher & Hayes, 2004), which resamples the existing dataset at least 5000 times to estimate the confidence intervals of the mediated effect.

Results

As a greater percentage of women participated in the study, t-tests were conducted to assess differences between women and men for all the study variables. As no significant differences were found, all the analyses were conducted on the entire sample.

Bivariate correlations

The results presented in Table 2 reveal a positive correlation between extra-dyadic stress and intra-dyadic stress, both of which were negatively correlated with mental health. In addition, a positive correlation between cohesion and flexibility, both of which were
Table 2. Means, Standard Deviations, and Bivariate Correlation Coefficients Between the Study Variables.

| Variable                                           | M (SD) | I   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  |
|----------------------------------------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. Extra-dyadic stress                             | 1.55 (.54) |     |     |     |     |     |     |     |     |     |     |     |
| 2. Intra-dyadic stress                             | 1.41 (.48) | .58** |     |     |     |     |     |     |     |     |     |     |
| 3. Cohesion                                        | 4.13 (.69) | -.10* | -.33** |     |     |     |     |     |     |     |     |     |
| 4. Flexibility                                     | 3.78 (.66) | -.08 | -.23** | .79** |     |     |     |     |     |     |     |     |
| 5. Mental health                                   | 62.48 (11.24) | -.35** | -.45** | .41** | .33** |     |     |     |     |     |     |     |
| 6. Gender                                          | 0.71 (0.46) | -.01 | -.05 | -.00 | -.05 | .00 |     |     |     |     |     |     |
| 7. Age                                             | 38.33 (9.66) | -.07 | -.05 | -.16** | -.10* | .03 | .18** |     |     |     |     |     |
| 8. Education                                       | 3.40 (1.40) | -.07 | -.01 | -.01 | .03 | .05 | -.05 | .06 |     |     |     |     |
| 9. Marriage duration                               | 14.73 (9.48) | -.06 | -.06 | -.18** | -.16** | -.01 | .08 | .88** | -.06 |     |     |     |
| 10. Number of children                             | 2.82 (1.34) | -.02 | .02 | -.15** | -.15** | .02 | -.05 | .62** | -.14** | .67** |     |     |
| 11. Average family income before the pandemic      | 3.44 (1.79) | -.14** | -.14** | .05 | .03 | .14** | -.13** | .15** | .45** | .06 | .01 |     |
| 12. Financial damage due to COVID-19                | 2.75 (1.65) | .21** | .21** | -.13** | -.14** | -.29** | .17** | -.13** | -.33** | -.01 | .06 | -.37** |

Note. Mean scores could range from 0 for low stress to 3 for high stress for extra-dyadic and intra-dyadic stress, from 1 for low levels to 5 for high levels for family cohesion and flexibility, and from 0 for low levels to 100 for high levels for mental health. Gender: 0 = male (n = 141), 1 = female (n = 339). Age ranged from 18 to 86. Education: scores could range from 1 for low education to 5 for high education. Marriage duration could range from 1 to 54. Number of children could range from 1 to 10. Average family income before the pandemic: scores could range from 1 for very low income to 5 for very high income. Financial damage due to the pandemic: scores could range from 1 for no damage to 5 for great damage. *p < .01; **p < .001.
negatively correlated with intra-dyadic stress and positively correlated with mental health. Cohesion also negatively correlated with extra-dyadic stress.

Average family income before the pandemic was negatively correlated with extra and intra-dyadic stress, and positively correlated with mental health. COVID-19-related financial damage was negatively correlated with cohesion, flexibility, mental health, and positively correlated with extra and intra-dyadic stress. Finally, age, marriage duration and number of children were negatively correlated with cohesion and flexibility. Overall, correlations between the study variables were as expected, enabling further examination of direct and indirect effects on mental health in the moderated mediation models.

Figure 1. Standardized Coefficients and Standard Error (SE) Values of the Moderated Mediation Models. Note. $a_{1i}$ = The effect of perceived extra-dyadic stress on intra-dyadic stress; $a_{2i}$ = The effect of family functioning (cohesion or flexibility) on intra-dyadic stress; $a_{3i}$ = The interaction effect of extra-dyadic and family functioning on intra-dyadic stress. *$p < .05$; **$p < .01$; ***$p < .001$. 
Table 3. The Moderated Mediation Effect of Extra-Dyadic Stress on Mental Health.

| Predictors                      | Cohesion                     | Flexibility                   |
|---------------------------------|------------------------------|-------------------------------|
|                                 | Model 1 | Model 2 | Model 1 | Model 2 | Model 1 | Model 2 |
| Extra-dyadic stress             |  .55 (.48, .62) | 15.09*** | -.14 (-.24, -.04) | -2.83** | .56 (.49, .63) | 15.12*** | -.14 (-.24, -.04) | -2.83** |
| Moderator                       | -.25 (-.33, -.18) | -6.86*** | -.18 (-.25, -.10) | -4.69*** | -.08 (-.15, -.01) | -2.31* |
| Moderator X extra-dyadic stress | -.08 (-.15, -.01) | -2.23* |
| Intra-dyadic stress             | -.34 (-.44, -.25) | -6.88*** |
| Age                             | .04 (-.12, .19) | 0.47 | .15 (-.03, .32) | 0.11 | .07 (-.09, .23) | 0.86 | .15 (-.03, .32) | 1.61 |
| Marriage duration               | -.16 (-.32, .00) | -1.93 | -.18 (-.34, -.01) | -2.12* | -.14 (-.33, .04) | -1.53 |
| Number of children              | .07 (-.02, .17) | 1.56 | .08 (-.02, .18) | 1.64 | -.04 (-.15, .07) | -.70 |
| Average income before the       | -.05 (-.12, .03) | -1.26 | -.06 (-.14, .01) | -1.62 | .07 (-.02, .16) | 1.61 |
| pandemic                        | Financial damage due to COVID-19 | -.06 (-.14, .01) | -1.69 | .02 (-.06, .11) | 0.59 | -.08 (-.16, -.00) | -2.03* | .02 (-.06, .11) | 0.54 |

Note. In Model 1, the dependent variable was intra-dyadic stress. In Model 2, mental health was the dependent variable.
Moderated mediation models

Figure 1 presents the standardized coefficients of each pathway of the two models, after controlling for age, marriage duration, number of children, family income before the pandemic, and COVID-19-related financial damage.

As shown in Table 3, the results demonstrated a significant direct effect of extra-dyadic stress on mental health ($\beta = -.14$, $SE = .05$, $p = .005$), supporting the first hypothesis. Furthermore, extra-dyadic stress demonstrated a significant effect on intra-dyadic stress ($\beta = .55$, $SE = .04$, $p < .001$; $\beta = .56$, $SE = .04$, $p < .001$, in Models A and B, respectively). In turn, intra-dyadic stress demonstrated significant direct effects on mental health ($\beta = -.34$, $SE = .05$, $p < .001$). Furthermore, the indirect effects, which are described below, were significant. In addition, after controlling for intra-dyadic stress, the direct effect of extra-dyadic stress on mental health was significant, suggesting partial mediation by intra-dyadic stress. These findings support the second hypotheses regarding the partial mediating effect of intra-dyadic stress on the relationship between extra-dyadic stress and mental health. Both extra- and intra-dyadic stress and the covariates accounted for 21.51% of the variance in mental health ($F(7,473) = 18.52$, $p < .001$).

Family cohesion as moderator of the relationship between extra- and intra-dyadic stress (see Figure 1, Model A). A significant interaction was found between extra-dyadic stress and family cohesion ($\beta = -.08$, $SE = .04$, $p = .027$; $R^2$ change = .006, $F$ change (1472) = 4.95, $p = .027$). As shown in Figure 2a, participants with lower levels of family cohesion ($-1$ SD) demonstrated a greater effect of extra-dyadic stress on intra-dyadic stress ($\beta = .63$, $SE = .05$, $t = 11.60$, $p < .001$), compared to participants with higher levels of family cohesion ($+1$ SD; $\beta = .47$, $SE = .05$, $t = 9.58$, $p < .001$). These findings support the third hypothesis regarding the moderating effect of family cohesion on the relationship between extra-dyadic stress and intra-dyadic stress. In addition, a significant effect of family cohesion on intra-dyadic stress was found ($\beta = -.25$, $SE = .04$, $p < .001$). The extra-dyadic stress, the moderator, and the covariates accounted for 41.20% of the variance in intra-dyadic stress ($F(8,472) = 41.34$, $p < .001$).

Finally, the overall moderated mediation model was supported (index of moderated mediation = 0.028; $SE = 0.016$; 95% CI: 0.001, 0.061). Results indicated that intra-dyadic stress mediated the effect of extra-dyadic stress on mental health, and family cohesion weakened the mediating effect of intra-dyadic stress. Specifically, the indirect effect of extra-dyadic stress through intra-dyadic stress on mental health was significant and the strongest for lower levels of cohesion ($\beta = -.22$, $SE = 0.04$; 95% CI: $-.30$, $-.14$), compared to medium levels of cohesion ($\beta = -.19$, $SE = 0.03$; 95% CI: $-.25$, $-.12$), and higher levels of cohesion ($\beta = -.16$, $SE = 0.03$; 95% CI: $-.22$, $-.10$).

Family flexibility as moderator of the relationship between extra- and intra-dyadic stress (see Figure 1, Model B). A significant interaction effect was found between extra-dyadic stress to family flexibility ($\beta = -.08$, $SE = .04$, $p = .021$; $R^2$ change = .007, $F$ change (1472) = 5.34, $p = .021$). As shown in Figure 2b, participants with lower levels of family flexibility ($-1$ SD) demonstrated a greater effect of extra-dyadic stress on intra-dyadic stress ($\beta = .64$, $SE = .05$, $t = 11.88$, $p < .001$), compared to participants with higher levels of family flexibility ($+1$ SD; $\beta = .48$, $SE = .05$, $t = 9.78$, $p < .001$). These findings
support the third hypothesis regarding the moderating effect of family flexibility on the relationship between extra-dyadic stress and intra-dyadic stress. In addition, a significant effect of family flexibility on intra-dyadic stress ($\beta = -.18, SE = .04, p < .001$). The extra-dyadic stress, the moderator, and the covariates accounted for 37.94% of the variance in intra-dyadic stress ($F(8,472) = 36.22, p < .001$).

Finally, the overall moderated moderation model was supported (index of moderated mediation = 0.029; $SE = 0.015; 95\% CI: 0.001, 0.060$). Results indicated that intra-dyadic stress mediated the effect of extra-dyadic stress on mental health, and family flexibility weakened the mediating effect of intra-dyadic stress. Specifically, the indirect effect of extra-dyadic stress through intra-dyadic stress on mental health was significant and strongest for lower levels of flexibility ($\beta = -.22, SE = 0.04; 95\% CI: -.31, -.14$), compared to medium levels of flexibility ($\beta = -.19, SE = 0.03; 95\% CI: -.26, -.13$), and higher levels of flexibility ($\beta = -.16, SE = 0.03; 95\% CI: -.23, -.11$).
Discussion

Two moderated mediation models based on the systemic-transactional model (STM; Bodenmann, 1995; 1997) were used to examine the relationship between stress from daily hassles and mental health among married individuals during the early stages of the COVID-19 pandemic. The results showed that alongside a direct relationship between the extra-dyadic stress and mental health, intra-dyadic stress played a mediating role and family functioning played a moderating role. Specifically, extra-dyadic-stress was positively associated with intra-dyadic stress, which in turn was negatively associated with mental health, indicating partial mediation. Furthermore, a significant interaction effect was found between extra-dyadic stress and both family cohesion and flexibility, indicating that these family functioning variables moderate the association between extra-dyadic-stress intra-dyadic stress. Participants with lower levels of family cohesion and flexibility demonstrated a greater effect of extra-dyadic stress on intra-dyadic stress, compared to participants with higher levels of family cohesion and flexibility. The overall moderated mediation model was supported, as intra-dyadic stress mediated the effect of extra-dyadic stress on mental health, and family cohesion and flexibility weakened the mediating effect of intra-dyadic stress. The results support the distinction between stressors that are external to and internal to the intimate dyad (see Bodenmann, 2000; 2005; Bodenmann et al., 2007; Neff & Karney, 2004) and suggest that extra-dyadic stress influences mental health both directly and indirectly through intra-dyadic stress (Bodenmann et al., 2016; Falconier et al., 2015; Neff & Karney, 2017). Family functioning can therefore be considered a protective factor that provides a buffer from the adverse effects of extra-dyadic stress on intra-dyadic stress.

The COVID-19 pandemic brought on a range of stressors, among them environmental stressors, such as increased workloads and financial difficulties (Pietromonaco & Overall, 2021), disrupted family routines and responsibilities (Goldberg et al., 2021), and increased burden of unpaid work and childcare (Craig & Churchill, 2020). These stressors were often expressed in additional daily hassles, with corresponding decreases in mental health (Goldberg et al., 2021; Gray et al., 2020; Reizer et al., 2020). The current findings contribute to our understanding of the mechanisms through which pandemic stressors disrupted mental health.

The relationship between extra-dyadic stress and mental health

The results support previous findings indicating that stress from daily hassles plays an important role in understanding the mental health of married individuals. Several researchers have shown that high levels of daily stress are associated with greater anxiety and depression and lower mental health (D’Angelo & Wierzbicki, 2003; Parrish et al., 2011; Schönfeld et al., 2019; Serido et al., 2004). Specifically regarding extra-dyadic stress from daily hassles, previous work shows a direct negative impact on individual mental health (Bodenmann, 1997). This claim has been supported in several studies with a range of outcome measures (Falconier et al., 2015; Serido et al., 2004; Ledermann et al., 2010).
The mediating role of intra-dyadic stress

The present study also examined the mediating role of intra-dyadic stress in the relationship between extra-dyadic stress and mental health. As expected, extra-dyadic-stress was positively associated with intra-dyadic stress, which in turn was negatively associated with mental health.

The first path, indicating that extra-dyadic stress was positively related to intra-dyadic stress, supports Bodenmann’s theory and previous studies showing that during periods of relatively high external stress, couples are more likely to report struggling with serious problems within the relationship, such as spending less time connecting with one another, lacking intimacy, feeling neglected by their partner, and increased differences in attitude (Neff & Karney, 2017). When couples face significant external stressors, as they did during the pandemic, critical time together often becomes limited and characterized by greater disconnection (Repetti et al., 2009). The second path of the mediation model indicated that intra-dyadic stress was negatively related to mental health. This was also consistent with previous studies, which found that intra-dyadic stress is related to depression (Falconier et al., 2015) and that marital tension and negative interactions are associated with symptoms of depression (Whisman & Uebelacker, 2009) and anxiety (Addis & Bernard, 2002; Chambless et al., 2001).

Overall, this study joins previous empirical work supporting the mediating role of intra-dyadic stress in the association between extra-dyadic stress from daily hassles and psychological well-being (Falconier et al., 2015). The novel question examined here was whether family cohesion and flexibility could affect mental health by altering the relationship between extra-dyadic and intra-dyadic stress.

The moderating role of family functioning

The results further revealed that family cohesion and flexibility moderate the path between extra-dyadic and intra-dyadic stress. As expected, among participants who reported higher cohesion and flexibility, the association between extra-dyadic and intra-dyadic stress was weaker.

These novel results support the assumption that when extra-dyadic stress does not go hand in hand with intra-dyadic stress, better outcomes can be expected. In the STM, Bodenmann et al. (2016) used the term dyadic coping in reference to the mechanisms that prevent extra-dyadic stress from increasing intra-dyadic stress, specifically noting provision of support and joint efforts to deal with common stressors. The current study raises the possibility that both family cohesion and family flexibility contribute significantly to such coping, thereby preventing extra-dyadic stress from daily hassles from spilling over into the relationship. This, in turn, can reduce negative effects on mental health.

Limitations

The findings and conclusions of this study should be considered in the context of several limitations. First, the sampling method employed, in which participants had access to and
were users of social media, and chose to complete an online survey, could have resulted in a selection bias. This might limit the generalizability of the results, although a large sample of participants with a broad sociodemographic range was included. Second, the study relied solely on self-report questionnaires, which are subjective by definition and affected by various biases. Third, the study was cross-sectional, making it impossible to determine causative relationships between the variables. Future studies are needed to evaluate whether the reported associations continued to be maintained longitudinally following the early stages of the pandemic, given that all the study variables could potentially be affected by increasing mortality rates, economic burdens, and other long-term effects of COVID-19.

In the context of generalizability, it should be noted that while the majority of previous work on ties between family functioning and mental health were conducted in Western societies, participants in the current study were from the Arab society in Israel. In general, this is a collectivistic culture (Haj-Yahia, 2019) that tends to differ essentially from Western societies with respect to values and norms related to all the variables addressed in this study. Though it is beyond the scope of the current work to assess the manner in which these values and norms might have affected the results, it is certainly possible that such effects would be found in a broader, cross-cultural comparison. Further work should address such cross-cultural differences, as well as differences resulting from other sociodemographic or geography-based variables, for example the extent of damage incurred and of aid offered during the COVID-19 pandemic.

Conclusions and implications

This study increases our understanding of variables related to stress processes and mental health among married individuals during the COVID-19 pandemic. In accordance with the STM (Bodenmann et al., 2016), intra-dyadic stress was shown to play a critical role in mediating the effects of extra-dyadic stress on mental health. Furthermore, family functioning was shown to moderate the relationship between extra-dyadic and intra-dyadic stress. These findings suggest that married individuals with cohesive and flexible family environments are protected from the negative effects of external stressors on their relationship, and in turn on their mental health.

The current work has implications for planning couple interventions during the pandemic and in general, with the dual goals of improving marital satisfaction and supporting the mental health of the partners. If stress from daily hassles is likely to decrease mental health directly and also indirectly by raising intra-dyadic stress, then couples’ therapists should routinely assess both the presence of major external stressors and their effects on relationship stress. Moreover, reducing daily hassles or coping with them effectively so that they do not spill into the couple’s relationship or deteriorate partners’ individual well-being may become a key goal of therapy and guide therapists towards intervention methods focused on enhancing communication and joint coping.

Furthermore, the findings suggest that intervention efforts should be focused on encouraging cohesive and flexible environments, as a means of reducing the effect of external stress on relationship stress. To promote cohesion, interventions should urge
families to increase interaction and communication between members and to resolve conflicts constructively. Flexibility, meanwhile, can be increased by creating viable mechanisms to adjust family rules and roles in response to environmental changes.

**Ethical approval**
The author confirms being the sole contributor of this study and has approved it for publication.

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**References**
Abu-Baker, K. (2003). Career women or working women? Change versus stability for young Palestinian women in Israel. *Journal of Israeli History, 21*(1–2), 85–109. https://doi.org/10.1080/13531040212331295872

Addis, J., & Bernard, M. E. (2002). Marital adjustment and irrational beliefs. *Journal of Rational Emotive & Cognitive Behavior Therapy, 20*(1), 3–13. https://doi.org/10.1023/A:1015199803099

Al-Krenawi, A., & Graham, J. R. (2005). Marital therapy for Arab muslim Palestinian couples in the context of reacculturation. *The Family Journal, 13*(3), 300–310. https://doi.org/10.1177/1066480704273640

Azaiza, F. (2008a). The perception and utilisation of social support in times of cultural change: The case of Arabs in Israel. *International Journal of Social Welfare, 17*(3), 198-203. https://doi.org/10.1111/j.1468-2397.2008.00542.x.

Azaiza, F. (2008b). Appropriateness of the helpline as a mode of service delivery in minority communities: The case of the Arab population in Israel. *Journal of Human Behavior in the Social Environment, 18*(4), 463-476. https://doi.org/10.1080/1091350802486908.

Barzilay, R., Moore, T. M., Greenberg, D. M., DiDomenico, G. E., Brown, L. A., White, L. K., Gur, R. C., & Gur, R. E. (2020). Resilience, COVID-19-related stress, anxiety and depression during the pandemic in a large population enriched for healthcare providers. *Translational Psychiatry, 10*(1), 291. https://doi.org/10.1038/s41398-020-00982-4

Berryhill, M. B., Harless, C., & Kean, P. (2018). College student cohesive-flexible family functioning and mental health: Examining gender differences and the mediation effects of positive family communication and self-compassion. *The Family Journal, 26*(4), 422–432. https://doi.org/10.1177/1066480718807411
Bodenmann, G. (1995). A systemic-transactional conceptualization of stress and coping in couples. *Swiss Journal of Psychology/Schweizerische Zeitschrift Für Psychologie/Revue Suisse de Psychologie, 54*(1), 34–49.

Bodenmann, G. (1997). Dyadic coping - a systemic-transactional view of stress and coping among couples: Theory and empirical findings. *European Review of Applied Psychology, 47*, 137–140.

Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. In T. Revenson, K. Kayser, & G. Bodenmann (Eds), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33–50). American Psychological Association.

Bodenmann, G., Ledermann, T., Blattner, D., & Galluzzo, C. (2006). Associations among everyday stress, critical life events, and sexual problems. *The Journal of Nervous and Mental Disease, 194*(7), 494–501. https://doi.org/10.1097/01.nmd.0000228504.15569.b6

Bodenmann, G., Ledermann, T., & Bradbury, T. (2007). Stress, sex, and satisfaction in marriage. *Personal Relationships, 14*(4), 551–569. https://doi.org/10.1080/135202007.00171.x

Bodenmann, G., Randall, A. K., & Falconier, M. K. (2016). Coping in couples: The systemic-transactional model. In M. K. Falconier, A. K. Randall, & G. Bodenmann (Eds), *Couples coping with stress: A cross-cultural perspective* (pp. 5–12). Routledge.

Chambless, D. L., Bryan, A. D., Aiken, L. S., Steketee, G., & Hooley, J. M. (2001). Predicting expressed emotion: A study with families of obsessive-compulsive and agoraphobic outpatients. *Journal of Family Psychology, 15*(2), 296–304. https://doi.org/10.1037.0893-3200.15.2.225

Chang, W. C., Neo, A. H. C., & Fung, D. (2015). In search of family resilience. *Psychology, 06*(13), 1594–1607. https://doi.org/10.4236/psych.2015.613157

Craig, L., & Churchill, B. (2020). Dual-earner parent couples’ work and care during COVID-19. *Gender, Work & Organization, 28*(S1), 66–79. https://doi.org/10.1111/gwao.12497

D’Angelo, B., & Wierzbicki, M. (2003). Relations of daily hassles with both anxious and depressed mood in students. *Psychological Reports, 92*(2), 416–418. https://doi.org/10.2466/pr0.2003.92.2.416

Falconier, M. K., Nussbeck, F., Bodenmann, G., Schneider, H., & Bradbury, T. (2015). Stress from daily hassles in couples: Its effects on intradyadic stress, relationship satisfaction, and physical and psychological well-being. *Journal of Marital and Family Therapy, 41*(2), 221–235. https://doi.org/10.1111/jmft.12073

Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21*(3), 219–239. https://doi.org/10.2307/2136617

Forte, G., Faviere, F., Tambelli, R., & Casagrande, M. (2020). COVID-19 pandemic in the Italian population: Validation of a post-traumatic stress disorder questionnaire and prevalence of PTSD symptomatology. *International Journal of Environmental Research and Public Health, 17*(11), 4151. https://doi.org/10.3390/ijerph17114151

García-Huidobro, D., Puschel, K., & Soto, G. (2012). Family functioning style and health: Opportunities for health prevention in primary care. *British Journal of General Practice, 62*(596), 198–203. https://doi.org/10.3399/bjgp12X630098

Goldberg, A. E., McCormick, N., & Virginia, H. (2021). Parenting in a pandemic: Work–family arrangements, well-being, and intimate relationships among adoptive parents. *Family Relations, 70*(1), 7–25. https://doi.org/10.1111/fare.12528
Gray, N. S., O’ConnorKnowles, C.J., Pink, J., Simkiss, N. J., Williams, S. D., & Snowden, R. J. (2020). The influence of the COVID-19 pandemic on mental well-being and psychological distress: Impact upon a single country. *Frontiers in Psychiatry, 11*, 594115. https://doi.org/10.3389/fpsyt.2020.594115

Haj-Yahia, M. M. (2019). The Palestinian family in Israel. In M. M. Haj-Yahia, O. Nakash, & I. Levav (Eds), *Mental health and Palestinian citizens in Israel* (pp. 97–120). Indiana University Press.

Harris, C. A., & Zakowski, S. G. (2003). Comparisons of distress in adolescents of cancer patients and controls. *Psycho-oncology, 12*(2), 173–182. https://doi.org/10.1002/pon.631

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

Hennon, C. B., Peterson, G., Hildenbrand, B., & Wilson, S. (2008). Parental stress amongst migrant and immigrant populations. *Pesquisas e Práticas Psicosociais, 2*(2), 242–257.

Hu, N., Li, Y., He, S. S., Wang, L. L., Wei, Y. Y., Yin, L., & Chen, J. X. (2020). Impact of the family environment on the emotional state of medical staff during the COVID-19 outbreak: The mediating effect of self-efficacy. *Frontiers in Psychology, 11*, 576515. https://doi.org/10.3389/fpsyg.2020.576515

Israel Central Bureau of Statistics (2019). *Social survey*. www.cbs.gov.il/en/subjects/Pages/Social-Survey.aspx

Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine, 4*(1), 1–39. https://doi.org/10.1007/BF00844845

Kimhi, S., Marciano, H., Eshel, Y., & Adini, B. (2020). Recovery from the COVID-19 pandemic: Distress and resilience. *International Journal of Disaster Risk Reduction, 50*, 101843. https://doi.org/10.1016/j.ijdrr.2020.101843

Koutra, K., Simos, P., Triliva, S., Lionis, C., & Vgontzas, A. N. (2016). Linking family cohesion and flexibility with expressed emotion, family burden and psychological distress in caregivers of patients with psychosis: A path analytic model. *Psychiatry Research, 240*, 66–75. https://doi.org/10.1016/j.psychres.2016.04.017

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Ledermann, T., Bodenmann, G., Rudaz, M., & Bradbury, T. N. (2010). Stress, communication, and marital quality. *Family Relations, 59*(2), 195–206. https://doi.org/10.1111/j.1741-3729.2010.00595.x

Mohindra, R., Suri, V., Bhalla, A., & Singh, S. M. (2020). Issues relevant to mental health promotion in frontline health care providers managing quarantined/isolated COVID-19 patients. *Asian Journal of Psychiatry, 51*, 102084. https://doi.org/10.1016/j.ajp.2020.102084

Neff, L. A., & Karney, B. R. (2004). How does context affect intimate relationships? Linking external stress and cognitive processes within marriage. *Personality & Social Psychology Bulletin, 30*(2), 134–148. https://doi.org/10.1177/0146167203255984

Neff, L. A., & Karney, B. R. (2017). Acknowledging the elephant in the room: How stressful environmental contexts shape relationship dynamics. *Current Opinion in Psychology, 13*, 107–110. http://doi.org/10.1016/j.copsyc.2016.05.013
Neo, A. H. C., Chang, W. C., & Fung, D. S. S. (2016). An actor-partner interdependence model on family resilience and subjective wellbeing. *Psychology, 07*(06), 889–900. https://doi.org/10.4236/psych.2016.76091

Olson, D. H. (1991). Commentary: Three-Dimensional (3-D) circumplex model and revised scoring of FACES III. *Family Process, 30*(1), 74–79. https://doi.org/10.1111/j.1545-5300.1991.00074.x

Olson, D. H. (1993). *Circumplex model of marital and family systems: Assessing family functioning in normative family processes.* Guilford Press.

Olson, D. H. (2000). Circumplex model of marital and family systems. *Journal of Family Therapy, 22*(2), 144–167. https://doi.org/10.1111/1467-6427.00144

Olson, D. H., & Gorall, D. M. (2006). *Faces IV and the circumplex model.* Life Innovations, Inc.

Olson, D. H., Portner, J., & Lavee, Y. (1985). *Faces III*: Family adaptability & cohesion evaluation scales. *Family social science.* University of Minnesota.

Olson, D. H., Sprenkle, D. H., & Russell, C. S. (1979). Circumplex model of marital and family systems: I. Cohesion and adaptability dimensions, family types, and clinical applications. *Family Process, 18*(1), 3–28. https://doi.org/10.1111/j.1545-5300.1979.00003.x

Parrish, B. P., Cohen, L. H., & Lajrienceaiaj, J. P. (2011). Prospective relationship between negative affective reactivity to daily stress and depressive symptoms. *Journal of Social and Clinical Psychology, 30*(3), 270–296. https://doi.org/10.1521/jscp.2011.30.3.270

Perrin, P. B., Stevens, L. F., Sutter, M., Hubbard, R., Díaz Sosa, D. M., Espinosa Jove, I. G., & Arango-Lasprilla, J. C. (2013). Exploring the connections between traumatic brain injury caregiver mental health and family dynamics in Mexico City, Mexico. *PM&R, 5*(10), 839–849. https://doi.org/10.1016/j.pmrj.2013.05.018

Peterson, G. (2017). Conceptualizing parental stress with family stress theory. In C. A. Price, K. R. Bush, & S. J. Price (Eds), *Families and change: Coping with stressful events and transitions* (pp. 53–78). Sage Publications.

Pietromonaco, P. R., & Overall, N. C. (2021). Applying relationship science to evaluate how the COVID-19 pandemic may impact couples’ relationships. *American Psychologist, 76*(3), 438–450. http://dx.doi.org/10.1037/amp0000714

Polizzi, C., Lynn, S. J., & Perry, A. (2020). Stress and coping in the time of COVID-19: Pathways to resilience and recovery. *Clinical Neuropsychiatry, 17*(2), 59–62. https://doi.org/10.36131/CN20200204

Pollock, E. D., Kazman, J. B., & Deuster, P. (2015). Family functioning and stress in african American families: A strength-based approach. *Journal of Black Psychology, 41*(2), 144–169. https://doi.org/10.1177/0095798413520451

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*(4), 717–731. https://doi.org/10.3758/BF03206553

Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist, 75*(5), 631–643. https://doi.org/10.1037/amp0000660

Randall, A. K., & Bodenmann, G. (2009). The role of stress on close relationships and marital satisfaction. *Clinical Psychological Review, 29*(2), 105–115. https://doi.org/10.1016/j.cpr.2008.10.004
Reizer, A., Koslowsky, M., & Geffen, L. (2020). Living in fear: The relationship between fear of COVID-19, distress, health, and marital satisfaction among Israeli women. *Health Care for Women International, 41*(11–12), 1273–1293. https://doi.org/10.1080/07399332.2020.1829626

Repetti, R., Wang, S., & Saxbe, D. (2009). Bringing it all back home: How outside stressors shape families’ everyday lives. *Current Directions in Psychological Science, 18*(2), 106–111. https://doi.org/10.1111/j.1467-8721.2009.01618.x

Salin, M., Kaittila, A., Hakovirta, M., & Anttila, M. (2020). Family coping strategies during Finland’s COVID-19 lockdown. *Sustainability, 12*(21), 1–13. https://doi.org/10.3390/su12219133

Sander, A. M., Caroselli, J. S., High, W. M., Becker, C., Neese, L., & Scheibel, R. (2002). Relationship of family functioning to progress in a post-acute rehabilitation programme following traumatic brain injury. *Brain Injury, 16*(8), 649–657. https://doi.org/10.1080/02699050210128889

Schöpfeld, P., Brailovskaia, J., Zhang, X. C., & Margraf, J. (2019). Self-efficacy as a mechanism linking daily stress to mental health in students: A three-wave cross-lagged study. *Psychological Reports, 122*(6), 2074–2095. https://doi.org/10.1177/0033294118787496

Serido, J., Almeida, D. M., & Wethington, E. (2004). Chronic stressors and daily hassles: Unique and interactive relationships with psychological distress. *Journal of Health and Social Behavior, 45*(1), 17–33. https://doi.org/10.1177/002214650404500102

Sheidow, A. J., Henry, D. B., Tolan, P. H., & Strachan, M. K. (2014). The role of stress exposure and family functioning in internalizing outcomes of urban families. *Journal of Child and Family Studies, 23*(8), 1351–1365. https://doi.org/10.1007/s10826-013-9793-3

Stevens, L. F., Perrin, P. B., Hubbard, R., Diaz Sosa, D. M., Espinosa Jove, I. G., & Arango-Lasprilla, J. C. (2013). Using multiple views of family dynamics to predict the mental health of individuals with TBI and their caregivers in Mexico. *Neurorehabilitation, 33*(2), 273–283. https://doi.org/10.3233/NRE-130955

Story, L. B., & Repetti, R. (2006). Daily occupational stressors and marital behavior. *Journal of Family Psychology, 20*(4), 690–700. https://doi.org/10.1037/0893-3200.20.4.690

Veit, C. T., & Ware, J. E. (1983). The structure of psychological distress and well-being in general populations. *Journal of Consulting and Clinical Psychology, 51*(5), 730–742. https://doi.org/10.1037/0022-006X.51.5.730

Wang, Y., Haslam, M., Yu, M., Ding, J., Lu, Q., & Pan, F. (2015). Family functioning, marital quality and social support in Chinese patients with epilepsy. *Health and Quality of Life Outcomes, 13*(1), 10. https://doi.org/10.1186/s12955-015-0208-6

Whisman, M. A., & Uebelacker, L. A. (2009). Prospective associations between marital discord and depressive symptoms in middle-aged and older adults. *Psychology and Aging, 24*(1), 184–189. https://doi.org/10.1037/a0014759

Ye, B., Hu, J., Im, H., Liu, M., Wang, X., & Yang, Q. (2022). Family cohesion and sleep disturbances during COVID-19: The mediating roles of security and stress. *International Journal of Mental Health and Addiction. Advance online publication* https://doi.org/10.1007/s11469-022-00753-w