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ORIGINAL PAPER

Bringing Work Home: Gender and Parenting Correlates of Work-Family Guilt among Parents of Toddlers

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Abstract Anecdotal evidence abounds suggesting that as compared to fathers, mothers report greater guilt regarding the negative impact of work on family (WIF-guilt), yet shockingly few quantitative studies have evaluated gender differences or correlates of WIF-guilt. In five studies, we provide an in-depth exploration of parents' feelings of guilt regarding perceived negative impacts on their children that arise from addressing work over familial responsibilities. We accomplish the following: (1) examine the validity of a novel self-report questionnaire of WIF-guilt (Work-Interfering-With-Family Guilt Scale [WIFGS]), (2) assess gender differences in WIF-guilt in parents of young children (ages 1–3), as well as whether these differences are moderated by WIF-conflict and work demand (number of hours worked), and (3) examine whether higher WIF-guilt predicts more permissive parenting. WIFGS scores were predictably associated with related psychological constructs. Mothers reported significantly higher levels of WIF-guilt than fathers. These effects were enhanced among mothers with high WIF-conflict and a high number of working hours. Consistent with anecdotal accounts and theory, WIF-guilt was associated with higher parenting permissiveness. Results provide directions for additional research on parents' emotional experiences.

Keywords Work-family guilt · Work-family conflict · Parenting · Toddlers · Emotion

Introduction

The modern workforce is characterized by increasing numbers of dual earner families, in large part due to mothers entering the workforce (Hayghe 1990). Despite these changing employment patterns, expectations regarding women's roles in childcare and domestic labor have been slower to shift: Mothers continue to hold primary responsibility for childrearing (Bianchi et al. 2006; Sasaki et al. 2010) and the pressure for mothers to spend extensive amounts of time with their children is only increasing (Milkie et al. 2015). Pressure from disparate sources may place working mothers of young children at unique risk for experiencing conflicts between their roles as workers, mothers, and partners. This clash between work and family (Greenhaus and Beutell 1985) may instantiate myriad emotional reactions, such as guilt about the negative impact of work on the family (WIF-guilt), including perceived harm of one's work on children. WIF-guilt may be especially strong among working mothers, who find that their occupation prevents them from fulfilling a socially-prescribed role with respect to their young children (Borelli et al. 2017). In turn, WIF-guilt may prompt parents

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to repair their perceived wrongs by giving in more readily to young children's demands, which in turn could result in negative outcomes for children. Though struggles of working mothers have long been discussed among sociologists (e.g., Hochschild and Machung 1989), little quantitative work has explored this topic.

Work-family conflict (Greenhaus and Beutell 1985) occurs when demands from work and family spheres collide. Theorists identify two main types of work-family conflict: Family-interfering-with-work (FIW) conflict occurs when demands from family life interfere with work obligations (e.g., when a parent must stay home to care for a sick child; Frone et al. 1997); by contrast, work-interfering-with-family (WIF) conflict occurs when demands at work prevent a parent from fulfilling family commitments (e.g., when a parent cannot put a child to bed because of the need to stay at the office for a meeting; Frone et al. 1997). Of these two types of conflicts, mothers' experiences of WIF-conflict may be more pervasive because their primary, gender-prescribed role exists within the family, and thus, they experience more distress when they are perceived as neglecting the family rather than neglecting work (Milkie and Peltola 1999; Nomaguchi et al. 2005). Accordingly, women report greater WIF-conflict, but not FIW-conflict, as compared to men (Aycan and Eskin 2005).

Given that women confront greater WIF-conflict than men, they may consequently experience more negative emotion (e.g., Good and Sanchez 2010; Guerrero-Witt and Wood 2010), such as guilt (Efthim et al. 2001), when violating gender roles. Guilt is a self-evaluative emotion thought to arise when people feel responsible for inflicting pain on another person or violating a moral standard (Baumeister et al. 1994; Tangney 2003). As with other emotional experiences (e.g., happiness; Kim-Prieto et al. 2005), people can experience guilt in varied ways, including globally (e.g., a general predisposition to experience guilt about many aspects of life), domain-specific (e.g., guilt about WIF-conflict), or momentary (e.g., guilt that arises in response to a specific experience). Although little work has examined WIF-guilt, a type of domain-specific guilt, for its association with other markers of distress, studies find that global guilt is associated with greater anxiety (Shapiro and Stewart 2011), depression, and interpersonal difficulties, such as insecure attachment (Lopez et al. 1997). Anxiety and depression are characterized by heightened negative emotion, and adults' attachment insecurity is associated with more general distress about parenting, such as lower parenting satisfaction and greater feelings of stress and aggravation (see Jones et al. 2015, for a review); therefore, it seems likely that greater WIF-guilt would be associated with greater anxiety, depression, and attachment insecurity.

Indeed, studies find that more pronounced work-family conflict is associated with greater work-family guilt among Turkish parents (Aycan and Eskin 2005) and among U.S. parents with traditional gender beliefs (Livingston and Judge 2008). Few quantitative studies have evaluated gender differences in work-family guilt, despite a strong theoretical rationale for doing so (Hochschild and Machung 1989), as well as demonstrated gender disparities in work-family conflict (Aycan and Eskin 2005). However, some preliminary evidence suggests that mothers may experience greater WIF-guilt than fathers. Compared to fathers, U.S. mothers' work-family narratives contain stronger themes of WIF-guilt (Borelli et al. 2017), and Turkish mothers report higher employment-related guilt, a construct similar to WIF-guilt. Yet no studies have investigated gender differences in U.S. parents' subjective experiences of WIF-guilt.

Understanding WIF-guilt is important because guilt may prompt parents to enact behaviors that could confer long-term negative consequences, such as reducing much-needed daycare hours or quitting a job (Hochschild and Machung 1989; Martínez et al. 2011); further, guilt is associated with psychiatric manifestations of distress (Shapiro and Stewart 2011), suggesting that the experience of guilt itself is aversive and may place individuals at risk for maladjustment. Finally, guilt may impact parenting: Scholars suggest that WIF-guilt can prompt parents to engage in repair behavior (e.g., letting children eat sweets), an example of permissive parenting, which is known to be associated with negative child outcomes, such as behavior problems (Martínez et al. 2011; Nomaguchi et al. 2005; Querido et al. 2002), but this assertion has not been tested.

We pursue three goals in the current studies regarding the assessment and meaning of WIF-guilt. We selected a child age range (1–3) that exceeds parental leaves in the U.S., but precedes the enrollment age for most preschools, thereby tapping a period of time that may be replete with work-family conflict. First, we evaluate whether a newly-developed questionnaire is associated with constructs theoretically-related to WIF-guilt and associated with global guilt—depressive and anxiety symptoms, attachment insecurity, WIF-conflict, momentary increases in guilt in response to a work-family conflict stressor, and a behavioral measure of WIF-guilt (Studies 1–3). To assess the specificity of WIF-guilt, we examine its effects over and above global guilt and momentary guilt. Second, to test and replicate our hypothesis that mothers will report significantly more WIF-guilt than fathers, we conduct five studies of gender differences in WIF-guilt, meta-analytically combining the effects observed across studies. To enhance confidence in our findings, we assess whether gender differences in WIF-guilt persist after controlling for relevant covariates (momentary guilt, work-family conflict, global guilt; Studies 1–5) and whether they are exacerbated

among parents who experience greater WIF-conflict (Study 2) or work more hours per week (Study 3). Based on the notion that greater WIF-conflict more strongly exacerbates feelings of WIF-guilt for women, we predict that high levels of WIF-conflict and a high number of hours worked per week will be associated with greater WIF-guilt among women. Third, we test the hypothesis that WIF-guilt will be positively associated with permissive parenting, measured both momentarily (Study 1) and globally (Study 2).

Study 1

First we tested the divergent and convergent validity of the WIFGS by evaluating whether parents' scores were significantly associated with demographics and with anxiety and depressive symptoms. Additionally, we examined whether higher WIFGS scores predicted greater increases in momentary guilt (Hypothesis 1) in response to a simulated parenting stressor.

Method

Participants

Full-time working (>34 h/week) parents ($N = 245$ [128 mothers]) living in the U.S., with children between the ages of 1 and 3, were recruited using Amazon's Mechanical Turk (mTurk) service, which has been shown to yield reliable samples (Buhrmester et al. 2011) that perform comparably to community samples on self-report as well as on behavioral tasks (Casler et al. 2013; Nelson et al. 2017). To prevent participant reactivity or selection biases, the advertisement for the study did not mention anything about work-family guilt, but rather only stated that we were recruiting working parents of young children. Participants responded to an advertisement for a short survey about parenting and emotions. See Table 1 for sample demographics.

Procedure

Participants first completed measures of WIF-guilt, depressive symptoms, and anxiety symptoms; then they completed a parenting stressor. Participants reported demographics at either the beginning or the end of the survey (counterbalanced order).

Measures

WIF-guilt To assess WIF-guilt, we developed the Work-Interfering-with-Family Guilt Scale (WIFGS) following a series of steps: (1) reviewing literature regarding work-family conflict and work-family guilt to provide an operational definition of WIF-guilt, (2) generating a pool of items for our measure, (3) soliciting input from scholars on parenting and gender, and (4) piloting the measure to test its psychometrics, internal validity, and external validity. Based on feedback of parenting experts, we modified and reduced the number of items from 39 to 10, and included 10 distractor items about guilt unrelated to work-family conflict. Piloting of the measure with our target sample ($N = 233$) confirmed that the data were suitable for factor analysis, KMO = .79, Bartlett's test of sphericity = 778.13, $p < .0001$; examination of the scree plot suggested a single factor solution (eigenvalue = 3.65), and all but one item loaded most strongly onto the first factor. Alpha for these nine items was 0.80. Based on this analysis, we retained nine items in the measure, which we used in the studies described below. See Supplementary Materials for full measure.

The resulting WIFGS is a 9-item scale that asks parents to rate the extent to which they experience feelings of responsibility for the actual or potential negative impact that working may have on themselves or members of their family (e.g., "[To what extent do you] feel like you really should be at home when you're away at work"; "Feel like your work has a positive impact on your child" [reverse-scored]) on a 5-point Likert-type scale (1 = *never*, 5 = *always*). Ten distractor items about other forms of guilt were included in the measure (e.g., "Feel guilty about not keeping in better touch with close friends and family"), but were excluded from the tabulation of WIFGS scores.

In the current sample, Cronbach's alpha was good, $\alpha = .72$. Mean scores were used in analyses.

Anxiety The General Anxiety Disorder 7-item scale (GAD-7; Spitzer et al. 2006) is a commonly used, reliable, and valid measure of anxiety symptoms. Using a 4-point Likert scale, participants rated how often they experienced symptoms (e.g., "feeling nervous, anxious, or on edge") over the last two weeks. Cronbach's alpha in this sample was 0.93.

Depressive symptoms The Patient Health Questionnaire (PHQ-9; Kroenke and Spitzer 2002) is a reliable and valid measure of depressive symptoms (Martin et al. 2006). Using a 4-point Likert scale, participants indicated how often they had been bothered by symptoms (e.g., "feeling down, depressed, or hopeless") over the past two weeks. Cronbach's alpha in this sample was 0.91.

Parenting stressor For the purposes of this study, we adapted a parenting stressor task designed to evoke WIF-conflict used in prior studies (Borelli et al. 2017) to include a stronger emphasis on WIF-guilt. Parents were presented with a vignette of a parent getting off work late, having to

Table 1 Descriptive statistics for study variables by parent gender

Measures	Study 1				Study 2			
	Total ($N = 245$) *M (SD)*	Mothers[a] ($n = 128$) *M (SD)*	Fathers[a] ($n = 117$) *M (SD)*	Gender Diff[a] *t*	Total ($N = 255$) *M (SD)*	Mothers[a] ($n = 109$) *M (SD)*	Fathers[a] ($n = 106$) *M (SD)*	Gender diff[a] *t*
Age	32.11 (6.80)	31.73 (7.45)	32.53 (6.04)	−0.63	32.69 (6.93)	32.89 (5.09)	32.26 (4.79)	−0.51
Age range	20–58	20–58	22–46	–	22–57	22–57	22–46	–
% Married	72%	68%	75%	–	69%	67%	82%	–
% Caucasian	74%	73%	75%	–	74%	71%	79%	–
% Bachelor's degree	57%	52%	62%	−1.66	67%	65%	77%	–
% H Inc < 61 K	50%	50%	50%	−0.70	77%	82%	44%	–
Wrk hours/Wk	40.35 (8.24)	38.66 (8.23)	41.58 (8.06)	2.45*	42.47 (5.92)	41.49 (3.80)	43.34 (6.06)	−0.36
State Guilt	6.7 (2.95)	6.85 (3.05)	6.40 (2.70)	1.49	7.75 (4.35)	7.55 (3.85)	7.95 (4.80)	0.43
WIF-guilt[b]	26.80 (5.80)	27.40 (5.81)	25.84 (5.62)	2.50*	26.40 (7.72)	27.03 (8.03)	26.68 (67.47)	0.73

% = percent, *H Inc < 61 K* = household income under $ 61,000 per year, *Wrk Hours/Wk* = number of hours worked per week, *WIF-* guilt = work-interfering-with- family guilt

[a] Gender coded as mothers = 0, fathers = 1 in all analyses. Study 1 $df = 244$, Study 2 $df = 254$

[b] Self-reported data on the Work Interfering with Family Guilt Scale; Scale ranges from 10 to 50

*$p < .05$; **$p < .01$

pick up his/her child from daycare late, and then needing to take the child shopping before going home for the evening. While in the store, the child throws a temper tantrum and is inconsolable, demanding a lollipop (see Supplementary Materials for vignette). This vignette is intended to remind participants of WIF-conflict in that the parent's work obligations are interfering with childcare duties. Parents were then asked a series of questions to immerse them in the emotional experience of the situation in the vignette (e.g., "How would you be feeling at this moment?"). For the purposes of this investigation, we were interested in parents' momentary guilt in response to the stressor (i.e., their self-reports of guilt on the PANAS-X following the task) after controlling for their momentary guilt immediately prior to the stressor.

Momentary guilt Before and after the stressor task, participants reported their current feelings of guilt on the 5-item guilt subscale (e.g., guilty, blameworthy) of the Positive and Negative Affect Schedule-Expanded Form (PANAS-X; Watson and Clark 1994) on a 5-point Likert-type scale (1 = *very slightly or not at all*, 5 = *extremely*). The subscale has shown good test-retest reliability, convergent and discriminant validity (Watson and Clark 1994), and demonstrated good reliability in this sample, $\alpha = .91$. Mean scores were used in analyses.

Permissive parenting In the stressor task, parents were also asked to indicate how they would respond behaviorally if they were in this situation, with options varying in parent permissiveness (Option 1: Buy child lollipop and keep shopping; Option 2: Not buy child lollipop and keep shopping; Option 3: Neither shop nor buy child lollipop; Option 4: Buy child lollipop and stop shopping). Option 2 was designed to be the least permissive parenting response. In our analysis, we collapsed Options 1, 3, and 4 into a "somewhat permissive" category, with Option 2 representing a non-permissive response.

Data analyses

Prior to testing hypotheses, using analyses of covariance (ANCOVAS) controlling for momentary guilt, we first examined whether there were order effects with respect to the collection of demographic data. To evaluate hypotheses related to study validity, we used partial correlations examining links between WIFGS scores and dependent variables controlling for participants' momentary guilt. We assessed for the presence of gender differences in WIF-guilt on the WIFGS using ANCOVAs in which we controlled for momentary or global guilt. Finally, to test the associations between WIF-guilt and state-guilt and parenting permissiveness, we conducted hierarchical linear regressions in which we controlled for momentary guilt and participant gender.

Results

First we examined the divergent validity of the WIFGS. There were no significant main effects or interactions associated with the order in which demographic data were collected. Partial correlations controlling for general guilt

revealed that WIF-guilt was not associated with participant age ($r = .02$), number of children ($r = .05$), educational attainment ($r = -.06$), or household income ($r = .05$; see Supplementary Table 1), providing evidence for divergent validity.

Next we assessed the evidence for the WIFGS's convergent validity: A series of partial correlations controlling for participant gender and momentary guilt revealed that WIF-guilt was significantly associated with anxiety, $r = .35$, $p = .001$, and depressive symptoms, $r = .35$, $p = .001$ (see Supplementary Table 1 for partial correlations of all study variables).

In addition, for the sample as a whole, momentary guilt increased from pre- to post-stressor, $t(244) = 3.92$, $p = .0001$, $r = .21$. A hierarchical linear regression revealed that after controlling for pre-stressor momentary guilt and participant gender, $R^2 = .50$, $p = .0001$, WIF-guilt significantly predicted greater post-stressor momentary guilt, $\beta = .10$, $\Delta R^2 = .01$, $p = .01$.

Then we tested for the presence of gender differences in WIF-guilt. Controlling for momentary guilt, $F(1, 244) = 35.95$, $p = .0001$, $r = .36$, mothers reported more WIF-guilt than fathers, $F(1, 244) = 4.52$, $p = .03$, $r = .13$.

Finally, we examined whether WIF-guilt was associated with permissive parenting behavior. After controlling for pre-stressor momentary guilt and participant gender in an initial step, Wald $\chi^2(1, 214) = 0.35$, $p = .84$, a binary logistic regression revealed that WIF-guilt significantly altered the odds ratio, Wald $\chi^2(1, 214) = 6.28$, $p = .01$. As WIF-guilt increased, the odds of endorsing a permissive response also increased, $\beta = .51$, $p = .01$.

Study 2

In this second study we test the validity of the WIFGS by evaluating whether parents' WIF-guilt is more strongly associated with WIF-conflict than FIW-conflict. We control for momentary guilt to ensure our findings hold beyond the general association between momentary guilt and work-family conflict.

Method

Participants

Full-time working parents (>34 h/week; $N = 215$; 51% female; $M_{age} = 32.65$, $SD_{age} = 6.35$) of children between the ages of 1 and 3 were recruited via identical advertisements as in Study 1 using mTurk (see Table 1).

Procedure

Participants reported WIF-conflict, WIF-guilt, parenting laxness, and momentary guilt. Additionally, they answered questions about their demographics (counterbalanced before or after the psychological measures).

Measures

WIF-guilt Participants completed the WIFGS (Borelli et al. 2017); $\alpha = .71$.

Momentary guilt Participants completed the PANAS-X guilt subscale (Watson and Clark 1994), which demonstrated good reliability in this sample, $\alpha = .83$.

Work-family conflict Participants completed the Work-Family and Family-Work Conflict Scales (Netemeyer et al. 1996), which includes a series of statements assessing WIF- (e.g., "The demands of my work interfere with my home and family life") and FIW-conflict (e.g., "I have to put off doing things at work because of demands on my time at home") on a 7-point Likert scale (*1 = strongly disagree, 7 = strongly agree).* Both of these 5-item scales have demonstrated strong validity and internal consistency in prior research (Netemeyer et al. 1996). Cronbach's alpha was good in this sample, WIF-conflict $\alpha = .95$; FIW-conflict $\alpha = .94$.

Parenting laxness Participants completed the 30-item Parenting Scale (PS; Arnold et al. 1993), which evaluates parenting behavior in discipline situations. Each item contains the beginning of a statement (e.g., "I threaten to do things") and participants choose the point in a 7-point range between two parenting behaviors, one that is considered to be effective discipline (e.g., "that I'm sure I can carry out") and one representing ineffective discipline (e.g., "that I know I won't actually do"), that describes their parenting strategy over the past month. The measure includes three subscales measuring parenting laxness (example above), overreactivity, and verbosity. We were interested in the 11-item parenting laxness subscale, as it most closely aligns with parent permissiveness. Higher scores on the scale indicate greater parenting laxness. Cronbach's alpha was good, $\alpha = .76$.

Data analyses

We followed the same procedures as in Study 1 to test order effects, examine WIFGS validity, test for the presence of gender differences, and examine the associations between WIF-guilt and permissive parenting. In addition, using the PROCESS macro for SPSS, Model 1 (Hayes 2012), we

examined WIF-conflict and hours worked per week as moderators of the link between gender and WIF-guilt. Finally, using PROCESS Model 4, we tested whether WIF-guilt is an indirect effect in the link between WIF-conflict and permissive parenting.

Results

There were no significant main effects or interactions associated with the order in which demographic data were collected. Independent samples *t*-tests revealed no gender differences in WIF-conflict, $t(214) = 0.41$, $p = .68$, or FIW-conflict, $t(214) = 0.49$, $p = .65$.

First we examined the data for evidence of convergent validity. WIF-guilt was positively associated with both WIF-conflict, $r = .54$, $p = .0001$, and FIW-conflict, $r = .40$, $p = .0001$. A Fisher *r*-to-*z* transformation revealed that the association between WIF-guilt and WIF-conflict was significantly stronger than the association between WIF-guilt and FIW-conflict, $z = 1.93$, $p = .02$.

Next, we tested for the presence of gender differences in WIF-guilt. Controlling for momentary guilt, $F(1, 214) = 23.36$, $p = .0001$, $r = .31$, mothers did not report more WIF-guilt than fathers, $F(1, 214) = 1.98$, $p = .16$, $r = .10$. We also tested whether WIF-conflict moderates the association between parent gender and WIF-guilt. After controlling for momentary guilt and main effects, $R^2 = 0.39$, $p = .00001$, a hierarchical linear regression showed that WIF-conflict moderated the association between gender and WIF-guilt, $\Delta R^2 = 0.02$, $p = .021$. Mothers reported relatively greater WIF-guilt than fathers when WIF-conflict was high, $b = -.23$, $p = .01$, but not at average, $b = -.07$, $p = .26$, or low, $b = .08$, $p = .38$, levels of WIF-conflict.

Our subsequent goal was to assess the association between WIF-guilt and parenting permissiveness. A regression revealed that after controlling for momentary guilt and WIF-conflict, $R^2 = 0.16$, $p = .0001$, WIF-guilt was significantly positively associated with parenting laxness, $\Delta R^2 = 0.03$, $\beta = .21$, $p = .01$. Participant gender did not moderate this association, $p = .16$. However, after controlling for momentary guilt and WIF-guilt, $R^2 = 0.18$, $p = .0001$, WIF-conflict was not significantly associated with parenting laxness, $\Delta R^2 = 0.001$, $p = .89$, suggesting that the association between WIF-conflict and parenting laxness may be partially explained by WIF-guilt. Participant gender did not moderate this association, $p = .94$.

To further test this possibility, we assessed whether WIF-guilt is an indirect effect in the link between WIF-conflict and permissive parenting behavior. Controlling for momentary guilt and gender, a regression revealed that WIF-guilt was a significant indirect effect in the model explaining the association between WIF-conflict and parenting laxness, $b = 0.10$, SE = .03, 95% CI [.05, 0.17]. By contrast, when we reversed the outcome and the mediator, we learned that laxness did not mediate the association between WIF-conflict and WIF-guilt, $b = 0.04$, SE = .03, 95% CI [−.02, 0.10], suggesting the specificity of the direction of effects.

Study 3

We provided a third validity check on the WIFGS, assessing its association with WIF-guilt expressed in written narratives and parental attachment insecurity (anxiety and avoidance).

Method

Participants

Full-time working parents (>34 h/week; $N = 255$; 55% female; $M_{age} = 34.35$, $SD_{age} = 6.28$) of children between the ages of 1 and 3 were recruited via identical advertisements as in Study 1 on company listservs, blogs, and parenting-related social media. See Table 2 for sample demographics.

Procedure

Participants completed an open-ended assessment of their reflections regarding the impact of their work on their family. They also reported WIF-guilt, attachment style, and a measure of global guilt. Additionally, they completed some demographic questions (counterbalanced before or after the psychological measures).

Measures

WIF-guilt Participants completed the WIFGS (Borelli et al. 2014a); $\alpha = .80$.

Open-ended assessment of intersection of work and family Participants completed the Work and Family Assessment (WFA; Borelli et al. 2014b), which consists of four open-ended prompts regarding work and family relations (Prompt 1: *How does your employment impact your family?*; Prompt 2: *How does your employment impact your child or children?*; Prompt 3; *How does your employment impact your romantic partner?*; Prompt 4: *How does your employment impact you personally*?).

We assessed participants' responses for (a) WIF-guilt, as rated by trained coders, and (b) frequency of negative emotion word use, as derived from linguistic analysis. Participants' written responses were coded for WIF-guilt on a 7 point scale: Participants received high scores, indicating

Table 2 Descriptive statistics for study variables by parent gender

Measures	Study 3				Study 4			
	Total ($N = 255$)	Mothers[a] ($n = 140$)	Fathers[a] ($n = 115$)	Gender Diff[a]	Total ($N = 106$)	Mothers[a] ($n = 79$)	Fathers[a] ($n = 27$)	Gender diff[a]
	M (SD)	*M (SD)*	*M (SD)*	*t*	*M (SD)*	*M (SD)*	*M (SD)*	*t*
Age	32.61 (4.96)	32.89 (5.09)	32.26 (4.79)	1.06	36.17 (6.93)	33.86 (5.66)	37.83 (9.03)	−2.33*
Age range	21–48	21–46	23–48	–	18–59	18–45	20–59	–
% Married	82%	81%	82%	–	83%	82%	83%	–
% Caucasian	80%	81%	79%	–	51%	51%	50%	–
% Bachelor's degree	76%	76%	77%	–	62%	63%	61%	−1.59
% H Inc < 61 K	40%	38%	44%	–	34%	34%	33%	0.28
Wrk Hours/Wk	45.18 (6.93)	44.81 (7.72)	45.63 (5.81)	−0.93	41.90 (5.01)	41.56 (3.41)	43.50 (6.99)	−2.17*
Global guilt	7.65 (3.85)	7.75 (3.85)	7.55 (3.80)	0.43	7.16 (3.39)	6.95 (2.79)	7.13 (4.30)	−0.25
WIF-guilt[b]	25.37 (6.45)	25.91 (6.72)	24.71 (6.05)	1.48^{t}	28.79 (5.67)	29.57 (5.73)	26.49 (4.92)	2.50*
Attachment Anxiety	47.33 (22.88)	46.37 (23.23)	48.51 (22.49)	−0.74	–	–	–	–
Attachment Avoidance	45.13 (18.08)	44.40 (18.75)	46.01 (17.26)	−0.71	–	–	–	–

% = percent, *H Inc* < 61 K = household income under $ 61,000 per year, *Wrk Hours/Wk* = number of hours worked per week; *WIF*-guilt = work-interfering- with-family- guilt

[a] Gender coded as mothers = 0, fathers = 1 in all analyses. Study 3 $df = 244$; Study 4 $df = 254$

[b] Self-reported data on the Work-Interfering-with-Family Guilt Scale; Scale ranges from 10 to 50

$^{t}p < .10$; $^{*}p < .05$; $^{**}p < .01$

high WIF-guilt, when they expressed feeling at fault for negative impacts on children that arose as a result of working (see Borelli et al. 2017, for more details). Four coders were trained to reliability on a set of 36 narratives created for training purposes (i.e., not part of the study sample). After achieving inter-rater reliability on the training narratives, all four coders coded all of the study narratives. Inter-rater reliability was strong, $\alpha_{\text{WIF-guilt}} = .89$.

Verbatim transcripts of the WFA were also submitted to analysis by the Linguistic Inquiry and Word Count System (LIWC; Pennebaker et al. 2001), a computer-automated program which tabulates the percentage of words that fall into certain semantic or grammatical categories within a text. Because our goal was to further validate the WIFGS, we examined frequency of negative emotion words (e.g., anger, guilt, sad).

Global guilt Participants responded to the 4-item guilt-negative-behavior-evaluation subscale of the Guilt and Shame Proneness Scale (GASP; Cohen et al. 2011), which assesses individual differences in one's general tendency to experience guilt in response to negative behavior. Participants rated the likelihood of their reactions to hypothetical situations (e.g., "You secretly commit a felony. What is the likelihood that you would feel remorse about breaking the law?" 1 = *very unlikely*, 7 = *very likely*). This scale is reliable and has good construct validity and discriminant validity (Cohen et al. 2011; Cohen et al. 2013). In our sample, internal consistency for this 4-item scale was acceptable, $\alpha = .70$.

Attachment style Participants completed the Experiences in Close Relationships—Revised scale (ECR-R; Fraley et al. 2000), a 36-item self-report measure of adult attachment in romantic relationships. The ECR-R consists of two 18-item subscales measuring attachment avoidance (e.g., "I prefer not to be too close to my romantic partners") and anxiety (e.g., "I worry a lot about my relationships"); participants indicate the extent to which items describe them on a 7-point Likert-type scale (1 = *strongly disagree;* 7 = *strongly agree*). This widely-used measure of attachment style is reliable and valid (Sibley et al. 2005). Reliability in our sample was excellent (avoidance: $\alpha = .92$; anxiety: $\alpha = .94$).

Hours worked Participants indicated how many hours they worked on average each week on a single item. Responses ranged from 36 to 81 h per week, $M = 45.18$, SD = 6.93.

Data analyses

We followed the same procedures as in Study 1 to test order effects, examine WIFGS validity, and test for the presence of gender differences. We followed the same procedures as in Study 2 to test whether hours worked moderated the association between participant gender and WIF-guilt.

Results

No order effects of demographic questions emerged.

We compared participants' scores on the WIFGS with their responses to the WFA. Partial correlations controlling for gender and global guilt revealed that WIFGS scores were positively associated with coder-rated WIF-guilt in the WFA, $r = .47$, $p = .0001$, and frequency of negative emotion word use when discussing the impact of work on the child, $r = .18$, $p = .005$.

Partial correlations controlling for participant gender and global guilt revealed that WIF-guilt was positively associated with attachment anxiety, $r = .43$, $p = .0001$, and attachment avoidance, $r = .33$, $p = .0001$ (see Supplementary Table 2 for partial correlations of all study variables).

Next, we tested for the presence of gender differences in WIF-guilt. After controlling for global guilt, $F(1, 252) = 0.03$, $p = .86$, $r = .01$, we found that mothers ($M = 2.61$, $SD = .05$) reported significantly higher WIF-guilt than fathers ($M = 2.45$, $SD = .06$), $F(1, 252) = 3.78$, $p = .05$, $r = .12$.

As in Study 2, we also tested for moderators of the association between parent gender and WIF-guilt. After controlling for global guilt and main effects, $R^2 = 0.18$, $p = .0001$, gender significantly moderated the association between hours worked outside the home and WIF-guilt, $\Delta R^2 = 0.02$, $p = .03$ (see Supplementary Figure 1); for mothers, working more hours outside the home was associated with greater WIF-guilt, $b = 0.01$, $p = .002$, whereas for fathers, the association was not significant, $b = -.0003$, $p = .94$. Among parents who worked average (45.18) hours, $b = -0.16$, $p = .03$, or a high number of hours outside the home (1 SD above average; 52.11 h), $b = -0.32$, $p = .003$, mothers reported significantly more WIF-guilt than fathers. However, there were no significant gender differences in WIF-guilt among parents who worked a low number of hours outside the home (1 SD below average, 38.25 h), $b = 0.001$, $p = .99$.

Studies 4 and 5

The results of Studies 4 and 5 replicated the sample recruitment techniques and effects observed in Studies 1–3 and are not described in depth here. The complete details of these studies are included in Supplementary material. In brief, in Study 4, we found that among a sample of full-time working parents ($N = 106$; 75% mothers) of children between the ages of 1 and 3 recruited from the community, the WIFGS demonstrated strong psychometric properties (e.g., $\alpha = .74$), and an ANCOVA revealed that after controlling for covariates, mothers reported more WIF-guilt than fathers, $F(1, 104) = 7.72$, $p = .01$, $r = .26$. Similarly, in Study 5 we recruited a sample of full-time working parents of children between the ages of one and three from mTurk ($N = 233$, 52% mothers, $M_{age} = 31.61$, $SD_{age} = 5.44$), the WIFGS again showed psychometric promise (e.g., $\alpha = .80$), and after controlling for covariates, participant gender significantly predicted WIF-guilt, $F(1, 232) = 6.95$, $p = .01$, $r = .17$, with mothers reporting higher WIF-guilt than fathers (Table 3).

Meta-Analysis of Studies 1–5

Across five samples with a total of 1054 participants, we tested our hypotheses regarding gender differences in WIF-guilt (Aim 2). To gain a more accurate estimate of the effect

Table 3 Descriptive statistics for study variables by parent gender

Measures	Study 5			
	Total ($N = 233$) *M (SD)*	Mothers[a] ($n = 121$) *M (SD)*	Fathers[a] ($n = 112$) *M (SD)*	Total ($N = 233$) *M (SD)*
Age	31.65 (5.43)	31.30 (5.09)	32.03 (4.42)	31.65 (5.43)
Age range	21–55	21–55	21–47	21–55
% Married	76%	73%	79%	76%
% Caucasian	78%	76%	79%	78%
% Bachelor's degree	61%	68%	51%	61%
% H Inc < 61 K	46%	55%	36%	46%
Wrk Hours/Wk	42.76 (5.13)	42.14 (4.08)	43.45 (6.03)	42.76 (5.13)
State Guilt	6.90 (4.99)	7.84 (5.15)	5.85 (4.60)	6.90 (4.99)
Reported WIF-guilt	26.47 (6.79)	27.20 (7.32)	25.66 (6.07)	26.47 (6.79)

% = percent, *H Inc* < 61 K = household income under $ 61,000 per year, *Wrk Hours/Wk* = number of hours worked per week; *WIF*-guilt = work-interfering- with-family- guilt

[a] Gender coded as mothers = 0, fathers = 1 in all analyses

size for gender differences in WIF-guilt, we meta-analytically combined the effect sizes from the five studies and conducted analyses using both fixed effects and random effects models for comparisons both with and without covariates. The fixed effects model is statistically powerful and appropriate for small-sample meta-analyses (Rosenthal 1995). For these analyses, one-tailed p-values from each study were converted to Z scores and then combined using the Stouffer method (Rosenthal and Rosnow 2008). The random effects model is notably less powerful, but allows for generalization to studies beyond this sample. For these analyses, one-sample t-tests were conducted on the average Fisher Z_r effect sizes (Rosenthal 1995).

For comparisons including covariates, the unweighted mean $r(.15)$ and weighted mean $r(.14)$ were close in magnitude. Moreover, this effect size was significant using both the random, $t(4) = 5.56$, one-tailed $p = .0025$, and the fixed effects model, $Z = 4.44$, $p = .000005$. Analyses excluding covariates (unweighted $r = .15$, weighted $r = .14$), were also significant using the random, $t(4) = 4.54$, one-tailed $p = .005$, and the fixed effects model, $Z = 4.58$, $p = .000002$.

General Discussion

One initial goal of this research was to develop and test a self-report measure of guilt about the impact of work on children (a form of WIF-guilt) for parents of young children and to examine whether mothers endorse having greater WIF-guilt than fathers. Results from Studies 1–3 supported the convergent and divergent validity of the WIFGS, and results from all five studies provided evidence of the measure's strong internal consistency.

Our first aim in the study was to examine evidence for the validity of the WIFGS. The results from these investigations provide evidence of the validity of the measure: WIFGS scores were associated with constructs theoretically related to WIF-guilt (depression, anxiety, attachment avoidance, attachment anxiety, WIF-conflict) and were not significantly associated with demographic factors thought to be unrelated to WIF-guilt. WIFGS scores were significantly associated with coder-rated guilt and frequency of negative emotion word use on a narrative assessment of WIF-guilt. Additionally, higher WIFGS scores predicted greater increases in momentary guilt in response to a parenting stressor involving WIF-conflict. Although future studies should further evaluate the validity of the WIFGS, as well as the test-retest reliability of the measure, we concluded that we had sufficient evidence to proceed in testing hypotheses regarding WIF-guilt.

Our second aim in conducting these studies was to evaluate gender differences in WIF-guilt among working parents of young children. Findings from five different samples converge on the idea that mothers of young children report more WIF-guilt than fathers of young children, effects that remain significant after controlling for general momentary guilt, global guilt, and WIF-conflict. Indeed, the results of our meta-analysis suggest that although gender was not a significant predictor of WIF-guilt in one of the five studies (Study 2), across the studies, the effect was statistically significant. In Study 2, although we did not find a main effect of gender, our results suggested that for mothers, number of hours worked outside the home was positively associated with WIF-guilt, whereas for fathers, WIF-guilt levels were independent of hours worked outside the home. Similarly, in Study 3, we found that when mothers experienced greater work-family conflict, they reported more WIF-guilt than fathers. This finding provides indirect support for the notion that WIF-guilt arises from WIF-conflict—without WIF-conflict, mothers do not have higher WIF-guilt than fathers. These findings extend the evidence for the WIFGS and suggest that certain working mothers may be more at risk for WIF-guilt than others.

Although these findings may be unsurprising to readers of parenting blogs, to our knowledge, gender differences in the subjective experience of work-family or WIF-guilt of U.S. parents have not been previously demonstrated quantitatively. However, our findings are consistent with our work documenting gender differences in coder-rated WIF-guilt (Borelli et al. 2017), as well as with a Turkish study that documented gender differences in "employment-related guilt," a related construct (Aycan and Eskin 2005).

Our data do not enable us to explain the mechanisms underlying why mothers report higher levels of WIF-guilt than fathers. Prior findings suggest that Turkish mothers report more WIF-conflict than fathers (Aycan and Eskin 2005), although we did not find this same pattern among our U.S. samples (see Study 2), which leads us to believe that the gender differences in WIF-guilt are likely not accounted for by gender differences in WIF-conflict. However, we did find when mothers, but not fathers, experience greater WIF-conflict, they also report greater WIF-guilt, suggesting that WIF-conflict is particularly detrimental for mothers' experiences of WIF-guilt. Perhaps mothers are more likely than fathers to feel that the experience of WIF-conflict means that they have failed their children in some important way, or that it activates feelings of anxiety regarding not providing for children or not living up to societal, familial, or even personal expectations regarding work-family balance. We hope that researchers will continue to explore these and other potential mechanisms underlying gender differences in WIF-guilt.

These findings inspire a host of questions regarding working parents' emotional experiences. For instance, parents are likely to experience a range of emotional reactions to WIF - conflicts (e.g., anxiety, anger, hopelessness)—are there gender differences in the experience of other emotional reactions to this conflict? Further, what intraindividual or situational/cultural factors predict whether WIF conflict is associated with guilt vs. other emotions? The results of one recent study found that mothers who work and have traditional beliefs about childcare responsibilities report greater anxiety than mothers whose responsibilities at work and home match their gender beliefs (Mickelson et al. 2013). Though pertaining to general anxiety rather than domain-specific guilt, these effects lead us to wonder whether parents' cultural and gender values influence the association between gender and WIF-guilt.

Our final aim was to examine whether WIF-guilt was associated with self-reported parenting behavior. In support of our hypotheses, our results revealed that WIF-guilt was associated with reports of situation-specific and general permissive parenting, providing preliminary evidence of the association between WIF-guilt and parenting-related constructs. Because these constructs were measured cross-sectionally, our data do not enable us to ascertain whether WIF-guilt caused permissive parenting, whether permissive parenting results in greater WIF-guilt, or whether a third factor explains the association of the first two; longitudinal studies will afford insight into the directionality of influence. These findings confirm what sociologists have observed in terms of work-family guilt being linked to more permissive parenting (Martínez et al. 2011), and suggest that parents' feelings of guilt may be detrimental for children. It would be informative to evaluate whether any negative impacts of parents' work on children are partially or wholly mediated by work-family guilt and permissiveness. In future studies it will be interesting to examine whether partners attenuate or enhance parents' WIF-guilt, as well as how parents' socialization histories (e.g., having a mother who worked when the parent was young) impact their WIF-guilt. Similarly, taking a dyadic approach to understanding experiences of work-family guilt within the family system would be informative.

We demonstrate that mothers' subjective experiences of WIF-guilt are worse than fathers', and that WIF-guilt may leave them vulnerable to the negative impact of mundane parenting stressors and render them more likely to use non-optimal parenting strategies, which over time may make children's behavior more difficult to regulate. These initial findings suggest that further exploration of this issue is merited, as finding ways to improve working parents' sentiment regarding work-family conflict is an essential part of supporting healthy families.

Limitations and Strengths

The findings of the current study should be interpreted in light of a few limitations. First, we did not directly assess participants' gender beliefs. Prior work suggests that feminine gender roles are associated with higher guilt (Benetti-McQuoid and Bursik 2005), and that conflicts in gender beliefs and work status are associated with higher anxiety (Mickelson et al. 2013), leading us to believe that gender beliefs represent an important dimension to examine in future studies of WIF-guilt.

Further, we speculate that WIF-guilt influences parenting behavior; however, at this point we are only able to link WIF-guilt with reports of parenting behavior (Studies 1 and 2). Observations of parenting sensitivity during parent-child interactions would be a natural progression in this line of work. Finally, all of the studies conducted here were cross-sectional. Work using experimental inductions of WIF-guilt as well as longitudinal studies of WIF-guilt across a child's development would significantly advance our understanding of the effects of WIF-guilt.

Limitations notwithstanding, the studies described here have notable strengths, including multiple checks on WIFGS's validity, both within and across measurement modalities (i.e., self-report and coder-rated data). We collected our data using representative, large samples of working parents. Further, given current concerns regarding lack of replication of key findings in psychological science (Open Science Collaboration 2015), it is noteworthy that we found the same pattern of gender differences results across five non-overlapping data collections, which when combined meta-analytically, suggest that this is a robust effect.

Author Contributions J.B. designed the study, conducted the analyses, and wrote the paper; S.K.N. designed the study, contributed to analyses and writing; L.R. designed the study, executed the study, contributed to analyses and writing; S.B. helped with study design, collaborated with writing; C.M.R. provided guidance regarding study design and writing.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no competing interests.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study prior to the commencement of their participation.

References

Arnold, D. S., O'Leary, S. G., Wolff, L. S., & Acker, M. M. (1993). The parenting scale: A measure of dysfunctional parenting in discipline situations. *Psychological Assessment*, *5*(2), 137–144. doi:10.1037//1040-3590.5.2.137.

Aycan, Z., & Eskin, M. (2005). Relative contributions of childcare, spousal support, and organizational support in reducing work-family conflict for men and women: The case of Turkey. *Sex Roles*, *53*(7–8), 453–471. doi:10.1007/s11199-00507134-8.

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, *115*(2), 243–267. doi:10.1037/0033-2909.115.2.243.

Benetti-McQuoid, J., & Bursik, K. (2005). Individual differences in experiences of and responses to guilt and shame: Examining the lenses of gender and gender role. *Sex Roles*, *53*(1–2), 133–142. doi:10.1007/s11199-005-4287-4.

Bianchi, S. M., Robinson, J. P., & Milkie, M. A. (2006). *Changing rhythms of American family life*. New York, NY: Russell Sage Foundation.

Borelli, J.L., Burkhart, M., Rasmussen, H.F., Brody, R., & Sbarra, D.A. (2017). Secure base scripts explain the association between attachment avoidance and emotion-related constructs in parents of young children. *Infant Mental Health Journal*. doi:10.1002/imhj.21632.

Borelli, J. L., Nelson, S. K., River, L. M., Birken, S. A., & Moss-Racusin, C. (2017). Gender differences in work-family guilt in parents of young children. *Sex Roles*, *76*(5), 356–368. doi:10.1007/s11199-016-0579-0.

Borelli, J. L., Nelson-Coffey, S. K., & River, L. M. (2014a). *The work-interfering-with-family guilt scale*. Claremont, CA: Pomona College. Unpublished document.

Borelli, J. L., Nelson, S. K., & River, L. M. (2014b). *Pomona work and family assessment*. Claremont, CA: Pomona College. Unpublished document.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's mechanical turk a new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*(1), 3–5. doi:10.1177/1745691610393980.

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, *29*(6), 2156–2160. doi:10.1016/j.chb.2013.05.009.

Cohen, T. R., Panter, A. T., & Turan, N. (2013). Predicting counterproductive work behavior from guilt proneness. *Journal of Business Ethics*, *114*(1), 45–53. doi:10.1007/s10551-012-1326-2.

Cohen, T. R., Wolf, S. T., Panter, A. T., & Insko, C. A. (2011). Introducing the GASP scale: A new measure of guilt and shame proneness. *Journal of Personality and Social Psychology*, *100*(5), 947–966. doi:10.1037/a0022641.

Efthim, P. W., Kenny, M. E., & Mahalik, J. R. (2001). Gender role stress in relation to shame, guilt, and externalization. *Journal of Counseling and Development*, *79*(4), 430–438. doi:10.1002/j.1556-6676.2001.tb01990.x.

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, *78*(2), 350–365. doi:10.1037/0022-3514.78.2.350.

Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior*, *50*(2), 145–167. doi:10.1006/jvbe.1996.1577.

Good, J. J., & Sanchez, D. T. (2010). Doing gender for different reasons: Why gender norm conformity positively and negatively predicts self-esteem. *Psychology of Women Quarterly*, *34*(2), 203–214. doi:10.1111/j.1471-6402.2010.01562.x.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*(1), 76–88. doi:10.5465/AMR.1985.4277352.

Guerrero-Witt, M., & Wood, W. (2010). Self-regulation of gendered behavior in everyday life. *Sex Roles*, *62*(9–10), 635–646. doi:10.1007/s11199-010-9761-y.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]. Retrieved from http://www.afhayes.com/public/process2012.pdf.

Hayghe, H. (1990). Family members in the work force. *Monthly Labor Review*, *113*(3), 14–19.

Hochschild, A. R., & Machung, A. (1989). *The second shift: Working parents and the revolution at home*. New York, NY: Viking.

Jones, J. D., Cassidy, J., & Shaver, P. R. (2015). Parents' self-reported attachment styles: A review of links with parenting behaviors, emotions, and cognitions *Personality and Social Psychology Review*, *19*(1), 44–76. doi:10.1177/1088868314541858.

Kim-Prieto, C., Diener, E., Tamir, M., Scollon, C., & Diener, M. (2005). Integrating the diverse definitions of happiness: A time-sequential framework of subjective well-being. *Journal of Happiness Studies*, *6*(3), 261–300. doi:10.1007/s10902-005-7226-8.

Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: A new depression diagnostic and severity measure. *Psychiatric Annals*, *32*(9), 509–515. doi:10.3928/0048-5713-20020901-06.

Livingston, B. A., & Judge, T. A. (2008). Emotional responses to work-family conflict: An examination of gender role orientation among working men and women. *Journal of Applied Psychology*, *93*(1), 207–216. doi:10.1037/0021-9010.93.1.207.

Lopez, F. G., Gover, M. R., Leskela, J., Sauer, E. M., Schirmer, L., & Wyssmann, J. (1997). Attachment styles, shame, guilt, and collaborative problem-solving orientations. *Personal Relationships*, *4*(2), 187–199. doi:10.1111/j.1475-6811.1997.tb00138.x.

Martin, A., Rief, W., Klaiberg, A., & Braehler, E. (2006). Validity of the brief patient health questionnaire mood scale (PHQ-9) in the general population. *General Hospital Psychiatry*, *28*(1), 71–77. doi:10.1016/j.genhosppsych.2005.07.003.

Martínez, P., Carrasco, M. J., Aza, G., Blanco, A., & Espinar, I. (2011). Family gender role and guilt in spanish dual-earner families. *Sex Roles*, *65*(11–12), 813–826. doi:10.1007/s11199-011-0031-4.

Mickelson, K. D., Chong, A., & Don, B. (2013). To thine own self be true: Impact of gender role and attitude mismatch on new mothers' mental health. In J. Marich (Ed.). *Psychology of women: diverse perspectives from the modern world* (pp. 1–16). Hauppauge, NY: Nova Science Publishers.

Milkie, M. A., Nomaguchi, K. M., & Denny, K. E. (2015). Does the amount of time mothers spend with children or adolescents matter? *Journal of Marriage and Family*, *77*(2), 355–372. doi:10.1111/jomf.12170.

Milkie, M. A., & Peltola, P. (1999). Playing all the roles: Gender and the work-family balancing Act. *Journal of Marriage and Family*, *61*(2), 476–490. doi:10.2307/353763.

Nelson, S. K., Layous, K., Cole, S. W., & Lyubomirsky, S. (2017). Are fathers (but not mothers) happier than their childless peers? Gender moderates the association between parenthood, psychological need satisfaction, and stress. Manuscript under review.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology*, *81*(4), 400–410. doi:10.1037/0021-9010.81.4.400.

Nomaguchi, K. M., Milkie, M. A., & Bianchi, S. M. (2005). Time strains and psychological well-being do dual-earner mothers and fathers differ? *Journal of Family Issues*, *26*(6), 756–792. doi:10.1177/0192513X05277524.

Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, *349*(6251), aac4716–aac4716. doi:10.1126/science.aac4716.

Pennebaker, J. W., Francis, M. E., & Booth, R. J. (2001). *Linguistic inquiry and word count (LIWC): LIWC2001*. Mahwah, NJ: Lawrence Erlbaum.

Querido, J. G., Warner, T. D., & Eyberg, S. M. (2002). Parenting styles and child behavior in African American families of preschool children. *Journal of Clinical Child Psychology*, *31*(2), 272–277. doi:10.1207/153744202753604548.

Rosenthal, R. (1995). Writing meta-analytic reviews. *Psychological Bulletin*, *118*(2), 183–192. doi:10.1037/0033-2909.118.2.183.

Rosenthal, R., & Rosnow, R. L. (2008). *Essentials of behavioral research: Methods and data analysis*. 3rd edn. New York, NY: McGraw-Hill.

Sasaki, T., Hazen, N. L., & Swann, W. J. (2010). The supermom trap: Do involved dads erode moms' self-competence? *Personal Relationships*, *17*(1), 71–79. doi:10.1111/j.1475-6811.2010.01253.x.

Shapiro, L. J., & Stewart, S. E. (2011). Pathological guilt: A persistent yet overlooked treatment factor in obsessive-compulsive disorder. *Annals of Clinical Psychiatry*, *23*(1), 63–70.

Sibley, C. G., Fischer, R., & Liu, J. H. (2005). Reliability and validity of the revised experiences in close relationships (ECR-R) self-report measure of adult romantic attachment. *Personality and Social Psychology Bulletin*, *31*(11), 1524–1536. doi:10.1177/0146167205276865.

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. doi:10.1001/archinte.166.10.1092.

Tangney, J. P. (2003). Self-relevant emotions. In M. R. Leary, J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 384–400). New York, NY: Guilford Press.

Watson, D., & Clark, L.A. (1994). *The PANAS-X: Manual for the Positive and Negative Affect Schedule-Expanded Form*. Unpublished manuscript, University of Iowa, Iowa City, IA.