




RESEARCH ARTICLE

# Understanding working mothers' difficulty: From need frustration to family-work conflict

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## Abstract

Previous research has primarily focused on the impact of basic psychological needs frustration on parenting styles and its effect on children. However, there is a lack of research on the impact of basic psychological needs frustration in mothers, particularly those who work full time. To fill the gap, this study explores how frustration of needs experienced by full-time working mothers in the family context relates to their experience of maternal stress and family-to-work conflict and the moderating role of financial motivation to work. In a three-wave study of 168 full-time working mothers, we discovered a positive correlation between basic psychological needs frustration and maternal stress, which in turn led to family-to-work conflict. These relationships were more pronounced among mothers with lower financial motivation to work, as opposed to those with higher. We conclude by discussing the implications of our research and suggesting areas for future study.

**Keywords:** working mothers; basic psychological needs frustration in family life; maternal stress; financial motivation to work; family-to-work conflict

## Introduction

Basic psychological needs (BPNs) are considered crucial for individuals' self-growth, adjustment, and flourishing. Satisfying these needs is shown to enhance psychological well-being (Campbell, Tობback, Delesie, Vogelaers, Mariman, & Vansteenkiste, 2017; Li, Ivarsson, Lam, & Sun, 2019; Mabbe, Soenens, Vansteenkiste, van der Kaap-deeder, & Mouratidis, 2018; Ryan & Deci, 2000; Vansteenkiste, Ryan, & Soenens, 2020), whereas frustration of these needs can result in ill-being, psychological maladjustment, and psychopathology (Campbell et al., 2017; Li et al., 2019; Ryan & Deci, 2000), such as distress (Ryan & Deci, 2000), depression (Bartholomew, Ntoumanis, Ryan & Thøgersen-Ntoumani, 2011; Chen et al., 2015), exhaustion (Bartholomew et al., 2011), and anxiety (Van Der Kaap-Deeder et al., 2019). Given the fundamental role of BPNs in individuals' growth and functioning, it is not surprising that a considerable amount of scholarly attention is devoted to examining how the satisfaction or frustration of parents' BPNs affects parenting behavior (Matosic, Ntoumanis, & Quedsted, 2016; Slobodin, Cohen, Arden, & Katz, 2020; Soenens & Vansteenkiste, 2010). As BPNs frustration is a better predictor of negative psychological functioning than BPNs satisfaction, it has been the focus of parenting studies, particularly as a predictor of negative parenting behavior, and research has examined its detrimental effect on children's development (Slobodin et al., 2020).

Despite the significant impact of BPNs frustration on parents, the current literature on this subject has mainly focused on identifying the interpersonal effects of BPNs frustration experienced by

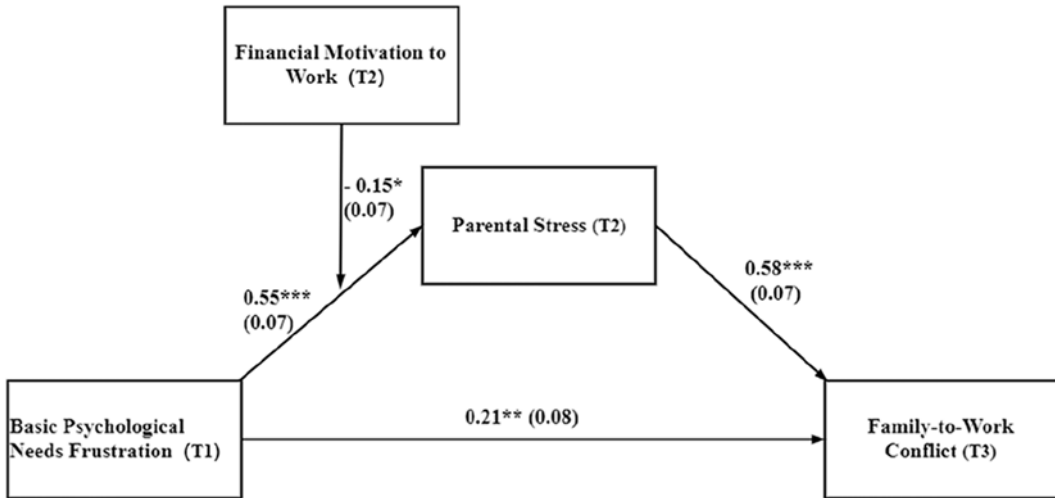
parents in general (Dieleman, Soenens, Vansteenkiste, Prinzie, Laporte, & De Pauw, 2019; Slobodin et al., 2020). Few studies have examined the predictive power of BPNs frustration experienced by working mothers in the household setting on maternal stress and its spillover effects at work, such as family-to-work conflict. The lack of research on BPNs frustration in family settings and family-to-work conflict among mothers with full-time jobs is a cause for concern, given that China is one of the countries with the highest level of female labor force participation (World Bank, 2021; Xie, 2019), and the majority of Chinese mothers have to work to meet the economic demands of their families (Cooke, 2010).

To fill the gap, this study explores how frustration of needs experienced by mothers with full-time jobs in the family context relates to their experience of maternal stress and family-to-work conflict. In the family context, mothers may experience the frustration of their BPNs, such as having limited control over family daily routines (including decision-making processes and autonomy frustration), feeling unprepared to handle the demands of parenthood and/or household management (competence frustration), or experiencing strained relationships with other family members (such as partners or extended family members and relatedness frustration). Based on previous studies, we postulate that mothers experiencing a higher level of BPN frustration in the family context are likely to experience more parental stress, defined as the feelings of distress or discomfort that arise from the demands of being a parent (Deater-Deckard, 1998), because, usually, individuals with a high level of BPN frustration tend to feel pressured (Matosic et al., 2016; Slobodin et al., 2020; Soenens & Vansteenkiste, 2010), which may increase family-to-work conflict due to energy depletion and vigor diminishing (Ten Brummelhuis & Bakker, 2012; Vander Elst, van den Broeck, de Witte, & de Cuyper, 2012).

Moreover, we contend that financial motivation to work, defined as family financial pressure subjectively perceived by individuals (Zhang, Liao, Li, & Colbert, 2020), moderates the indirect impact of BPNs frustration on family-to-work conflict through maternal stress. As an external and controlled motivation, financial pressure tends to undermine autonomy (Gagné & Deci, 2005; Ryan & Deci, 2000; Stone, Deci, & Ryan, 2009) and can generate additional stress beyond BPNs frustration. According to Zhang et al. (2020), financial pressure may also help counteract the negative effects of BPNs frustration as an external incentive. When financial motivation to work is high, a working mother may shift her focus from the family's frustrated experience of BPNs to the pressing need to support her family, thus reducing the negative impact of BPNs frustration on maternal stress. Conversely, when there is little or no financial motivation to work, the relationship between BPNs frustration in the family context and maternal stress may be more noticeable, with maternal stress increasing more rapidly as BPNs frustration rises. As a result, we propose our hypothesized model as depicted in Fig. 1.

Our study makes several theoretical contributions. First, it contributes to the existing literature on family-to-work conflict. Our research presents an intrapersonal approach to BPNs frustration by demonstrating that working mothers who experience BPNs frustration in their families are likely to encounter family-to-work conflict due to maternal stress. Moreover, by including BPNs frustration in the family context as a contributing factor to family-to-work conflict, our study can aid in a better understanding of family-work interference.

Second, our research extends the BPNs literature by revealing that BPNs frustration in the family context can not only lead to maternal stress but also lead to an imbalance between family and work. Although previous studies have suggested that individuals who experience BPNs frustration during the previous week are more prone to experience stress in general (Campbell et al., 2017), previous parenting studies have mainly viewed BPNs frustration as a predictor of interpersonal effects (e.g., on children's development) (Bai, Liu, & Xiang, 2020; Matosic et al., 2016; Slobodin et al., 2020; Soenens & Vansteenkiste, 2010). By examining the influence of BPNs frustration in the family context on working mothers' maternal stress and their family-to-work conflict, we can gain a more comprehensive understanding of the detrimental effects of BPNs frustration.



**Figure 1.** Conceptual model and path analysis results.  
Note: Coefficients are unstandardized.

Third, investigating financial motivation to work as a potential boundary condition can provide valuable insights into the stress processes involved in the connection between mothers' experience of BPNs frustration and family-to-work conflict.

## Hypotheses development

### *Basic psychological needs frustration in the family context and family-to-work conflict*

BPNs in general play an important role in the interactions between family and work roles. For example, opportunities to experience success (e.g., competence satisfaction) are related to positive spillovers between family and work. On the contrary, BPNs frustration has been found to predict exhaustion (Bartholomew et al., 2011; Fernet, Austin, Trépanier, & Dussault, 2013), a feeling that is closely associated with family-to-work conflict (Bakker, Demerouti, & Dollard, 2008). For example, autonomy needs frustration leads to more negative spillovers, such as family-to-work conflict (French, Dumani, Allen, & Schockley, 2018; Grzywacz & Marks, 2000). Previous research found that, for mothers, BPNs frustration in the family context is associated with low levels of psychological availability and vitality (Slobodin et al., 2020). The detrimental effect of BPNs frustration on individuals' psychological resources implies that BPNs frustration in family life might diminish people's energy and capacity to invest in a full-time job, which can provoke conflicts between family and work. Indeed, studies have revealed that difficulties in meeting parenting demands can drain personal resources and cause friction between family and work (Boz Semerci & Volery, 2018; Ten Brummelhuis & Bakker, 2012; Ten Brummelhuis, Oosterwaal, & Bakker, 2012).

The theoretical model of Frone, Russell and Cooper (1992) and Frone, Yardley and Markel (1997) posits a strong distinction between family-to-work conflict and work-to-family conflict. Family-to-work conflict occurs when demands of the family hinder one's performance at work and would result in job distress (Frone et al., 1992). In turn, work-to-family conflict occurs when demands of work hinder the accomplishment of one's family-related obligations and would result in family-related distress (Frone et al., 1992). According to this model, family factors, such as relatedness frustration (i.e., lack of family support; Woodgate, Ateah, & Secco, 2008), competence frustration (i.e., lower levels of parental self-efficacy), and autonomy frustration (i.e., financial and time constraints) (Karst & van Hecke, 2012; Woodgate et al., 2008), may lead to family-to-work conflict (Warner & Hausdorf, 2009). As a result, we argue that BPNs frustration experienced in the family context would

be more likely to elicit family-to-work conflict as previous research has found that the demands from family life impede performance at work (Frone et al., 1992). Thus, we propose the following hypothesis.

**Hypothesis 1:** Working mothers' basic psychological needs frustration in the family context is positively associated with family-to-work conflict.

### *The mediating role of maternal stress*

Maternal stress can explain the associations between BPNs frustration and family-to-work conflict. As BPNs have been regarded as coping resources, individuals who experience BPNs frustration might interpret parenting demands as threats to themselves and react in maladaptive ways (e.g., increased stress level; Quested, Bosch, Burns, Cumming, Ntoumanis, & Duda, 2011). Studies found that parents who experience BPNs frustration are more likely to feel pressured (Matosic et al., 2016; Slobodin et al., 2020; Soenens & Vansteenkiste, 2010). Furthermore, several studies have also revealed parental BPNs frustration in the family context functions as a robust predictor of parental stress (Van Der Kaap-Deeder et al., 2019; Vansteenkiste et al., 2020). For example, in a longitudinal study, Brenning and Soenens (2017) demonstrated that BPNs frustration increases postnatal depressive symptoms. A recent study conducted by Dieleman et al. (2019) also showed that daily experience of BPNs frustration predicts maternal stress. Studies have suggested that feelings of pressure coexist with BPNs frustration (for a review, see Vansteenkiste et al., 2020) and suggest that BPNs frustration experienced in the family context elicits stressful feelings among mothers.

Moreover, Frone et al. (1997) specifically stated that family stress functions as a predictor of family-to-work conflict. Maternal stress elicited by BPNs frustration in the family context could make it difficult for mothers to effectively carry out their work roles for several reasons. First, resource demand in the family may drain personal resources and elicit tension in work and life for married and employed mothers (Nomaguchi & Johnson, 2013). Second, parenting stress reduces individuals' psychological and physical energy, a state of depletion that makes it difficult for individuals to muster the energy required to complete work tasks (Wierda-Boer, Gerris & Vermulst, 2009). Third, mothers might lose energy trying to compensate for their experience of maternal stress. These effects can result in diminished work effort and burnout (Olafsen et al., 2021). Research revealed that mothers suffer a great loss in productivity or efficiency at work due to being distracted by worries about parenting demands during working hours (Beauregard, 2006). For example, Hwang and Jung (2020) employed unpartnered mothers as participants and found that parental stress was positively related to family-to-work conflict, regardless of their work schedules. Furthermore, the predictive effect of parenting stress on family-to-work conflict has also been supported by a longitudinal study (Boz Semerci & Volery, 2018). Thus, we propose:

**Hypothesis 2:** Working mothers' basic psychological needs frustration in the family context is indirectly related to family-to-work conflict via maternal stress.

### *The moderating role of financial motivation to work*

We further contend that although maternal stress would increase when financial motivation to work increases, financial motivation to work will ameliorate the relationship between BPNs frustration and maternal stress. First, research shows that among working women, family pressure is positively correlated with financial concerns (Zhang et al., 2020). This may be especially the case in China, where mothers are particularly sensitive to family financial issues as a result of the huge costs associated with child-rearing (e.g., education). Therefore, mothers who are more financially pressured to work will already be under much stress with child-rearing. Under this circumstance, an increase in BPNs frustration in the family setting might not result in a dramatic increase in maternal stress. In contrast,

mothers who are less financially pressured to work are under less stress with child-rearing, so an increase in BPNs frustration might result in a dramatic increase in maternal stress.

Furthermore, mothers with higher levels of financial motivation to work might pay more attention to their current work and put forth more effort at their jobs (Zhang et al., 2020), as means to compensate for their experience of BPNs frustration. This means that the relationship between BPNs frustration in the family context and maternal stress tends to be weaker for mothers with a higher financial motivation to work, as they might shift their attention from their BPNs frustration experience in the family context to external incentives in their work to gain extra BPNs. In contrast, mothers who are less financially motivated to work tend to be more sensitive to heightened BPNs frustration (Soenens & Vansteenkiste, 2010) and thus would be more likely to feel maternal stress.

This shift in priority has been described by researchers as ‘meaningfulness detachment’, a phenomenon in which people put in more work effort because they regard their work as a valuable way to benefit their family (Menges, Tussing, Wihler, & Grant, 2017). Thus, mothers who are strongly pressured by finances to work might shift their attention from satisfying their BPNs in their family (e.g., trying to control their decision-making processes in the family and the satisfaction of autonomy) toward caring primarily about their work and its financial aspects and might thus be less reactive to family BPNs frustration caused by ‘meaningfulness detachment’. Therefore, financial motivation to work does not alter the direction of the relationship between need frustration in the family context and maternal stress, while the existence of a higher financial motivation to work ameliorates the relationship between them. Thus, we propose,

**Hypothesis 3:** The relationship between working mothers’ basic psychological needs frustration in the family context and maternal stress is weaker for mothers who have higher (vs. lower) financial motivation to work.

Combining hypotheses 2 and 3, we further propose that high financial motivation to work not only mitigates the relationship between BPNs frustration in the family context and maternal stress but also ameliorates the indirect relationship between BPNs frustration and family-to-work conflict through maternal stress.

**Hypothesis 4:** The influence of basic psychological needs frustration in the family context on family-to-work conflict via maternal stress is weaker for working mothers who have higher (vs. lower) financial motivation to work.

## Methods

### Sample

Mothers with a full-time job and at least one child (between the ages of 3 and 17) in their care were invited to participate in the study through snowball sampling. In the first wave, 346 mothers reported their BPNs frustration in the family context and background information. Data of 245 mothers from the sample was deemed valid after the elimination of participants who worked part-time (45), stayed at home (13), or had no child between the ages of 3 and 17 (33). Thus, the valid rate was 70.80% in the first wave. The number of participants with valid data was 210 at Time 2 (85.71% response rate) and 168 at Time 3 (80.00% response rate).

Within the final 168 participants, the mean age was 39.88 years ( $SD = 5.60$ ). The education level of the mothers was as follows: junior high-school level ( $n = 89$ , 52.98%), senior high-school level ( $n = 37$ , 22.02%), and college level ( $n = 42$ , 25%). The average number of children was 2.05 ( $SD = 0.62$ ), and the age of the youngest children ranged from 2 months to 17 years (mean = 10.57,  $SD = 4.33$ ). Most of the families had an economic status of ‘medium’ ( $n = 134$ , 79.80%). The marriage status of most mothers was ‘married/living with a domestic partner’ ( $n = 150$ , 89.30%). To address the

attrition issue, we conducted a one-way analysis of variance to examine whether there was selective attrition due to the characteristics of mothers with a full-time job. The results indicated that mothers (with a full-time job) with and without complete data did not differ significantly in BPNs frustration, age, level of education, marital status, family economic status, number of children, or age of the youngest child. Thus, there was no selective attrition in this study.

### *Procedure*

Research on BPNs frustration has utilized time lags from 2 weeks (Li et al., 2019; Quedstedt et al., 2011) to 6 weeks (Busque-Carrier, Ratelle, & Le Corff, 2021) to predict its effect on stress responses. Furthermore, research on parenting stress has used longitudinal (van Eldik, Prinzie, Deković, & De Haan, 2017) and no time lag (Rajgariah et al., 2021; Wierda-Boer et al., 2009) research designs and demonstrated that parenting stress predicts family-to-work conflict. Hence, following previous research (Li et al., 2019), we considered a 3-week time lag as the optimal choice in this study. We conducted surveys at three points in time, with a 3-week interval between each survey. The time-lagged surveys also helped to minimize the potential threat of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To further relieve the concern about common method bias, we used the last four digits of the mothers' cell phone numbers to match the data from each survey to make sure the surveys were anonymous.

The data were collected online through Wenjuanxing, a popular online survey platform in China, and participants were told that they had the right to withdraw at any time. At Time 1, after completing the informed consent form, the mothers reported their BPNs frustration and background information. At Time 2 (3 weeks after Time 1), the mothers reported their financial motivation to work and maternal stress. At Time 3 (3 weeks after Time 2), the mothers reported their family-to-work conflict. The participants had the chance to win 1 to 5 yuan for their participation after completing each wave of the surveys.

### *Measures*

We applied Brislin's (1970) translation and back-translation procedure to translate all of the following measures into Chinese.

#### *Mothers' basic psychological needs frustration (T1)*

We measured mothers' BPNs frustration with an adapted version of the frustration subscale of the Basic Psychological Needs Frustration Scale (Chen et al., 2015). We adapted each item to begin with 'In my family...' in order to capture the specificity of the family context. All items were rated on a 5-point Likert scale, ranging from 1 (completely untrue) to 5 (completely true). A sample item was 'In my family, my daily activities feel like a chain of obligations'. The Cronbach's alpha in this study was 0.93.

#### *Financial motivation to work (T2)*

Financial motivation to work was measured via six items using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Zhang et al., 2020). A sample item was 'Money is the only reason why I do this job'. Higher scores denote stronger financial motivation to work. In this study, the Cronbach's alpha was 0.87.

#### *Maternal stress (T2)*

Maternal stress was assessed with the Parental Stress Scale developed by Berry and Jones (1995), which focuses on the perception of stress associated with raising children, rather than on the assessment of stressors. The seven items that assess maternal stress were used in our study



(Leung & Tsang, 2010). Participants responded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). An example item was 'The behavior of my child(ren) is often embarrassing or stressful to me'. In this study, the Cronbach's alpha was 0.86.

### *Family-to-work conflict (T3)*

The 5-item family-work conflict scale was used to assess family-to-work conflict (Netemeyer, Boles, & McMurrian, 1996). Participants responded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). An example item was 'I have to put off doing things at work because of demands on my time at home'. The Cronbach's alpha in this study was 0.89.

### *Control variables*

Because prior research has shown that mothers' and families' characteristics are associated with parenting style and family-to-work conflict (Milkie, Raley, & Bianchi, 2009; Ng, Pomerantz, & Deng, 2014; Puff & Renk, 2014), we included mothers' age, education, marital status, family's economic status, number of children, and the age of the youngest child as covariates.

### *Analytical strategy*

We conducted a series of confirmatory factor analyses to examine the distinctiveness of the variables in the study by R package lavaan (Rosseel, 2012). Because there were 12 items in BPNs frustration, which was quite a large number, we used the averages of competence, relatedness, and autonomy as indicators of the latent variable of BPNs frustration following previous research (Unanue, Dittmar, Vignoles, & Vansteenkiste, 2014). We also randomly combined the items into two groups and used the average of each group as an indicator of the latent variable of financial motivation to work. This method has been used in previous studies to reduce the number of estimated parameters (Babalola, Mawritz, Greenbaum, Ren, & Garba, 2021; Yan, Tangirala, Vadera, & Ekkirala, 2022). Furthermore, previous studies have demonstrated that the items of the financial motivation to work scale (Zhang et al., 2020) are unidimensional constructs. Given the unidimensionality of the items being combined, the use of parceling would be unlikely to result in biased results (Bandalos, 2002).

The confirmatory factor analyses results showed that the four-factor model fit the data well ( $\chi^2/df = 2.16$ , comparative fit index (CFI) = 0.95, Tucker-Lewis index (TLI) = 0.93, root-mean-square error of approximation (RMSEA) = 0.09, Standardized Root Mean Squared Residual (SRMR) = 0.04) and was better than all the other alternative models, in which each indicator loaded upon its intended latent variable (Table 1). Moreover, since all the variables were self-reported by the mothers, the single unmeasured latent method was used to examine if common method variance was a major threat in this study (Podsakoff et al., 2003). Though the fit of the measurement model which included the common method factor improved significantly, the factor loadings of all the items significantly loaded on the respective factors ( $p < .001$ ). Moreover, the method factor explained only 1.2% of the variance, which is less than 25% (Williams, Cote, & Buckley, 1989). Therefore, common method variance is not a major problem in this study.

To test our research model, we used path analysis by simply averaging items for the scale of each variable using R package processR (Moon, 2021). To test the unconditional and conditional indirect effects, we used Monte Carlo bias-corrected bootstrapping analysis with 20,000 replications to create 95% confidence intervals (Hayes, 2009; Preacher, Rucker, & Hayes, 2007). A confidence interval that does not include 0 indicates a significant indirect effect.

## **Results**

### *Descriptive statistics*

The means, standard deviations, and correlations between the focal variables are displayed in Table 2. Mothers' BPNs frustration ( $r = 0.53$ ,  $p < .001$ ) and maternal stress ( $r = 0.66$ ,  $p < .001$ ) were both positively associated with family-to-work conflict.

**Table 1.** Confirmatory factor analysis

Model	$\chi^2$ (df)	Scaling correction factor for MLR	$p$	CFI	TLI	RMSEA	SRMR
Four-factor model	133.88 (59)	1.30	<.001	0.95	0.93	0.09	0.04
Three-factor model <sup>a</sup>	311.61 (62)	1.29	<.001	0.83	0.79	0.16	0.08
Three-factor model <sup>b</sup>	282.23 (62)	1.29	<.001	0.85	0.81	0.15	0.10
Two-factor model <sup>c</sup>	458.36 (64)	1.28	<.001	0.73	0.68	0.19	0.12
One-factor model <sup>d</sup>	671.92 (66)	1.29	<.001	0.59	0.51	0.24	0.13

$N = 168$ . CFI = Comparative Fit Index, TLI = Tucker-Lewis Index, RMSEA = the Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual.

<sup>a</sup>Combines maternal stress and financial motivation to work into one factor.

<sup>b</sup>Combines mothers' basic psychological needs frustration and maternal stress into one factor.

<sup>c</sup>Combines mothers' basic psychological needs frustration, maternal stress, and financial motivation to work into one factor.

<sup>d</sup>Combines all the factors into one factor.

**Table 2.** Means (M), standard deviations (SD), and correlation matrix of the main variables

Variable	$M$ (SD)	1	2	3	4	5	6	7	8	9
1 Mother's age	39.64 (6.27)									
2 Mother's education	4.24 (1.91)	-0.08								
3 Marriage status	2.10 (0.39)	0.05	-0.04							
4 Family's economic status	4.69 (1.67)	0.09	0.35***	-0.02						
5 Number of children	2.07 (0.66)	0.03	-0.29***	-0.05	-0.20**					
6 Age of youngest child	10.70 (4.51)	0.63***	-0.04	0.04	0.04	-0.26***				
7 BPNs frustration	2.67 (0.85)	-0.08	-0.04	-0.03	-0.06	0.13	-0.11			
8 Maternal stress	2.82 (0.86)	-0.03	0.01	0.01	-0.06	0.17*	-0.14	0.54***		
9 Financial motivation to work	3.35 (0.90)	-0.01	-0.12	0.12	-0.13	-0.07	0.03	0.21**	0.31***	
10 Family-to-work conflict	2.56 (0.89)	-0.20*	-0.06	-0.05	0.00	0.16*	-0.28***	0.53***	0.66***	0.15*

$N = 168$ . \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ .

Correlation matrix of the main variables based on pairwise deletion.

### Hypotheses' testing

R package processR (Moon, 2021) was adopted to test the hypotheses' model, in which observed variables were used. Table 3 shows that, after controlling for the mother's age, education, marital status, the families' economic status, number of children, and age of the youngest child, mothers' BPNs frustration was significantly positively correlated with family-to-work conflict ( $B = 0.48$ ,  $SE = 0.07$ ,  $p < .001$ ). Thus, Hypothesis 1 was supported.

Hypothesis 2 proposed that mothers' BPNs frustration was related to family-to-work conflict via maternal stress. The results showed that the indirect relationship between BPNs frustration and family-to-work conflict through maternal stress was significant ( $B = 0.31$ ,  $SE = 0.06$ , 95% CI [0.20, 0.44]), and thus Hypothesis 2 was supported.



**Table 3.** Results of regression analysis

	Maternal stress	Family-work conflict	
		Model 1	Model 2
Mother's age	0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Mother's education	0.03 (0.03)	-0.04 (0.03)	0.00 (0.03)
Marital status	0.05 (0.14)	-0.07 (0.14)	-0.14 (0.13)
Family's economic status	0.01 (0.03)	0.04 (0.03)	-0.07 (0.12)
Number of children	0.07 (0.09)	-0.01 (0.08)	0.02 (0.09)
Age of youngest child	-0.02 (0.02)	-0.02 (0.01)	-0.03 (0.02)
Mother's needs frustration	0.55 (0.07)***	0.48 (0.07)***	0.21 (0.08)**
Financial motivation to work	0.17 (0.06)**	0.00 (0.06)	0.02 (0.06)
Mother's BPNs frustration × financial motivation to work	-0.15 (0.07)*		
Maternal stress			0.58 (0.07)***
$R^2$	0.41	0.28	0.53
$\Delta R^2$	0.33	0.25	0.51

$N = 168$ . All data are unstandardized estimates.

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

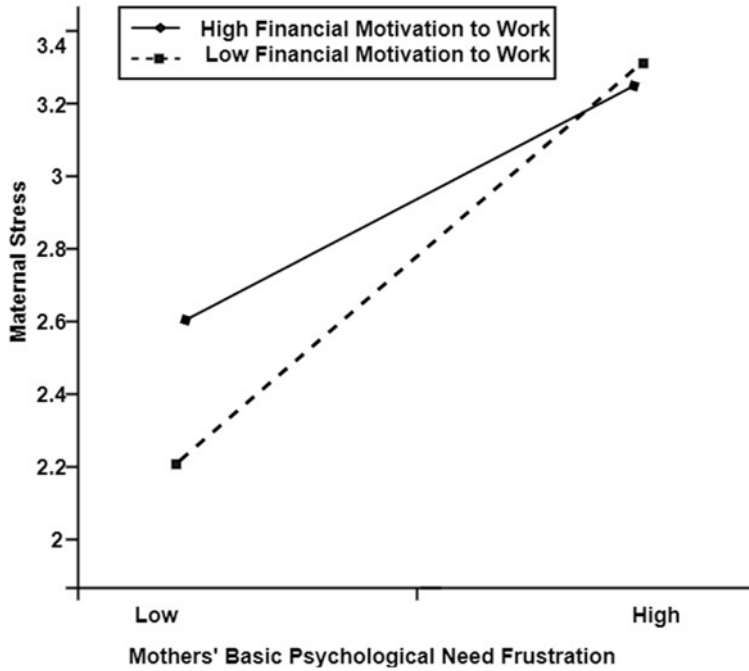
Next, we sought to assess whether financial motivation to work moderated the relationship between mothers' BPNs frustration and maternal stress. As shown in Table 3, the interaction between BPNs frustration and financial motivation to work was significant ( $B = -0.15$ ,  $SE = 0.07$ ,  $p < .05$ ). To determine the nature of the moderating effect, the simple slopes at high (1 SD above the mean) and low (1 SD below the mean) levels of financial motivation to work were computed. As shown in Fig. 2, the relationship between BPNs frustration and maternal stress was much stronger for mothers with lower financial motivation to work (-1 SD simple slope:  $B = 0.67$ ,  $t = 7.33$ ,  $p < .001$ ) than for those with higher financial motivation to work (+1 SD simple slope:  $B = 0.42$ ,  $t = 4.85$ ,  $p < .001$ ). Thus, Hypothesis 3 was supported. Hypothesis 4 was also supported (see Table 4): the indirect relationships between BPNs frustration and family-to-work conflict were both significant via maternal stress at higher (estimate = 0.24,  $SE = 0.06$ , 95% CI [0.13, 0.37]) and lower (estimate = 0.39,  $SE = 0.07$ , 95% CI [0.27, 0.54]) levels of financial motivation to work, and the difference between the higher and lower levels was significant (estimate = -0.15,  $SE = 0.07$ , 95% CI [-0.30, -0.03]).

## Discussion

Our findings showed that working mothers with BPNs frustration were more likely to experience family-to-work conflict through maternal stress. In addition, we found that financial motivation to work moderated the relationship between mothers' BPNs frustration and family-to-work conflict in such a way that the strength of the relationship was attenuated under higher financial motivation to work. These findings highlight the importance of mothers' BPNs frustration when considering family interfering with work.

## Theoretical contributions

This study makes several theoretical contributions. First, the findings of the present study build a nuanced explanation of how BPNs frustration impacts family-to-work conflict. We demonstrate that BPNs frustration in the family context contributes to an understanding of family interference with work. Our results provide empirical evidence that BPNs frustration is not only an experience



**Figure 2.** Interactive effect of financial motivation to work on the relationship between mothers’ needs frustration and maternal stress.

**Table 4.** Conditional indirect effect of financial motivation to work on the relationship between mothers’ needs frustration and family-to-work conflict via maternal stress

Indirect effect	Financial motivation to work	Estimate (SE)	Es. /SE	95% bootstrap CI
BPNs frustration → family-to-work conflict (via maternal stress)	High	0.24 (0.06)	3.82	[0.12, 0.36]
	Low	0.39 (0.07)	5.31	[0.27, 0.54]
	Difference	-0.15 (0.07)	2.23	[-0.30, -0.03]

Bias-corrected indirect effect and conditional indirect effects confidence intervals are based on 2,000 Monte Carlo bootstrap samples. All indirect effects were calculated accounting for direct effects. Unstandardized effects are reported in the table. CI = confidence interval.

of having one’s essential needs thwarted, which is associated with energy draining and vigor diminishing (Ten Brummelhuis & Bakker, 2012; Vander Elst et al., 2012), but also a detrimental factor that has negative effects across domains, allowing for an alternative interpretation of family–work imbalance.

Second, despite the literature on BPNs frustration highlighting its detrimental effect on individuals (Vansteenkiste & Ryan, 2013), the majority of studies to date have focused on its predictive role in single-domain impacts, especially as a predictor of negative parenting behavior and its unfavorable impact on child’s development (Dieleman et al., 2019; Slobodin et al., 2020). By exploring how and when experiences of BPNs frustration in the family context spill over into the work context, our findings extend the literature on BPNs. The overall pattern of results from this study suggests that family-to-work conflict is positively related to BPNs frustration, which is in line with our assumptions. Our results suggest that BPNs play a crucial role in mothers’ lives, providing them with essential resources for their maternal and work roles, which is consistent with previous studies (Bartholomew et al., 2011). Mothers who experience BPNs frustration suffer maternal stress and an imbalance

between work and family. This implies that the frustration of BPNs has an impact on the well-being of mothers and their professional outcomes. Thus, this study sheds light on the negative consequences of BPNs frustration by emphasizing it as a unique issue that impacts people's life.

Third, we discovered that higher levels of maternal stress are associated with financial motivation to work. Consistent with extensive evidence about the generally negative effect of instrumental and external regulation, such as depression, anxiety, and low self-esteem (Gagné & Deci, 2005), these findings tentatively support the potentially detrimental effect of financial motivation to work on maternal stress. Furthermore, the moderating effect of financial motivation to work also deepens our understanding of the circumstances in which the association between BPNs frustration and maternal stress is weaker or stronger. BPNs serve as a context in which basic motives influence how people explain their behaviors and feelings (Vansteenkiste et al., 2020). When people are frustrated, they frequently engage in needs-substitution behavior (Kasser & Ryan, 1996; Vansteenkiste et al., 2020). Additionally, research has shown that people often exhibit depression, anxiety, and low self-esteem when extrinsic aspirations are relatively strong, such as financial desire (Deci, Olafsen, & Ryan, 2017). Our findings suggest that BPNs frustration and external incentives (e.g., financial pressure) interplay in explaining maternal stress and family-to-work conflict. This study, therefore, contributes to a better understanding of the circumstances under which BPNs frustration spills over from family to work.

### *Practical implications*

Our research also has practical implications. First, our study suggests that any effort to lessen working mothers' BPNs frustration might also lessen maternal stress and conflict between family and work. For mothers, maternal and work roles often conflict with each other (Kayaalp, Page, & Rospenda, 2021). As our findings suggest, decreasing BPNs frustration might make it easier for working mothers to simultaneously perform these two roles. One approach would be to make use of one's ability to live a self-regulated life. For example, studies showed that when people regulate their behaviors according to their interests, genuine preferences, and internal values, they will satisfy their needs despite that environments might impede them from achieving this goal (Vansteenkiste & Ryan, 2013).

Second, our results suggest that a lack of satisfaction or fulfillment of BPNs (such as autonomy, competence, and relatedness) in the family environment can cause difficulties for mothers to meet the demands of parenting. Thus, it is important for family members, especially the other adult members, to realize the importance of supporting mothers to satisfy their BPNs and alleviate their feelings of maternal stress. This may be especially vital for mothers who have had two or more children or are planning to have another child because they might need to devote much more effort and time to the maternal role than mothers who only have one child. Having more children might further damage mothers' careers by creating barriers to career development due to 'maybe baby' expectations (Gloor, Okimoto, & King, 2022), as well as maternity bias in the workplace (Arena, Volpone, & Jones, 2023). Thus, we encourage family members to support mothers fulfill their BPNs by, for example, fostering a supportive family climate (Carlson & Perrewé, 1999; Olafsen et al., 2021) and enabling mothers to organize their daily activities in a way that makes them feel competent, relatedness (Grzywacz & Marks, 2000), and competencies.

Finally, mothers need to be aware of the connection between their experience of BPNs frustration and feelings of maternal stress. Especially, mothers should understand that BPNs frustration derived from family life might be an important reason why they are stressed as parents. For example, maternal stress may partly come from mothers' being incapable of handling the demands of household management (competence frustration). Thus, mothers need to understand how their BPNs might be satisfied and how BPNs frustration affects the strain of parenting. In this way, they will be in a better position to comprehend their emotions and learn strategies for actively seeking out resources to meet their own BPNs, which will then lessen parental stress and the tension between family and work.

### *Limitations and future research directions*

This study has several limitations. First, it did not explore antecedents that may contribute to working mothers' experience of BPNs frustration in the family context. For example, negative social-context factors (e.g., controlling behavior from family members) are naturally destructive and may yield adverse psychological experiences. Exploring these antecedents and/or conditional factors is extremely important because it could help provide a deeper understanding of how to effectively intervene in the feeling of having thwarted BPNs. For example, personal characteristics (e.g., optimism and resilience) and socio-contextual factors (e.g., family-supportive and -destructive behaviors) may affect mothers' experiences of BPNs frustration and subsequent intra- and/or interpersonal outcomes (French et al., 2018). Future studies may target these personal characteristics and family systems to explore how personal factors and family social contexts impact mothers' experience of BPNs frustration and satisfaction.

Second, although we argue that family-to-work conflict would be unlikely to elicit BPNs frustration in the family context (Frone et al., 1997), it may contribute to psychological stress (Bilodeau, Marchand, & Demers, 2020), which may in turn lead to workplace frustration (Frone et al., 1997). To further determine the causal or dual link between BPNs frustration and family-to-work conflict, longitudinal research and/or experimental studies examining family interventions are required. Another approach to gain a deeper understanding of the process and operation of BPNs frustration and stress and the spillover effects would be to examine the dynamics of the relationships among BPNs frustration, stress, and work–family conflict within daily life, through experience-sampling methodologies or diaries.

Third, in China, more than half of grandparents provide care for their grandchildren to some extent (Ko & Hank, 2014). Thus, whether working mothers live with their parents or parents-in-law may be a potential factor moderating the relationship between working mothers' experience of BPNs frustration and maternal stress. Specifically, future studies could examine how different living arrangements may affect the relationships between BPNs frustration, maternal stress, and family-to-work conflict.

Finally, we collected all the data through self-reported surveys, which may result in concerns over common method variance (Podsakoff et al., 2003). As previously mentioned, we took many precautions during the data collection to address this potential issue, such as using time-lagged and anonymous response designs; therefore, we believe common method variance had a minor impact on our study (Podsakoff et al., 2003). Moreover, the results of the confirmatory factor analyses supported the distinctiveness of the study variables, and the single unmeasured latent method also demonstrated that common method variance was not a major concern in our study. Further research may adopt more objective and diverse methods to measure some of the variables, such as ratings from supervisors on maternal family-to-work conflict.

### **Conclusion**

This study shows a positive relationship between BPNs frustration and family-to-work conflict among full-time working mothers. This study also found that maternal stress mediates the relationship between working mothers' BPNs frustration and family-to-work conflict. Financial motivation to work ameliorates the relationship between BPNs frustration and maternal stress in such a way that the relationship is weaker for working mothers with higher (vs. lower) financial motivation to work. We hope our work will inspire future research that targets various systems (e.g., family and work) to better understand the factors that might influence working mothers' BPNs frustration and its effects on their family and work lives, thus helping all women in the workplace.

**Data Availability Statement.** The data that support the findings of this study are available from the corresponding author upon reasonable request.

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