PARENTING STRESS AND COUPLE RELATIONSHIP QUALITY AMONG TRANSGENDER AND GENDER NONBINARY (TGNB) PARENTS: THE MEDIATING ROLE OF DIVISION OF CHILDCARE LABOR DISCREPANCY AND MODERATING ROLE OF GENDER IDENTITY

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ABSTRACT

Transgender and gender nonbinary (TGNB) people refer to people whose gender identity does not conform to the cultural and social expectations of the sex they were assigned at birth. Despite a substantial population of TGNB parents, research on how they navigate their experiences as parents, family dynamics, and couple functioning remains limited. This study investigated the association between parenting stress and couple relationship quality, and tested the mediating role of perceived division of childcare labor discrepancy (i.e., satisfaction with the current allocation of childrearing tasks) and the moderating role of gender identity (i.e., gender binary versus gender nonbinary) in such association in a sample of 228 TGNB parents. Results of structural equation modeling identified a conditional indirect pathway: Higher levels of parenting stress were negatively associated with lower couple relationship quality through greater division of childcare labor discrepancy only among nonbinary parents rather than binary parents. The findings of the current study shed initial light on the understudied intricacies of TGNB parents’ intersectional experiences of gender identity and intimate relationships, as well as parenthood. The practical significance of this study lies in its potential to raise practitioners’ and policymakers’ awareness of and sensitivity toward the nuanced experiences of TGNB parents. Additionally, such findings will inform targeted prevention/intervention programs that ultimately enhance couple relationship well-being through the development of a more desirable division of childcare labor.
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Introduction

Transgender and gender nonbinary (TGNB) people are broadly defined as individuals whose gender identity does not conform to the cultural and social expectations of the sex they were assigned at birth (American Psychological Association, 2015). With clinical de-pathologization and sociocultural shifts, TGNB individuals experience greater societal visibility than in previous decades (Tebbe & Budge, 2022). Still, TGNB people experience gender-related discrimination and stigma (Hendricks & Testa, 2012), which has been associated with disproportionately high risks of health disparities, including higher rates of anxiety (Brown & Jones, 2016), depression (Budge et al., 2013), suicidality (Blosnich et al., 2013), and substance use disorders (Connolly & Gilchrist, 2020). Approximately 0.5% to 2% of adults self-identify as transgender in the U.S. (Flores et al., 2016; Herman et al., 2022). According to the online EU-LGBTI II Survey conducted across 28 European countries (European Union Agency for Fundamental Rights, 2021), an average of 19% of TGNB individuals are actively involved in raising a child with a romantic partner. Despite the considerable population of TGNB households with children, limited scholarly work has explored their experiences as parents, their family dynamics, and couple functioning.

The existing body of empirical work has demonstrated that couple relationship quality tends to decline over the transition to parenthood, regardless of couples’ gender composition (Belsky et al., 1983; Belsky & Rovine, 1990; Goldberg & Sayer, 2006; Goldberg et al., 2010; Twenge et al., 2003). Among the potential precursors to detrimental changes in relationships, parenting stress is considered to be one of the most
salient after couples become parents (Bradbury et al., 2000; Lavee et al., 1996).

According to Abidin (1990), parents tend to experience parenting stress when confronted with a gap between the daily demands of parenting and the available resources that parents have to effectively address those demands. As couples are often a team dealing with childrearing tasks together, a sense of imbalance in duties or responsibilities is likely to spill over into the couple relationship dynamics (Durtschi et al., 2017; Lavee et al., 1996). A notable body of research has revealed an overall negative linkage between parenting stress and couple’s relationship well-being among both heterosexual (Berryhill et al., 2016; Camisasca et al., 2014; Dong et al., 2022; Durtschi et al., 2017) and sexual minority couples (Horne et al., 2021). However, empirical work on the association between parenting stress and relationship quality is still limited in several ways.

First, extant studies have predominantly centered on the generic and direct links between parenting stress and relational well-being, with only a few seeking to identify the underlying mechanisms. For example, two studies based on samples of Chinese parenting couples both found that higher parenting stress contributed to lower marital quality through giving rise to an intrapersonal vulnerability, namely, parental depression (Ding et al., 2022; Dong et al., 2022). However, as related couple stress models (Bodenmann et al., 2007; Karney & Bradbury, 1995) concur that stressors originating outside the couple will proliferate to the within-couple stressors, which in turn affect the couple relationship outcomes, it is plausible that coparenting processes (e.g., division of labor) may serve as a critical intermediary mechanism in the relationship between parenting stress and relational well-being. As such, the perceived discrepancy between the actual and ideal
division of childcare labor (Tornello et al., 2015a; Tornello et al., 2015b), which reflects how satisfied a partner is with the current allocation of childrearing tasks, could be an intermediate factor accounting for the direct association. Furthermore, existing research supports the idea that parental roles and coparenting dynamics are conventionally gendered (Morawska, 2020). Mothers are more likely to be the primary caregivers and handle approximately twice the childcare responsibilities as fathers due to social expectations of gender display (Bianchi et al. 2000; Coltrane, 2000). Extending to families headed by gender-diverse parents, as a growing body of research on TGNB populations illustrated that individuals in various gender groups hold different awareness of gender ideology (Catalpa et al., 2019; Riskind & Tornello, 2022), we might also expect that gender plays a role in the mechanisms that determine how gender binary parents and gender nonbinary parents respond to parenting stress. Collectively, a more adequate understanding of the link between parenting stress and couple relationship well-being may hinge on examinations of the processes through which and the groups in which parenting stress may negatively influence couple relationship quality. That is, researchers should examine key mediators and moderators implicated in this association.

Second, the associations and mechanisms between parenting stress and relationship quality have generally been tested among cisgender heterosexual couples, and such findings may not be readily generalized to parents who identify as transgender or gender nonbinary. As for the coparenting processes, TGNB parents have been found to divide their childcare labor in a more egalitarian fashion than their cisgender counterparts (Tornello, 2020). More importantly, variability was observed even within TGNB parent
groups regarding adaptation to gender transition and family functioning (Veldorale-Griffin & Darling, 2016). To this end, scholars have been calling for efforts to revisit the association between stress and relationship quality during parenthood, as well as the underlying mechanisms among TGNB parents (Hafford-Letchfield et al., 2019).

Taken together, this study sought to investigate the association between parenting stress and couple relationship quality among TGNB parents, and to test the mediating role of perceived division of childcare labor discrepancy and the moderating role of gender identity (i.e., gender binary versus gender nonbinary) in such association.

**Theoretical Framework**

The theoretical foundation for this study was based on an integration of the family systems theory (Minuchin, 1985), the vulnerability-stress-adaptation (VSA) model (Karney & Bradbury, 1995), and the conceptual model of decentering heteronormativity (Oswald et al., 2005). First, family systems theory, the spillover hypothesis in particular, posits that stress originating from the parent-child domain may interfere with the interactions in other family subsystems, such as coparenting or couple dynamics (Cox & Paley, 1997; Minuchin, 1985). Accordingly, the features captured by parenting stress, such as the strain of childrearing demands and dissatisfaction with parent-child interactions (Abidin, 1990), may spill over to parents’ perceived fairness of the division of childrearing tasks, and ultimately, overall relationship satisfaction.

With the VSA model (Karney & Bradbury, 1995) as a lens, stressful events that close partners encounter are conceptualized as shaping their behavioral exchanges with each other, which in turn contribute to their perceptions of relationship quality. Thus, the
VSA model suggests an essential indirect pathway for relationship distress: external stress arising from outside the couple dyad may trigger tensions within the couple dyad, decreasing interaction quality and ultimately leading to overall negative relationship outcomes (Randall et al., 2023; Randall & Bodenmann, 2009). As such, it seems warranted to expect that exposure to parenting stress, as an extra-dyad stressor, may negatively influence TGNB parents’ couple relationship quality through giving rise to destructive within-dyad dynamics (e.g., division of childcare labor discrepancy).

Last, Oswald et al. (2005) proposed a model for family scholarship to disentangle the socially constructed facets of gender, sexuality, and family binaries that contribute to heteronormativity. To challenge deep-rooted gender conventionality, researchers were encouraged to move beyond assumptions of gender essentialism and focus on more complex gender experiences (Oswald et al., 2005). Consistent with the idea of “complex gendering” (Oswald et al., 2005), we specifically investigated the functioning of multiple family subsystems among transgender and gender nonbinary parents, and also captured the varied susceptibility to parenting stress between gender binary and gender nonbinary groups within TGNB parents. With the acknowledgment that the categorization of the gender binary and gender nonbinary may overgeneralize the diverse spectrum within the TGNB group, our examinations still serve as the initial exploratory step to better understand the nuanced intersection of gender and parenthood.

**Parenting Stress and Couple Relationship Quality**

Raising children can often be emotionally and cognitively demanding for parents (Dix, 1991). As discussed above, when there is an imbalance between the demands of
parenting and the resources available to parents, parents tend to encounter distress within the parent-child domain, that is, parenting stress (Abidin, 1990; Cooper et al., 2009). According to Abidin (1990), parenting stress is a multidimensional situational demand consisting of the sense of restriction and deprivation associated with parenthood, parents’ perceptions of children’s temperament or demanding behaviors, and parents’ perceived quality of interactions with their children. Previous evidence showed that parenting stress consistently served as a critical factor accounting for negative couple relationship interactions (Berryhill et al., 2016; Camisasca et al., 2014; Chester & Blandon, 2016; Durtschi et al., 2017; Hartley et al., 2018; Lavee et al., 1996). This body of work is buttressed by the spillover hypothesis, which posits that tension, negative affect, and destructive interactions emanating from the parent-child subsystem will be transferred to the couple relationship subsystem (Cox & Paley, 1997; Cox et al., 2001). For example, using three-year longitudinal dyadic data drawn from 848 ethnically diverse couples in their transition to parenthood, Durtschi et al. (2017) observed an actor effect that fathers’ early parenting stress predicted lower later fathers’ relationship quality. Based on the existing evidence, we expected that a higher level of parenting stress would be associated with a lower level of couple relationship quality among TGNB parents (Hypothesis 1).

**Division of Childcare Labor Discrepancy as a Potential Mediator**

As to possible explanatory mechanisms of the association between parenting stress and couple relationship quality, division of childcare labor discrepancy may serve as the mediating role. Division of childcare labor discrepancy reflected the difference between currently shared participation in childcare tasks and desired shared participation.
(Cowan & Cowan, 1988), which is considered to be a key aspect of coparenting dynamics (Feinberg, 2003). Both the ecological model of coparenting (Feinberg, 2003) and empirical work have documented that coparenting features are closely tied to the adjustment of many other family subsystems (McDaniel et al., 2018). Specifically, for parenting stress and coparenting, a cross-lagged designed study has shown that parenting stress consistently predicted lower coparenting quality, with the reverse association not consistently observed across three, six, and twelve months after mothers gave birth (Kang et al., 2022). In a study involving a sample of 1,100 heterosexual parents from the Netherlands, researchers found that as women’s contributions to parenting tasks increased, their level of dissatisfaction with the current division of childcare labor also increased (Koster et al. 2022). In terms of the association between coparenting and couple relationship well-being, researchers identified a reciprocal link (Le et al., 2016; Schoppe-Sullivan et al., 2004). However, Schoppe-Sullivan et al. (2004) found that early supportive or undermining coparenting behaviors were more indicative of later marital interactions than vice versa. Among a sample of 163 TGNB parents, greater discrepancies between the current and ideal division of unpaid childcare labor, not the current division of childcare labor, were predictive of worse relationship quality (Tornello, 2020). Hence, it is conceivable that parenting stress may contribute to the emergence of disruptive coparenting interactions, which in turn may negatively impact couple relationship quality. Thus, we expected that greater parenting stress would be indirectly associated with lower levels of couple relationship quality via discrepancies in how a couple divides their childcare unpaid labor (Hypothesis 2).
Gender Identity as a Potential Moderator

The adverse implications of parenting stress on the division of childcare labor discrepancy might vary from gender binary parents to gender nonbinary parents. Specifically, *gender binary parents* referred to transgender parents whose current gender identity differed from their assigned sex at birth and identified primarily as woman or man, while *gender nonbinary parents* referred to those parents whose current gender identity did not align with their assigned sex at birth and who identified outside or between woman-man binary framework, including agender, genderqueer, gender non-conforming, gender fluid, etc. The gender identity of nonbinary people may be neither feminine nor masculine, both feminine and masculine, or either feminine or masculine at separate times (Lefevor et al., 2019; Matsuno & Budge, 2017).

Emerging research highlights the nuances of gender ideology and practices between transgender binary and gender nonbinary people (Bradford & Catalpa, 2019; Catalpa et al., 2019; McDermott et al., 2021; Riskind & Tornello, 2022). According to the measurement development studies of gender ideology among TGNB people (Catalpa et al., 2019; McDermott et al., 2021), nonbinary individuals are inclined to hold less patriarchal beliefs about men and women, less endorsement for femininity norms, and more fluidity in gender expression than binary people. Extending the differentiated gender ideology to our study, nonbinary parents may be less likely to have a preexisting pattern of domestic labor expectations based on gender roles (Riskind & Tornello, 2022), and may be more sensitive to a fair tenet in the division of labor than binary parents (Tornello et al., 2020). When confronted with heightened challenges in parenting tasks,
nonbinary parents may encounter greater difficulty in coordinating a division of labor that aligns with their satisfaction compared to binary parents. Therefore, for the indirect link between parenting stress and couple relationship quality through division of childcare discrepancies, we expected that the relationship between parenting stress and division of childcare labor discrepancies would be stronger among nonbinary parents than that among binary parents (Hypothesis 3).

The Current Study

This study used cross-sectional, self-report survey data from 228 transgender and gender nonbinary parents who were in romantic relationships. We sought to examine the association between extra-dyadic stressful experiences, parenting stress, and couple relationship quality. In particular, we tested an intra-dyadic maladaptive process of division of childcare labor discrepancy (i.e., perceptions of how closely the current allocation of childrearing tasks aligns with their ideal) as a potential mediator that may account for this link. We also investigated if the association between parenting stress and division of childcare labor discrepancy might be moderated by parents’ gender identity. Ultimately, we expect to identify a conditional indirect pathway, such that TGNB parents’ experiences of parenting stress would be negatively associated with their relationship quality through a positive association with their perceived division of childcare labor discrepancy, and the indirect effect observed among gender nonbinary parents would be larger than that among gender binary parents (see Figure 1 for a conceptual illustration). In sum, we had three hypotheses in our study:
Hypothesis 1: Greater parenting stress is associated with lower levels of couple relationship quality among TGNB parents.

Hypothesis 2: Greater parenting stress is indirectly associated with lower levels of couple relationship quality via division of childcare labor discrepancy.

Hypothesis 3: Gender identity moderates the association between parenting stress and division of childcare labor discrepancy, such that the link is stronger among gender nonbinary groups than gender binary groups.

Methods

Participants and Procedures

Participants were recruited for a large longitudinal study of transgender and nonbinary (TGNB) parents through advertisements on social media and websites specifically targeting TGNB parents and their families. Recruitment took place from June 2016 to April 2017. Participants were eligible for the original study if their gender identity did not coincide with the cultural expectations of the person’s assigned sex at birth (American Psychological Association, 2015), were 18 years of age or older, and had at least one child. Potential participants contacted the PI through e-mail or a survey request form. If eligible to participate, the participant received a consent form through a personalized survey link with a corresponding password. There were 497 transgender and gender nonbinary parents who completed the survey. No incentives were used to recruit participants. The study was approved by the Human Subjects Ethics Review Board at the Pennsylvania State University.
For the designated aims of the current study, participants were excluded if they were not in a romantic relationship \( (n = 73) \), did not indicate a relationship status \( (n = 7) \), or their oldest child was older than 12 years of age \( (n = 152) \). Parents whose oldest child was over the age of 12 were removed because the Parenting Stress Index-Short Form \( (\text{Abidin, 1990}) \) was designed to measure the stress related to being a parent of a child aged 12 or younger. To preserve the independence of participants within a couple, only one person per couple was retained if both partners completed the survey \( (n = 37) \). Defined chronologically, if both members of the couple participated, the second individual was excluded from the current study. The final sample consisted of 228 TGNB parents with children from birth to 12 years of age.

All demographic information for the final sample appears in Table 1. Participants were on average 35.30 years of age \( (SD = 6.67) \) and predominantly self-identified as White/Caucasian American \( (89.91\%) \). Almost half \( (n = 113, 49.56\%) \) had only one child. The mean age of the participants’ eldest child in the household was 5.32 years old \( (SD = 3.68) \). Gender identity in the current sample was diverse. Many participants identified their gender as transgender women \( (20.18\%) \) and transgender men \( (21.05\%) \), with other gender identities extending beyond a binary framework, such as genderqueer \( (13.60\%) \), gender nonbinary \( (11.40\%) \), gender non-confirming \( (5.26\%) \), gender fluid \( (3.51\%) \), etc. The majority of participants identified as a member of a sexual minority group \( (92.54\%) \). Over half of the participants \( (66.67\%) \) were married legally. Participants, including those who were not employed at the time of data collection, worked an average of 29.59 \( (SD = 18.41) \) hours per week.
Measures

Parenting Stress

The Parenting Stress Index-Short Form (PSI-SF; Abidin, 1990) was used to measure the level and source of stress related to the responsibilities of being a parent. The PSI-SF consists of 36 items along with measuring three factors, including parental distress (PD), parent-child dysfunctional interaction (PCDI), and difficult child (DC), and each factor is indicated by 12 items. The PD subscale centers on parents’ sense of incompetence in childrearing (i.e., I often have the feeling that I cannot handle things well) and stress arising from parental role constraints (i.e., I don’t enjoy things as I used to). The PCDI subscale quantifies the emotional quality of parents’ interactions with their children (i.e., Most times I feel that my child does not like me and does not want to be close to me) The DC subscale assesses the parents’ perception of children’s difficult temperament or non-collaborative behaviors (i.e., My child’s sleeping or eating schedule was much harder to establish than I expected). Thirty-three out of the thirty-six items asked participants to rate on a five-point Likert scale from 1 = strongly agree to 5 = strongly disagree. Three items were on a five-point Likert scale but used different anchors such as 1 = Much harder than I expected to 5 = Much easier than I expected, to respond to the statement such as: “I have found that getting my child to do something or stop doing something is:” Parenting stress was represented by the sum score of all 36 items. Higher scores reflected greater parenting stress. Cronbach’s α for the overall scale was 0.91.
Gender Identity

Participants were asked, “What is your current gender identity?” The following response options were provided: woman, man, transgender woman, transgender man, genderqueer, gender non-conforming, gender fluid, non-binary, agender, bigender, choose not to label, and self-describe (please explain). For those participants who identified their gender within the experiences of binary genders (i.e., woman, man, transgender woman, transgender man), their responses were collapsed to represent the gender binary group (n = 122, 53.51%). Participants whose gender identities did not fall into binary gender terms (i.e., genderqueer, gender non-conforming, gender fluid, non-binary) were categorized into the gender nonbinary group (n = 106, 46.49%).

Division of Childcare Labor Discrepancy

The childcare subscale of Who Does What? (Cowan & Cowan, 1990) was used to assess the actual and ideal division of labor in a household. Each item was scored on a nine-point Likert scale in which 1 = partner does it all, 9 = I do it all, and 5 = we both do this equally. Participants were asked to rate two kinds of perceptions: how their current unpaid childcare division of labor (i.e., actual) is, and how they would like the unpaid childcare labor to be divided (i.e., ideal) for their first child. Based on the child’s age, which ranged from zero to twelve years old, five different age-adapted versions of childcare labor scales were utilized. Example items included “Responding to the baby’s crying in the middle of the night” (0 to 11 months), “Arranging for baby sitters or child care” (12 to 36 months), “Setting limits for our child” (37 to 54 months), “Getting our child to and from school” (55 to 96 months), and “Teaching our child, including
"homework help" (97 to 144 months). The number of items varied from 12 to 20 based on the age of the child. Cronbach’s α for different versions of actual and ideal childcare division of labor ranged from .78 to .96.

The actual and ideal childcare division of labor was represented by the mean score of all corresponding items. Division of childcare labor discrepancy was measured by the absolute difference score between the actual and ideal division of childcare labor. A score of zero indicated perfect satisfaction with the current division of childcare labor, while higher scores reflected a greater discrepancy between the actual and ideal division of labor.

**Couple Relationship Quality**

Participants’ relationship quality with their current romantic partner was measured by the 32-item Dyadic Adjustment Scale (DAS; Spanier, 1976). The DAS scale is comprised of four interrelated factors: dyadic consensus (i.e., *Career decisions*), dyadic satisfaction (i.e., *Do you confide in your mate?*), dyadic cohesion (i.e., *Calmly discuss something*), and affectional expression (i.e., *Not showing love*). Item response options varied, with some items having six-point Likert scales on agreement or frequency (0 = *always disagree* and 5 = *always agree*; 0 = *never* and 5 = *all the time*), or a two-point scale in which 0 = *yes* and 1 = *no*. Subscale scores were generated by summing all corresponding item scores, with a higher score reflecting greater relational performance on that indicator. Cronbach’s αs were .84, .85, .75, and .70 for consensus, satisfaction, cohesion, and affectional expression, respectively. The construct of relationship quality was measured as a latent variable which was indicated by the total score of each subscale.
**Covariates**

Participants were asked to respond to a series of demographic questions about themselves, their partners, and their children. According to previous empirical studies (Tornello et al., 2015a, 2015b), the number of children, eldest child age, and paid working hours per week were included in the proposed model as covariates.

**Analytic Strategies**

The item-level missing amount for the study variables was from 0.00% to 28.51%. The results of Little’s test (1988) indicated a mechanism of missing completely at random (MCAR, $\chi^2 = 155.874, df = 140, p = .17$) among used variables. The full information maximum likelihood (FIML) estimation was used to handle missing data (Acock, 2005). Our hypotheses were tested by structural equation modeling in Mplus 8.3 (Muthén & Muthén, 1998-2019). Relationship quality was specified as a latent variable with the first factor loading being fixed to one, and the remaining study variables were observed.

As depicted in Figure 2, parenting stress and gender identity were included in the model to predict both the division of childcare labor discrepancy and couple relationship quality, with the division of childcare labor discrepancy tested as a potential mediator in the association between parenting stress and couple relationship quality. In addition, a product term between parenting stress and gender identity was included to test the moderating role of gender identity in the links between parenting stress and division of childcare labor discrepancy. The product term of multiplying mean-centered values of parenting stress and the original values of gender identity ($0 = nonbinary, 1 = binary$) was
created. To probe the identified interactive effect, simple slopes for nonbinary parents and binary parents were estimated. Last, the conditional indirect effect was estimated nonparametrically through bootstrapping with 5,000 re-samples, as no assumptions need to be made about the sampling distribution for indirect effects, which in turn, controls the type I error at the correct nominal rate (Preacher et al., 2007). The conditional mediating effect would be considered statistically significant if the 95% confidence interval for the unstandardized indirect effect did not include zero. The magnitude of the effect size of the indirect effect was determined by Kenny’s (2012) criteria: Standardized indirect effects around .01 were interpreted as “small,” effects around .09 as “medium,” and effects around .25 as “large.” Both relationship quality and division of childcare labor discrepancy were regressed on covariates (i.e., number of children, eldest child age, and paid working hours per week) in our model.

**Results**

Table 2 presents means, standard deviations, and zero-order bivariate correlations among study variables. The structural equation model was used to examine the mediating role of division of childcare discrepancy in the link between parenting stress and relationship quality, and the moderating role of gender identity in the association between parenting stress and division of childcare discrepancy among TGNB parents. Standardized coefficients for the structural equation model are displayed in Figure 2. The overall fit indices indicated that our hypothesized model fit the data well (Kline, 2016): $\chi^2(24) = 30.071, p = .182$, RMSEA [90% CI] = .033 [.000, .067], CFI = .971, TLI = .951, SRMR = .036.
In terms of direct effect, greater parenting stress was associated with lower levels of couple relationship quality ($b = -0.062$, $S.E. = .022$, $p = .005$, $\beta = -0.222$), so Hypothesis 1 was supported. For indirect effect, bootstrapping analyses showed that higher levels of parenting stress were associated with poorer relationship quality indirectly via giving rise to division of childcare labor discrepancy ($b = -0.26$, $S.E. = .017$, 95% CI $[-0.074, -0.002]$, $\beta = -0.095$), which aligned with Hypothesis 2. The effect size of the indirect effect was about medium according to Kenny’s criteria (2012). The estimate of the post hoc power for the indirect effect is .994 (Kenny, 2017), indicating adequacy in power.

Further, the interaction between parenting stress and gender identity significantly predicted the division of childcare labor discrepancy ($b = -0.011$, $S.E. = .005$, $p = .040$, $\beta = -0.256$). Simple slope analyses (see Figure 3) indicated that parenting stress was positively linked to the division of childcare labor discrepancy among nonbinary parents ($b = .011$, $S.E. = .005$, $p = .022$), but was not associated with the division of childcare labor discrepancy among binary parents ($b = .000$, $S.E. = .003$, $p = .935$). Thus, Hypothesis 3 was supported.

For nonbinary parents, parenting stress was negatively related to couple relationship quality via a positive association with the division of childcare labor discrepancy ($b = -0.026$, $S.E. = .017$, 95% CI $[-0.074, -0.002]$). In contrast, for binary parents, parenting stress was not related to couple relationship quality via the discrepancy ($b = .001$, $S.E. = .008$, 95% CI $[-0.014, 0.17]$). Thus, a conditional indirect pathway was identified as hypothesized: More experiences of parenting stress were associated with
lower couple relationship quality through higher division of childcare labor discrepancy, but only among nonbinary parents.

**Discussion**

Grounded in the family systems theory (Minuchin, 1985) and vulnerability-stress-adaptation model (Karney & Bradbury, 1995), and informed by the concept of decentering heteronormativity (Oswald et al., 2005), the current study investigated the potential mediating role of division of childcare labor discrepancy in the association between parenting stress and couple relationship quality, along with the potential moderating role of gender identity (i.e., nonbinary vs. binary) in the links between parenting stress and division of childcare labor discrepancy among transgender and gender nonbinary (TGNB) parents. Most importantly, the results of our moderated mediation model identified a conditional indirect pathway. That is, greater exposure to parenting stress was associated with lower couple relationship quality through higher discrepancies in the division of childcare labor only among nonbinary TGNB parents.

The current study expands upon previous research concerning TGNB family processes through two pivotal contributions: By elucidating the underlying mechanism that may explain the negative association between parenting stress and couple relationship quality, and by examining more nuanced gender variations within the TGNB group related to such dynamics.

Consistent with our hypothesis, the findings indicated that TGNB parents with greater levels of parenting stress reported lower couple relationship quality. This result provided support for the *spillover* process from the parent-child domain to the couple
relationship domain (Cox & Paley, 1997; Cox et al., 2001) in the context of families headed by TGNB parents. This finding is aligned with the existing evidence drawn from predominantly cisgender heterosexual samples (Berryhill et al., 2016; Chester & Blandon, 2016; Ding et al., 2022; Durtschi et al., 2017; Hartley et al., 2018).

Furthermore, to the best of our knowledge, the current study is the first to identify the division of childcare labor discrepancy as a destructive mechanism accounting for the negative association between parenting stress and TGNB parents’ couple relationship quality. This finding is in line with propositions of multiple theoretical perspectives. First, according to the family systems theory (Minuchin, 1985), the negative dynamics in the coparenting subsystem that are induced by parent-child related stressors may redound to the couple subsystem, ultimately disrupting couple relationship well-being (Katz & Gottman, 1996). Then, this mediating path provides evidence for one central proposition of the VSA model (Karney & Bradbury, 1995), which suggests that extra-dyadic stressful events are likely to compromise couples’ relational outcomes by hindering adaptive behaviors between partners. Last, the idea of resource preservation to prevent losses from the conservation of resources theory (COR, Hobfoll, 2001, 2011) also serves to elucidate the identified indirect path. COR posits that people tend to engage in resource protection to prevent losses, so that dissatisfaction with status-quo resources will lead to defensive efforts to preserve the remaining resources (Hobfoll, 2001). TGNB parents who expend resources for childrearing are more inclined to hold a cognitive imbalance in the perceived fairness of division of childcare labor with their coparents, such that perceiving themselves as contributing more than expectation or anticipating their partners to assume
a greater responsibility. This unfulfilled need for a balanced division of childcare labor, driven by the desire to conserve existing resources, may subsequently contribute to dissatisfaction in romantic couple relationships.

Our findings for the indirect path also resonate with empirical work. In a study that used dyadic data from Korean parents of children with atopic dermatitis, the results demonstrated an actor mediation effect that fathers’ parenting stress increased their perceived marital conflicts by undermining coparenting relationships with their partners (Han & Lee, 2020). When it comes to the specific aspect of the division of childcare labor in coparenting, extant research suggests that perceived fairness of division of labor, a similar concept as division of labor discrepancy measured in a different way (Cowan & Cowan, 1988), functions as a pivotal intermediary factor, connecting family processes to marital relationships (Lavee & Katz, 2002; Mikula et al., 2012; Newkirk et al., 2017). For example, Newkirk et al. (2017) investigated 108 working-class, dual-earner couples in the U.S during their transition to parenthood, and found that mothers’ perceived fairness about childcare tasks mediated the negative association between their violated expectations for childcare (i.e., exceeding their anticipated childcare responsibilities upon returning to work) and later relationship conflicts.

We also found the linkage between parenting stress and division of childcare labor discrepancy was shaped by gender identity, such that more parenting stress only predicted a greater discrepancy in division of childcare labor among nonbinary parents rather than binary parents. Building upon existing research concerning gender roles and satisfaction with the division of labor primarily within husband-wife unions (Kuo et al.,
2017; Lavee & Katz, 2002), our study goes beyond a binary perspective of conventional gender differences in domestic labor division. Indeed, the current findings provide a more nuanced understanding of how gender identity in the TGNB community interacts with experiences of parenting stress to have implications on their discrepancies in the division of childcare labor. Previous literature demonstrated that nonbinary individuals might distinctly conceptualize their gender compared to their binary counterparts (Catalpa et al., 2019; McDermott et al., 2021), such that nonbinary individuals were more inclined to embrace a fluid sense of gender compared to binary individuals (Bradford & Catalpa, 2019). In the specific domain of parenting, research has indicated that children with nonbinary parents participate in a greater array of gender-expansive activities when compared to children with binary transgender parents (Riskind & Tornello, 2022). The aforementioned evidence suggests that nonbinary parents face increased pressure to challenge the hegemonic gender norms reflected in the childcare labor division (Pollitt et al., 2018), so they may exhibit heightened susceptibility to the demands of parenting tasks, which in turn, affect their sense of fairness in labor distribution. As a result, in our study, increased parenting stress was found to be associated with greater undesirable perceptions of childcare labor division among nonbinary parents, whereas binary parents’ perceived discrepancies in division of childcare labor exhibited minimal correlation with parenting stress.

Further and most importantly, a conditional indirect pathway was identified such that only for nonbinary parents, reports of parenting stress were negatively associated with couple relationship quality through a positive association with division of childcare

labor discrepancy. This pathway as a whole highlights the understudied intricacies of TGNB parents’ intersectional experiences of gender identity, intimate relationships, and parenthood. Such complexity is underscored by various well-documented dynamics, including stress originating in the parent-child subsystem seeping into the couple relationship subsystem (Berryhill et al., 2016), discrepancies in division of childcare labor as one intermediary component of family dynamics (Lavee & Katz, 2002), and individual characteristics interacting with family stress to shape familial processes (Sun et al., 2017).

**Practice Implications**

As our results suggest, parenting stress predicted relationship well-being via division of childcare labor discrepancy, it is noteworthy for practitioners that the distress originating from one family subsystem may permeate other family subsystems and disrupt the corresponding relational homeostasis. In this regard, TGNB parents may derive greater benefit from relevant family-based intervention programs that include multiple domains within a family unit. Also, our results indicated that the division of domestic labor might be a pronounced intervening point to promote couple relational outcomes for TGNB populations who become parents. Hence, intervention components, such as constructive communication about a fair division of labor with partners, may assist TGNB parents in navigating overwhelming childrearing tasks and maintaining a sense of well-being in the couple relationship. In terms of the gender differences found in our study, practitioners working with gender diverse groups should recognize the
importance of heterogeneity in gender ideology within this group and refrain from perpetuating gender stereotypes about domestic labor.

**Limitations and Future Directions**

Some limitations and future directions of the current study should be noted. First, the current study is cross-sectional and correlational, which limits the causality of the identified association. Future research will benefit from the utilization of longitudinal designs with time-varying variables. Second, the vast majority of participants self-identified as white due to our sampling approach, suggesting that we need to be cautious about the generalizability of our results. Future research could consider oversampling underrepresented populations, such as People of Color. Third, we only retained data from one partner in a couple due to the extreme difficulties in reaching both partners in a couple dyad among the TGNB sample. However, considering the interdependent nature of division of labor and couple relationships, using data exclusively from one partner cannot allow the examination of spillover and crossover effects. Thus, future research should adopt a dyadic approach to unveil more intricate effects that are possibly implicated within our currently examined associations. Fourth, a more nuanced categorization of the gender spectrum was not feasible within the scope of this study. Future research endeavors should investigate the experiences of individuals identifying with less representative or multiple gender identities.
Figure 1: The conceptual model.
Figure 2: The moderated mediation model results.

Notes. All estimated parameters were standardized with covariates loaded on both division of childcare labor discrepancy and relationship quality. To note, pathways lines with $p > .05$ were depicted in grey dash lines, whereas pathways lines with $p < .05$ are depicted in black solid lines. * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed).
Figure 3: Probing simple slopes for the moderating role of gender identity in the association between parenting stress and division of childcare labor discrepancy.
Table 1: Demographic characteristics of transgender and nonbinary parents and their eldest child (N = 228).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Parent</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD) or n (%)</td>
<td>M (SD) or n (%)</td>
</tr>
<tr>
<td>Age</td>
<td>35.30 (6.67)</td>
<td>5.32 (3.68)</td>
</tr>
<tr>
<td>Household income per year (in thousands)</td>
<td>79.00 (70.77)</td>
<td></td>
</tr>
<tr>
<td>Paid working hours per week</td>
<td>29.59 (18.41)</td>
<td></td>
</tr>
<tr>
<td>Length of relationships (in years)</td>
<td>10.04 (5.47)</td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td>1.54 (.90)</td>
<td></td>
</tr>
<tr>
<td>Sex assigned at birth (female %)</td>
<td>161 (70.93)</td>
<td>96 (43.84)</td>
</tr>
<tr>
<td>Gender (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transgender woman</td>
<td>46 (20.18)</td>
<td></td>
</tr>
<tr>
<td>Transgender man</td>
<td>48 (21.05)</td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>18 (7.89)</td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>10 (4.39)</td>
<td></td>
</tr>
<tr>
<td>Genderqueer</td>
<td>31 (13.60)</td>
<td></td>
</tr>
<tr>
<td>Non-binary</td>
<td>26 (11.40)</td>
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<tr>
<td>Gender non-conforming</td>
<td>12 (5.26)</td>
<td></td>
</tr>
<tr>
<td>Agender</td>
<td>10 (4.39)</td>
<td></td>
</tr>
<tr>
<td>Gender fluid</td>
<td>8 (3.51)</td>
<td></td>
</tr>
<tr>
<td>Choose not to label</td>
<td>1 (.44)</td>
<td></td>
</tr>
<tr>
<td>Additional gender identities</td>
<td>14 (6.14)</td>
<td></td>
</tr>
<tr>
<td>Sexual orientation (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Queer</td>
<td>57 (25.00)</td>
<td></td>
</tr>
<tr>
<td>Pansexual</td>
<td>40 (17.54)</td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>38 (16.67)</td>
<td></td>
</tr>
<tr>
<td>Lesbian</td>
<td>34 (14.91)</td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>17 (7.46)</td>
<td></td>
</tr>
<tr>
<td>Choose not to label</td>
<td>9 (3.95)</td>
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<tr>
<td>Gay</td>
<td>8 (3.51)</td>
<td></td>
</tr>
<tr>
<td>Asexual</td>
<td>7 (3.07)</td>
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<tr>
<td>Demisexual</td>
<td>5 (2.19)</td>
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<tr>
<td>Questioning</td>
<td>5 (2.19)</td>
<td></td>
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<tr>
<td>Additional sexual orientation</td>
<td>8 (3.51)</td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>205 (89.91)</td>
<td>178 (81.28)</td>
</tr>
<tr>
<td>Biracial/Multiracial</td>
<td>7 (3.07)</td>
<td>26 (11.87)</td>
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<tr>
<td>Hispanic/Latino(a)</td>
<td>4 (1.75)</td>
<td>7 (3.20)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Filipino</td>
<td>2</td>
<td>(.88)</td>
</tr>
<tr>
<td>Additional race/ethnicities c</td>
<td>10</td>
<td>(.439)</td>
</tr>
</tbody>
</table>

Relationship status (%)

<table>
<thead>
<tr>
<th>Status</th>
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</tr>
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<tbody>
<tr>
<td>Married legally</td>
<td>152</td>
<td>(66.67)</td>
</tr>
<tr>
<td>Committed relationship</td>
<td>32</td>
<td>(14.04)</td>
</tr>
<tr>
<td>Engaged</td>
<td>14</td>
<td>(6.14)</td>
</tr>
<tr>
<td>Polyamorous</td>
<td>7</td>
<td>(3.07)</td>
</tr>
<tr>
<td>Married but no legal recognition</td>
<td>6</td>
<td>(2.63)</td>
</tr>
<tr>
<td>Dating</td>
<td>5</td>
<td>(2.19)</td>
</tr>
<tr>
<td>Additional relationship status d</td>
<td>12</td>
<td>(5.26)</td>
</tr>
</tbody>
</table>

Education (%)

<table>
<thead>
<tr>
<th>Level</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>2</td>
<td>(.89)</td>
</tr>
<tr>
<td>High school/GED</td>
<td>14</td>
<td>(6.14)</td>
</tr>
<tr>
<td>Vocational/Trade school</td>
<td>5</td>
<td>(2.19)</td>
</tr>
<tr>
<td>Associates degree/2 years</td>
<td>23</td>
<td>(10.09)</td>
</tr>
<tr>
<td>Bachelor’s degree/4 years</td>
<td>106</td>
<td>(47.37)</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>76</td>
<td>(33.33)</td>
</tr>
</tbody>
</table>

Notes. Not all numbers will total to 100% due to rounding. Parent’s sex assigned at birth, child’s sex assigned at birth, and child’s race/ethnicity have missing values, so a valid percentage was used for the above characteristics.

a Additional gender identities include androgyne, transfeminine, transmasculine, etc.

b Additional sexual orientation includes androsexual, queer demisexual, etc.

c Additional race/ethnicities include American Indian/Alaskan Native, Black/African American, etc.

d Additional relationship status includes civil partnership, in the process of divorce, etc.
Table 2: Descriptive statistics and zero-order bivariate correlations among study variables.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<tbody>
<tr>
<td><strong>Key study variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Parenting Stress</td>
<td>79.27</td>
<td>19.45</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gender a</td>
<td>.54</td>
<td>.50</td>
<td>−.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Division of childcare labor discrepancy</td>
<td>.77</td>
<td>.63</td>
<td>.19*</td>
<td>−.20*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. DAS-consensus</td>
<td>48.27</td>
<td>6.64</td>
<td>−.23**</td>
<td>.07</td>
<td>−.34**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. DAS-satisfaction</td>
<td>38.40</td>
<td>6.55</td>
<td>−.19*</td>
<td>−.19*</td>
<td>−.19*</td>
<td>.57**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. DAS-cohesion</td>
<td>16.39</td>
<td>3.46</td>
<td>−.24**</td>
<td>−.25**</td>
<td>−.25**</td>
<td>.42**</td>
<td>.40**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. DAS-affectional expression</td>
<td>8.00</td>
<td>1.79</td>
<td>−.02</td>
<td>−.06</td>
<td>−.06</td>
<td>.47**</td>
<td>.41**</td>
<td>.35**</td>
<td></td>
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<tr>
<td><strong>Key covariates</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td>1.54</td>
<td>90</td>
<td>.05</td>
<td>−.01</td>
<td>−.03</td>
<td>−.03</td>
<td>.04</td>
<td>−.03</td>
<td>−.11</td>
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<tr>
<td>Eldest child age</td>
<td>5.32</td>
<td>3.68</td>
<td>.09</td>
<td>.14*</td>
<td>.14</td>
<td>−.10</td>
<td>−.18*</td>
<td>−.04</td>
<td>−.11</td>
</tr>
<tr>
<td>Paid working hours</td>
<td>29.59</td>
<td>18.41</td>
<td>−.17*</td>
<td>.18**</td>
<td>−.17*</td>
<td>.01</td>
<td>−.06</td>
<td>−.02</td>
<td>−.04</td>
</tr>
</tbody>
</table>

*Note.* SD = Standard Deviation. *p < .05, **p < .01 (two-tailed). N ranges from 156 to 226 given missingness. N represents the number of participants for each pair of zero-order correlations. DAS = Dyadic Adjustment Scale. Higher scores of parenting stress indicate greater parenting stress. Higher scores of division of childcare labor discrepancy indicate greater dissatisfaction of the current allocation of childcare tasks. Higher scores of DAS measures indicate greater relationship well-being.

a 1 = gender binary, 0 = gender nonbinary.
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