

Who mothers Mommy?

Factors that contribute to mothers' well-being

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Abstract

Developmental science is replete with studies on the impact of mothers on their children, but little is known about what might best help caregivers to function well themselves. In an initial effort to address this gap, we conducted an internet-based study of over 2,000 mostly well-educated mothers, seeking to illuminate salient risk and protective processes associated with their personal well-being. When women's feelings in the parenting role were considered along with dimensions of personal support as predictors, the latter set explained at least as much variance -- and often much more -- across dimensions of mothers' personal well-being. Within the latter set of personal support predictors, findings showed that four had particularly robust links with mothers' personal adjustment: Their feeling unconditionally loved, feeling comforted when in distress, authenticity in relationships, and satisfaction with friendships. Partner satisfaction had some associations with personal adjustment outcomes, but being married in itself had negligible effects. Findings are discussed in terms of implications for future research, and for interventions aimed at fostering resilience among mothers facing high level of stress in their role as parents.

Keywords: Maternal adjustment, motherhood, parenting stress, social support, resilience

“My children cause me the most exquisite suffering of which I have any experience. It is the suffering of ambivalence: the murderous alternation between bitter resentment and raw-edged nerves, and blissful gratification and tenderness.” -- Adrienne Rich (1995; pp. 21-22)

Motherhood is a decades-long developmental task, yet little is known about the factors that best help women maintain equanimity of spirit despite the myriad challenges inevitably encountered. In this study, the central aim was to examine the relative significance of two sets of factors likely to affect mothers' well-being: those pertaining to their experiences in parenting, and those related to dimensions of personal support. The salience of both sets of constructs were examined in relation to diverse aspects of distress and well-being in a large sample of over 2,000 mostly well-educated women

Risks experienced by affluent mothers

As gratifying as motherhood can be, it is inevitably taxing. Describing the demands, Balaji and colleagues pithily note that, “parenting involves a number of mental health costs, including time, physical and emotional energy, conflicts with other social roles, and the economic burden of childrearing. These hardships are especially salient for women, who are often the primary caretakers of children” (Balaji, Claussen, Smith, Visser, Morales, & Perou, 2007, p. 1388).

Increasingly, it has been suggested that the burdens associated with parenting can be particularly pronounced in a group rarely considered in developmental science, that is, upper-middle class mothers. Cohort data indicate marked increases in demands on energy and time in this group: Between 1993 and 2008, college-educated mothers increased their time invested in childrearing from 12.0 to 20.5 hours per week, whereas less educated mothers increased theirs from 10.5 to 16.0 hours (Ramey & Ramey, 2010). Parallel increases for college-educated fathers were from 4.2 to 9.7 hours per week. Similarly, data between 2003 and 2007 showed that as compared to their less educated counterparts, college-educated American mothers of six to thirteen year olds invested 130 percent more time in parenting responsibilities of “management”, that is, planning, organizing, and monitoring their children's lives outside the home (Kalil, Ryan, & Corey, 2012).

The psychological toll associated with such management responsibilities is highlighted in sociological research. Lareau and her colleagues have established that well-educated mothers (with college degrees or more) disproportionately shoulder the work of coordinating “concerted cultivation” via children's extra-curricular pursuits (Lareau, 2003; Lareau & Weininger, 2008). “Mothers reported nagging children to get ready, coping with children's resentment and irritation, and racing to get to activities in the requisite time period; the strict deadlines created countless headaches for parents,

particularly mothers. Fathers were insulated from this “invisible labor.” (Lareau & Weininger, 2008, p. 443).

Two personal characteristics, additionally, can also render highly educated women vulnerable to distress: their gender, and paradoxically, what is typically considered an asset, their intelligence. As Susan Nolen-Hoeksema’s (2001) seminal work showed, women are more prone than men to ruminate when distressed. In other research, high verbal intelligence has been linked with significantly higher levels of worry and rumination severity (Penney, Miedema, & Mazmanian, 2015). Worry and intelligence, furthermore, are both characterized by depletion of metabolic substrate in subcortical white matter within the brain, leading to the suggestion that intelligence may actually have “co-evolved with worry in humans” (Coplan et al., 2012).

Mothers’ well-being: Resting chiefly on “success as parent” or personal support?

In contemporary media, there are frequent suggestions that today’s mothers are excessively child-centric, preoccupied to an unhealthy degree with how well their children are doing (Chua, 2011; Hofer & Moore, 2013; Nelson, 2010; Warner, 2005). Some have gone as far as suggesting that when children come along, motherhood becomes the new “priority and religion”, relegating to the background personal relationships including marriage (Teller & Teller, 2014). Describing the complex challenges of parenthood today, Senior (2014) argues that for many women, children overwhelmingly redirect the course of their marriages, jobs, hobbies, and friendships, besides largely shaping their internal sense of self.

To some degree, the contagion of stress from their children is inevitable, as seen in biological evidence on mothers affected by distress in their offspring (see Barrett & Fleming, 2011; Swain, Lorberbaum, Kose, & Strathearn, 2007; Taylor, 2002). In general, mothers tend to be more sensitive to the cries of their newborn infants than are fathers (De Pisapia, Bornstein, Rigo, Esposito, De Falco, & Venuti, 2013), and their early preoccupation with their infants is typically more intense (Leckman, Feldman, Swain, Eicher, Thompson, & Mayes, 2004; Winnicott, 1956). Later in development, mothers tend to be more affected than fathers by emotional distance from teenagers, as their identities are strongly associated with the maternal role (Collins & Russell, 1991).

Being affected by their children’s distress does not, however, necessarily imply overarching angst; mothers’ well-being can be significantly bolstered by support from others. In other words, it is possible that rather than being hijacked by perturbations in parenting, the well-being of mothers – even the most accomplished or well-educated – rests as much if not more on the emotional sustenance that they receive. Applied developmental scientists have argued that among all groups of mothers experiencing difficulties as caregivers, ego-depletion can be attenuated if they themselves regularly receive “tending” (Luthar, Crossman, & Small, 2015; Shonkoff & Fisher, 2013). Additionally, studies have shown that like their low-income counterparts (see Ammerman, Putnam, Altaye, Stevens, Teeters, & Van Ginkel, 2013; Balaji et al., 2007), mothers from relatively affluent families do benefit greatly from social support. Protective effects have been shown in the face of adversities ranging from postpartum depression and parenting a child with special needs, to stressors associated with discrimination, military deployment, and family relocation (Barker, Hartley, Seltzer, Floyd, Greenberg, & Orsmond, 2011; Bos, Van Balen, & Van den Boom, 2004; Hartley & Shultz, 2015; Strange, Fisher, Howat, & Wood, 2014; Sipal & Sayin, 2013; Weis & Ryan, 2012).

Given the evidence cited, the goal in this study was to disentangle the relative influence of the two sets of potential predictors previously discussed. In a sample of mostly well-educated mothers, we sought to explore the degree to which mothers’ personal well-being is in fact associated with vicissitudes in their feelings as parents, as opposed to the degree to which they feel supported themselves.

Operationalization of central constructs

In operationalizing feelings as parents, we considered both positive and negative indices, including several commonly examined such as overall feelings of satisfaction and efficacy in parenting, as well as guilt, role overload, and rejection of the child (Bornstein, 2005). In addition, we included two dimensions that pertained to the child’s behavior directed specifically at the mother, one positive and the other negative. It is conceivable that over and above general feelings of satisfaction or guilt in the parenting role, a mother’s well-being could also rest on perceptions of the child being affectionate and thoughtful in one-on-one interactions with her, as opposed to being rude, distancing or rejecting of her.

Personal support was operationalized via marital status and satisfaction with both marriages and friendships (see Antonucci, Arouch, & Birditt, 2004; Cutrona, 2004), as well as new constructs believed to

be important for mothers' well-being. The new dimensions explored were each intended to capture women's feelings that they had dependable, authentic connections in their personal lives. These included the degree to which mothers (a) felt unconditionally accepted, or seen and loved for their "core" selves; (b) comforted, when in distress; and (c) "mothered", themselves, in their everyday lives. Additionally, mothers were asked (d) whether they had someone with whom they could comfortably share their innermost feelings including hurts and fears, and about (e) their felt authenticity, or being themselves in personal relationships.

Adjustment dimensions included several commonly examined in the past: feelings of anxiety, depression, stress, as well as overall satisfaction with life. Also considered were two new constructs that appear to be critical among upper middle class women specifically (Luthar, Barkin, & Crossman, 2013; Warner, 2005), that is, feelings of emptiness and dissatisfaction, and those of personal fulfillment and gratification, in their everyday lives (see "Methods" for details). With diverse adjustment outcomes examined, our goal was to base our central inferences regarding salient predictors only if they showed *recurrent links* across multiple adjustment outcomes, each with medium to large *effect sizes*. Such replication of findings across conceptually similar outcomes is considered particularly important while testing associations in heretofore little-examined research questions and hypotheses (Maner, 2014; Sheldon & Hoon, 2007; Stroebe & Strack, 2015).

Summary

To summarize, we addressed the following questions in this exploratory study of largely well-educated mothers. (1.) In terms of potential ramifications for mothers' psychological well-being, what is the relative significance of dimensions of parenting, versus feeling personally supported by others? (2.) Among different dimensions of feeling personally supported, which have the greatest unique ramifications for mothers' well-being?

Methods

Sample and Procedure

Data were collected through the "Moms As People" Survey, an online questionnaire developed to examine how mothers feel about various aspects of their lives, with the intention to oversample for relatively well-educated women. A total of 2,247 American women completed the survey between 2005 and 2010. (Note: An additional 997 had responded to an earlier version of this survey that included several rights-managed scales (e.g. the Beck Depression Inventory) that became prohibitively expensive. Those respondents are not included in the current sample).

Mothers were recruited via descriptions of the survey in talks for PTA groups and scientists and associated news articles (a list is in Luthar, 2015); emails from colleagues and students to mothers they knew personally (and from them to other mothers); flyers placed in gymnasiums, libraries, and other community centers; and at a national level, through dissemination by journalist and author Judith Warner (2005). Discussing early pilot work on this project, Warner (2006b) described the survey as very insightful and thought-provoking and encouraged all mothers to take it (see also Warner, 2006a). No incentives were offered for participation; despite this, 88% of mothers who began the questionnaires completed them with only 11.8% of mothers discontinuing the survey before the end.

As work with this project evolved over the years and we received feedback from participants, we included additional questions that seemed to be of potentially high significance. In particular, later waves of data collection included new measures of personal support and feelings associated with personal relationships (see "Methods" for details).

Demographic information is provided in Table 1. Efforts to oversample for well-educated women were successful, with 84% of the sample having at least a college degree, and almost half (47%) had a graduate degree. Most women (85%) were legally married. Of the women who reported having a partner or spouse, 2029 (92% of the whole sample) had male partners and 50 (2%) had female partners.

----- Insert Table 1 about here -----

Measures

In Table 2, we indicate the total number of women who provided data for each measure included in this report as well as alpha coefficients of internal consistency for multi-item scales. For those measures not previously published – i.e., were created specifically for this study – we indicate them with

an asterisk in the sections that follow, and we list the specific items in these new measures in Appendix A.

Maternal Adjustment. *Anxiety* was measured by the Zung Self-Rating Anxiety Scale (Zung, 1971) with 20 items rated on 4-point Likert scale (1=a little of the time; 4=most of the time). Total scores corresponded to the following categories: Below 45 - no anxiety; 46-59 - minimal to moderate anxiety; 60-74 - moderate to severe anxiety; and scores 75 and above - extreme anxiety.

Depression was assessed by the Zung Self-Rating Depression Scale (Zung, 1965), also with 20 items rated on a 4-point Likert scale (1=a little of the time; 4=most of the time). The categorical descriptors for ranges of scores are as follows: Below 45 - no depression; 46-59 - mild depression; 60-69 moderate depression; 70 and above - severe depression.

Mothers' levels of *stress* were measured by 10-item Perceived Stress Scale-10 (Cohen, Kamarck, & Mermelstein, 1983), with ratings on a 5-point scale. *Emptiness** was assessed by four items reflecting women's feelings of emptiness and dissatisfaction with their lives and *Fulfillment** was assessed by five items indicating a sense of gratification and pursuit of meaningful life goals; both were rated on a 5-point scale (see Appendix A). *Loneliness* was measured by the UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978), with 20 items rated on a 4-point scale, and overall *Life Satisfaction* was assessed by the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), with five items measuring global cognitive judgments of satisfaction with one's life, rated on a 7-point scale.

Parenting Experiences. *Satisfaction with Parenting**, *Parenting Efficacy**, *Parenting Guilt**, and *Parenting Role Overload** were assessed via scales with eight, thirteen, six, and seven items respectively, each rated on a 5-point scale (see Appendix A). In addition, feelings of *Rejection of the child* were measured by the Undifferentiated Rejection subscale of the Mother version of the Parental Acceptance-Rejection Questionnaire (PARQ; Rohner, Saavedra, & Granum, 1978). This subscale consists of 10 items measuring parents' self-perceptions of their rejecting behaviors toward their child, rated on a 4-point scale.

Mothers responded to six and five items (each rated on a 5-point scale) respectively, assessing the degree to which mothers saw their children as behaving in positive and respectful ways towards them as opposed to manifesting rude or distancing behaviors. These scales are referred to as *Child Positive to me** and *Child Negative to me**, respectively. An additional 14 items (again, on a 5-point scale) assessed mothers' perceptions of *Child Maladjustment**. (Note that all three of these subscales had "Not Applicable" as one of the response choices, to account for possible developmental inapplicability, e.g., "Child is argumentative" for mothers with only infants).

Support in relationships. Mothers reported on their *Satisfaction with partners** (8 items); *Satisfaction with friends* (4 items from the Inventory of Parent Experiences; Crnic, 1983); and *Authenticity** in relationships (6 items), each measured on a 5-point scale (Appendix A).

A series of individual items asked about specific facets of feeling loved and comforted, all rated on a 5-point scale ("not at all" to "all the time"): (a) Do you feel seen and loved for the person you are, at your inner core? (b) When you are deeply distressed, do you feel comforted in the ways you need? and (c) Is there someone, currently, with whom you can comfortably share your innermost hurts, wishes, and fears? and (d) Do you feel "mothered" yourself in your everyday life?

Data Analysis Plan

Given that this is among the first known studies of mostly well-educated mothers, we considered it optimal to conduct in-depth exploration of different domains rather than attempting *a priori* data reduction via factor analyses (as combining measures can obscure important differences existing in reality; see Sheldon & Hoon, 2007). As noted in the introduction to this paper, therefore, we conducted parallel hierarchical regression analyses predicting to our seven adjustment outcomes. Our hope was to identify recurrent, strong associations across conceptually related outcomes that would represent protective or vulnerability processes (as in commonly used main-effects models of resilience; see Luthar, Cicchetti, & Becker, 2000; Vanderbilt-Adriance & Shaw, 2008).

In all analyses, we first controlled for mother's personal characteristics that could affect their personal adjustment, including their age and level of education, as well as family income, number of children, and age of the oldest (target) child. The relative salience of parenting versus relationship support dimensions was then examined by varying their order of entry in our hierarchical regressions, first examining blocks in the following sequence: Demographics in Block 1, Parenting Experiences in Block 2, and Relationship variables in Block 3. In a second set of regressions, we switched the last two blocks so that Relationship variables preceded the Parenting constructs. The amount of variance explained (R^2 statistic) by dimensions of parenting versus relationships was ascertained by the proportion of variance

that each set accounted for in Block 3, over and above what was already accounted for by Blocks 1 and 2.

Results

Missing Data Handling

Due to changes in the online survey (i.e. the addition of scales or items) across new waves of data collection, as well as the possibility of respondents skipping questionnaire items, missing values were examined for the extent of missing data using IBM SPSS Statistics 22. Multiple Imputation (MI) analysis was conducted using IBM SPSS Statistics 22, which uses a Markov Chain Monte Carlo (MCMC) algorithm known as fully conditional specification (FCS). The imputation model included all the variables used in the current study, as well as additional variables from the larger data set that may add importantly to the imputation (e.g. personality variables, psychiatric diagnoses). Only continuous variables were imputed. Twenty separate data sets were imputed with the number of between-imputation iterations set to 100 (Enders, 2010). Analyses were then run on all 20 imputed data sets and the statistics automatically pooled.

Of the personal adjustment outcomes and parenting predictors in this study, no more than 15% were missing, and of the other variables in the study, less than 25% had missing values with the exception of authenticity (27% missing values). These higher levels of missingness are due to additions at the final wave of data collection and not due to systematic response patterns. This said, in order to buttress the veracity of our findings, we replicated all analyses involving these variables using (a) the whole sample with missing values imputed by 20 data sets, and (b) the subset of women with complete data. Results were the same.

Descriptive data

In Table 2, we present means and standard deviations of all continuous variables along with alpha reliability coefficients of each, and simple correlations among variables are shown in Table 3. As seen in these tables, reliability was high for all measures, and evidence of validity is evident in the strong correlations (and not mutual redundancy) among conceptually related variables.

----- Insert Tables 2 and 3 about here -----

Multiple Regression Analyses

Predictors of maternal adjustment. In Table 4, we present results of hierarchical multiple regressions with feelings in the parental role versus dimensions of support examined as sets of predictors. As shown there, with depression, emptiness, loneliness, and life satisfaction as outcomes, the support variables accounted for a much larger proportion of unique variance (R^2) when included in Block 3, as compared to when the parenting experiences variables were included in Block 3. These four pairs of R^2 s (support vs. parenting) respectively were .13 vs. .06; .17 vs. .05; .44 vs. .00; and .21 vs. .03. For anxiety, stress, and fulfillment, the variance explained by support variables versus parenting variables was approximately the same: unique R^2 values for these pairs respectively were .08 vs. .06; .09 vs. .10; .08 vs. .06.

----- Insert Table 4 about here -----

With regard to associations within blocks, *Beta* coefficients showed that none of the demographic variables were consistently related to all outcomes. Associations that were significant pointed to better adjustment among older than younger mothers, more educated than less educated ones, those with relatively high family incomes, and those employed versus unemployed. Additionally, mothers with two or more children and those with younger children fared better than mothers with only one child and those with older children, respectively.

As shown by *Beta* coefficients within Blocks, again, none of the parenting dimensions showed significant links with all seven outcomes. (Note: Values of *Beta* coefficients are the same in complete models, regardless of whether the variables are entered in Block 2 or in Block 3). Considering patterns recurrently seen across outcomes, guilt, role overload, and child negative were each positively associated with anxiety, depression, and stress, and guilt was also positively linked with emptiness and negatively with life satisfaction. In addition, overall parenting satisfaction was related (in expected directions) to depression, emptiness, life satisfaction, and fulfillment.

Among the support dimensions, four constructs showed significant unique associations with *all*

seven outcomes examined also in expected directions): Friendship satisfaction, Authenticity in relationships, Feels seen/ loved, and Feels comforted. Partner satisfaction had a unique positive association with life satisfaction, and negative links with stress, and emptiness, but it was not associated with depression, anxiety, loneliness or fulfillment. Being married was uniquely associated only with (higher) life satisfaction.

Replications by high / low education levels. To determine whether our findings truly apply to mothers of relatively high socioeconomic status (SES), we re-ran prior regression analyses both (a) excluding the small proportion of mothers at the low end of SES, i.e., those who did not have a college degree and with family incomes below \$50,000, and also, (b) *only* including those mothers at the low end of the SES spectrum. Results were essentially the same as those reported in Table 4, indicating that the central findings did indeed characterize well-educated mothers but also, importantly, that they generalized to women with only a high school degree.

Post-hoc comparisons: Levels of Seen/loved and Comforted. Given the surprisingly consistent, significant *Beta* coefficients for two single-item questions in the preceding regressions – Feeling seen/loved, and Feeling comforted when distressed -- we compared the five levels of response options on each, to ascertain effect sizes (partial eta squared) with maternal adjustment dimensions as outcomes. The goal underlying these additional analyses was to estimate the potential predictive power of these two items relative to other determinants of women’s adjustment not addressed in this study (i.e., to go beyond comparing their effects relative to variables in regressions reported here, and provide benchmark for future comparisons with other indicators as described in the next paragraph).

----- Insert Table 5 about here -----

In Table 5, we show the number of women endorsing each of the five levels for both questions, and their mean scores on adjustment indices. Strikingly, one in five of these women said they did not have anyone to comfort them when distressed (17% endorsing “not really true” and 3% “not at all true”). Thirteen percent said they did not feel seen and loved for who they were (11% and 2% respectively endorsing “not really” and “not at all true”).

As expected, multivariate analyses of variance showed significant differences across the seven adjustment outcomes for Feeling seen/loved, $F(35, 8256) = 49.97, p < .001$; Wilk’s $\Lambda = 0.45, \eta^2 = .13$, and for Comforted, $F(35, 8214) = 42.20, p < .001$; Wilk’s $\Lambda = 0.50, \eta^2 = .15$. Follow-up univariate ANOVAs showed significant effects for all outcomes with medium to large η^2 s, ranging from .15 to an impressive .47, and a median value of .28 (see Table 4; an η^2 of .30 is considered large, Cohen, 1988). These effect sizes are substantially greater than those in comparisons based on mothers categorized by various demographics including the developmental stages and gender(s) of their children (Luthar & Cicciolla, in press), as well as maternal education, mothers’ employment status, and family income; partial η^2 s in all of those instances were all less than .08, and generally less than .03¹.

In Table 5, we also show results of pairwise comparisons of means with Bonferroni corrections. In general, mothers reporting little to no feelings of love or comfort reported significantly higher scores than others on negative outcomes (i.e. anxiety, depression, stress, emptiness, and loneliness) and significantly lower scores on positive outcomes (fulfillment and life satisfaction).

Discussion

Our results yield little support for views that as a group, upper-middle class mothers’ well-being is primarily tied to their investment in their children and their roles as parents, and instead, suggest far stronger ramifications for feelings of being personally supported. In recent parenting books, it is often suggested that high SES women are hyperinvested with their children such that their own well-being rests disproportionately on how well they are doing as parents. Examples of this view include, “(Raising) children plays an enormous part in making who we are. For some of us, perhaps the largest part” (Senior, 2014, p. 13), and “most parents hate to see their children unhappy.... and when this “shouts *helicopter*”, it is part of what is happening on (college) campuses across the country” (Hofer & Moore, 2013; p. 54). The possibility has also been raised in developmental science, with the speculation that well educated parents, used to being able to control much in their lives, may come to assume that they should be able to control their children’s outcomes too. When they fail on this front (which they inevitably must at times), this renders them vulnerable to distress (Luthar, 2003).

In our regression analyses, women's adjustment status did covary with how they felt in their roles as mothers but also showed equivalent if not vastly stronger variation with the emotional support in their everyday lives. When parenting and support indices were considered in separate blocks, the two sets of constructs explained approximately equal amounts of variance in mothers' anxiety, stress, and their feelings of fulfillment. In predicting their feelings of depression, emptiness, life satisfaction, and loneliness, however, the support variables explained at least two to three times as much variance as did the parenting dimensions. Overall, therefore, our results thus call into question assumptions that upper middle class mothers are "child-centric" in unhealthy ways, with their personal distress or happiness overwhelmingly determined by how well they feel their children are doing, or how well they themselves are doing in their role as parents (see also Ashton-James, Kushlev, & Dunn, 2013).

Of the various parenting dimensions we considered, three were consistently linked with distress: Role overload, parenting guilt, and child negative behaviors. Each of these constructs was associated with higher levels of maternal depression, anxiety, and stress. The findings on role overload lend support to suggestions that when these mothers feel stretched thin by all their everyday responsibilities, this can in fact engender significant ego-depletion (Lareau & Weininger, 2008; Luthar et al., 2013). With regard to guilt, similarly, a mother's feeling ("accurate" or not) that she is not putting out enough for her children is, intuitively, likely to bring about distress. Findings on the third construct in this group attest to the value of considering, in future research, not just mothers' overall difficulties as parents but also the degree to which they see their children as being distancing, rude or disrespectful toward them. Apparently, feelings of hurt in these dyadic child-mother interactions can run deep.

Indices of support: Relative salience

Among the personal support dimensions we examined, four had powerful, unique associations with *all seven* adjustment indices in this study: Unconditional acceptance, feeling comforted when needed (henceforth referred to as "reliable comfort"), authenticity in relationships, and friendship satisfaction. These findings are extremely encouraging in showing the strong protective potential of close, authentic relationships in buffering women through the myriad challenges of motherhood. As Luthar (2015) has suggested, as unconditional acceptance is critical for children, so is it critical for mothers who must provide it. And mothers, like children, benefit greatly when they know they have reliable sources of comfort when in distress (Hrdy, 2009; Taylor, 2002).

Findings on two of these indices were especially noteworthy as they both involve one-item questions: "Do you feel seen and loved for the person you are?" and "When distressed, do you feel comforted?" It is remarkable that these indices showed strong associations given the limited range of scores (zero to five) on each item, and also that they were significant *after* considering multi-item measures of satisfaction with friends and with partners. These findings could suggest that feelings of unconditional love sometimes derived from people other than partners or friends (e.g., from relatives, or even children and therapists; the last two together was found to be true for 10% of women in open-ended responses²). Additionally, global measures of partner or friendship satisfaction may not capture the notion of unconditional love *per se*. Previous research on post-partum distress, for example, has shown independent effects, indicating conceptual distinctiveness, for partner's support related to the pregnancy, overall satisfaction with the relationship, and dimensions of the woman's attachment security (Stapleton et al., 2012).

Aside from their recurrent unique significance in regressions, the impressive effect sizes in item-level analyses further attest to the importance of the two constructs representing unconditional love and reliable comfort. Comparisons of women endorsing the six levels of responses to these two questions yielded effect sizes that ranged from .15 to .47 with a median value of .28 (a partial η^2 of .30 is considered large). It should be noted that these values are, on average, about five times larger than effect sizes we have seen on other categorical indicators examined in relation to the adjustment of mothers' in this sample, including their own educational level, employment status, and family income, as well as the developmental stages and gender of their children (Luthar & Ciciolla, in press). From an intervention perspective, again, these findings are heartening in suggesting the vastly greater significance of "modifiable modifiers" as compared to demographic indicators that are much less amenable, if at all, to change via supportive interventions.

Partner satisfaction

After considering the "big four" predictors of well-being -- unconditional love, reliable comfort, authenticity, and friendship satisfaction -- partner satisfaction was associated with life satisfaction, as well

as, inversely, with stress and emptiness (but not depression, anxiety, loneliness or fulfillment). These findings are resonant with recurrent findings that the spousal relationship can be a major source of support for mothers of all ages (Antonucci et al., 2004; Dandurand & Lafontaine, 2013; Nelson, Kushlev, & Lyubomirsky, 2014; Strazdins & Broom, 2004).

Relationships with spouses are important but clearly not determinative: Our findings show the strong potential protective power of other close relationships. To reiterate, satisfaction with the frequency of visiting with friends had significant unique associations with all seven adjustment outcomes. These results are consistent with prior research showing that women, more so than men, have close relationships outside of marriages that bring much support and intimacy (Antonucci, Ajrouch, & Birditt, 2014; Coleman, 2011; Monin & Clark, 2011; Taylor, 2002). Furthermore, these close friendships can sometimes be more beneficial than family relationships, as they do not imply the relative permanence and obligations (and thus high positivity plus high negativity) of the latter (Antonucci, et al., 2004). In point of fact, having close friendships may help to sustain the marital relationship by reducing the burden on the marriage to fulfill all of one's emotional needs (Finkel, Hui, Carswell, & Larson, 2014). In the interest of their own well-being and even that of their marriages, therefore, our findings suggest that women must deliberately prioritize fostering these close personal friendships as much as they value maintaining good marriages.

Notably, analyses in this study yielded scant evidence for the benefits of being married per se; there was a single unique association: with life satisfaction. There is much prior research showing the benefits of being married are weaker for women than for men (see Monin & Clark 2011; Wanic & Kulik 2011; also Rosin, 2012), possibly because women provide more “tending” to their partners than do men (Taylor, 2002), or because daily hassles are reduced for men as women undertake the bulk of household management (Wanic & Kulik, 2011). Analyses presented here confirm that being married in itself is not necessarily protective; what benefits women more is that they feel loved and comforted when in need – whoever the source of those feelings.

Limitations and caveats

Given our web-based data collection, there remains a possibility of some sampling biases (Bethlehem, 2010), but at least one major source of such bias – lack of access to computers – is unlikely to have been a major problem given our focus on upper middle class mothers. It should also be noted that web-based sampling is increasingly used not just for research in psychology in general (see Mason & Suri, 2012), but specifically in research on parents (Ashton-James et al., 2013; Rizzo, Schiffrin, & Liss, 2013). This said, the questions we examined here certainly warrant consideration with representative samples of mothers ascertained through different methods.

The cross-sectional nature of this work precludes definitive conclusions about causality, and third variables could underlie some significant associations as a mother's chronic illness, for example, could engender feelings of both role overload and stress. Similarly, bidirectional links are entirely plausible. To illustrate, high levels of depression can lead to women's feeling that they are alone and without confidantes, just as much as the converse.

Offsetting potential limitations are several strengths of this work. This is the first known effort to delve into the phenomenological experience of motherhood, with data on a sample of well-educated, upper middle class mothers, increasingly described as being at high risk for parenting stress (Kalil et al., 2012; Lareau & Weininger, 2008; Luthar et al., 2013; Senior, 2014; Warner, 2005). The sample is large, completion rates are high, measures have good psychometrics, and analyses are sophisticated, involving multiple imputation for missing values. With robust associations across diverse outcomes, our findings were compelling on the potential significance of four central “protective factors”: feelings of unconditional acceptance, reliable comfort, authenticity in relationships, and satisfaction with friendships.

Future directions

As the study is based on a sample of mostly well-educated, married mothers, future research is needed to establish the generalizability of findings across diverse samples. The likely universal salience of protective interpersonal forces is suggested in the replication of our results among the subset of mothers without college degrees, as well as by findings from previous clinical trials. With regard to the latter, relationally-based interventions for very low-income at-risk mothers have led to substantial improvements in their personal adjustment and their parenting (e.g., Luthar & Suchman, 2000; Toth, Gravener-Davis, Guild, & Cicchetti, 2013). These considerations acknowledged, it will be useful to examine, in future research, the salience of the specific constructs that were examined here among women

with less than high school educations, and with family incomes well below national median levels (neither represented here). Also valuable will be replication among subgroups too small to examine separately in this sample, such as mothers of different ethnicities, and those with same- versus opposite-sex partners.

Aside from extending knowledge of normative developmental processes, future replications of our findings could substantively inform applied developmental science. What this study has yielded is a “short-list” of critical relationship-based dimensions that could be highly beneficial for mothers contending with parenting difficulties. With appropriate corroborating evidence, therefore, these support dimensions might be usefully prioritized in future interventions seeking to bolster the well-being of highly stressed mothers, paving the way, in turn for their more positive functioning in parenting, in other relationships, and at work (Knitzer, 2000; Luthar et al., 2015; Shonkoff & Fisher, 2013; Toth et al., 2013).

As developmental scientists continue to explore determinants of mothers’ well-being, we must do the same for fathers (Phares, Lopez, Fields, Kamboukos, & Duhig, 2005; Rotheram-Borus, Stein, & Lin, 2001). Factors that most are most salutary for fathers are unlikely to be identical to those that benefit mothers (see Lamb, 2004; Lewis & Lamb, 2003). We cannot assume, for example, that groups entailing mutually supportive relationships would have the same appeal for upper middle class professional fathers as they might for high SES mothers (Luthar, 2015).

Even as we conduct further research on the well-being of mothers and fathers, there is potential value in disseminating the central findings, from this study, on the critical importance of support for mothers (Antonucci et al., 2014; Fuller-Iglesias, Webster, & Antonucci, 2013). Among women experiencing significant parenting difficulties, supportive connections can do much to offset ego-depletion and distress. As contemporary mothers strive so carefully to tend their children, therefore, they must deliberately cultivate and maintain close, authentic relationships with friends as well as family. These must be recognized as essential buffers against the redoubtable challenges of sustaining “good enough” mothering across two decades or more.

In conclusion, results of this study provide a critical corollary to a homily that has been widely accepted across generations and continents: “A mother’s job is never done”. Stated simply, our findings indicate that, as mothers must tend, so too, must they feel tended themselves.

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Footnotes

¹ Across all measures of maternal well-being considered here (Table 4), partial η^2 values ranged from .01 to .08 for maternal education; .00 to .04 for employment; and .01 to .05 for income.

² Percent responses to the question, "When you are very distressed, who tends to bring you the most comfort?" were as follows: Spouse/Partner: 50%; Other Relative or Friend: 28%; Child: 8%; God or Higher Power: 7%; Therapist/professional: 2%; Pet: 1%; Other: 1%; No one: 3%.

Table 1.
Sample characteristics: Demographics

Variable	<i>n</i>	%	Variable	<i>n</i>	%
Education			Mother's age (yrs)		
High school	366	16.3	21 to 30	301	13.5
College	587	26.2	31 to 40	875	39.1
Some grad school	244	10.9	41 to 50	685	30.6
Master's	644	28.8	51 to 60	283	12.7
Doctorate	399	17.8	61 or older	92	4.1
Family income			Marital status		
Less than \$50,000	277	12.5	Legally married	1915	85.7
\$50,000 to \$75,000	344	15.5	Not married	319	14.3
\$75 -100,000	416	18.7	Partner: Male	2029	92
\$100-200,000	678	30.5	Female	50	2
\$200-500,000	366	16.5	No. of Children		
>\$500,000	118	5.3	1	782	34.8
Ethnicity			2	926	41.2
Black	84	3.9	3+	536	23.9
White	1917	88.3	Region		
Hispanic	87	4	Northeast	647	55.8
Asian	84	3.9	Midwest	161	13.9
Community			South	155	6.9
City	665	29.7	West	196	8.7
Suburb	1358	60.6	Employed	1485	66
Rural	211	9.4	Not Employed	750	34

Note. Total number of survey respondents, $n = 2,247$. Across demographic data, n 's ranged from 2,172 to 2,236. For the subset of the sample from whom we collected regional data, $n = 1159$.

Table 2.

Descriptive data on measures: Number of respondents, alpha coefficients of internal consistency, means and standard deviations.

	<i>n</i>	α	Mean	<i>SD</i>
1. Anxiety	1997	.83	40.17	9.24
2. Depression	2005	.85	46.82	10.49
3. Stress	2022	.90	17.36	6.75
4. Emptiness	1984	.84	2.44	1.06
5. Loneliness	1978	.95	38.67	12.31
6. Fulfillment	1984	.83	3.99	0.77
7. Life Satisfaction	2025	.91	25.11	7.11
8. Parenting (P-) Efficacy	1716	.92	31.89	6.46
9. P-Satisfaction	2098	.87	36.44	4.38
10. P-Guilt	2093	.83	19.22	5.22
11. P-Role Overload	2098	.89	23.83	6.44
12. Rejecting Child	1973	.78	15.23	3.81
13. Child Positive	2049	.90	25.48	4.83
14. Child Negative	2042	.84	9.54	3.66
15. Child Maladjustment	2065	.89	30.00	9.57
17. Partner Satisfaction	1872	.90	29.68	6.70
18. Friend Satisfaction	2174	.82	12.04	3.05
19. Authenticity	1643	.89	19.91	4.85
20. Can Share ^a	1974	-	4.68	1.32
21. Feel seen/loved ^a	1974	-	3.96	1.28
22. Feel Comforted ^a	1964	-	3.60	1.22
23. Feel Mothered ^a	1977	-	2.79	1.20

Note. ^a Single item questions

Table 3.
Pearson product-moment correlations among variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.
1. Anxiety	--																				
2. Depression	.77	--																			
3. Stress	.68	.73	--																		
4. Emptiness	.55	.67	.60	--																	
5. Loneliness	.50	.58	.51	.62	--																
6. Fulfillment	.36	-.53	-.41	.58	-.47	--															
7. Life Satisfaction	.46	-.59	.58	.62	-.54	.50	--														
8. Efficacy	.23	.34	.32	-.31	.29	.35	.31	--													
9. Satisfaction	-.27	-.35	-.31	-.37	.30	.34	.37	.40	--												
10. Guilt	.43	.45	.51	.44	.38	-.27	-.33	.42	.26	--											
11. Role Overload	.38	.40	.46	.36	.40	-.18	-.27	-.17	.26	.45	--										
12. Rejecting Child	.27	.28	.31	.30	.24	-.21	-.21	.46	.43	.38	.27	--									
13. Child Positive	-.15	-.21	-.15	-.16	-.13	.21	.21	.41	.29	-.12	.04	.23	--								
14. Child Negative	.25	.27	.28	.27	.22	-.19	-.25	.42	-.27	.28	.16	.54	.30	--							
15. Child Maladjustment	.25	.27	.31	.24	.25	-.19	.23	.38	.28	.29	.25	.48	-.22	.67	--						
16. Married ^a	.08	.07	.07	.09	-.04	.08	.23	.05	.07	.00	.07	.01	.15	.06	.00	--					
17. Partner Satisfaction	-.33	-.41	.42	-.45	.43	.26	.58	.22	.24	-.25	-.27	-.19	.16	.22	-.17	.28	--				
18. Friend Satisfaction	.36	.40	.38	-.41	-.67	.28	.40	.23	.24	-.33	.42	-.16	.05	-.18	.23	-.03	.27	--			
19. Authenticity	.42	.49	.49	.49	.58	.33	.44	.24	.21	.38	.34	-.19	.09	-.16	-.19	.00	.37	.36	--		
20. Can Share	-.31	.42	.32	.46	-.65	.33	.45	.25	.25	.24	-.25	-.15	.16	-.14	-.13	.11	.51	.45	.40	--	
21. Feel seen/loved	-.45	-.56	.49	-.57	-.67	.44	.56	.31	.31	.36	-.35	.24	.20	.22	-.21	.08	.58	.45	.52	.65	--
22. Feel Comforted	.44	-.53	-.47	-.54	-.65	.40	.51	.28	.27	-.34	.38	.23	.15	.20	.20	.07	.52	.48	.45	.60	.69

Note. All values in bold face are $p < .05$. P- = Parenting. ^a 1 = married, 0 = not married.

Table 4.

Multivariate regressions predicting well-being from dimensions of (a) parenting and (b) personal support (values are Beta coefficients)

	Anxiety	Depress	Stress	Empty	Lonely	Life Satis	Fulfill
Demographics: R²: Block 1	.05**	.07**	.04**	.03**	.02**	.09**	.10**
Maternal Age	-.13**	-.06*	-.07*	-.03	-.04	-.01	.03
Education	-.08**	-.12**	-.03	-.06**	.00	.06**	.19**
Employed ^a	-.02	-.06**	-.02	-.10**	-.06**	.03	.15**
Family income	-.06*	-.08**	-.07**	.03	-.05**	.14**	.00
Number of children ^b	-.07**	-.07**	-.08**	-.09**	.00	.10**	.05*
Age of oldest child	.16**	.10**	.08**	.10**	.00	-.15**	.01
Parenting R²Δ: Block 2/ 3	.24/ .06	.30/ .06	.35/ .10	.30/ .05	.24/ .00^d	.24/ .03	.17/ .06
P-Efficacy	.04	-.04	-.03	.01	-.01	.06*	.17**
P-Satisfaction	-.03	-.07**	-.03	-.12**	-.01	.16**	.13**
P-Guilt	.18**	.14**	.22**	.16**	-.01	-.05*	-.02
P-Role Overload	.13**	.11**	.17**	.05	-.01	-.01	.05
Rejecting of child	.05	.01	.03	.04	.05**	.05*	.01
Child Positive	-.03	-.05*	-.02	.01	-.00	-.01	.05*
Child Negative	.06*	.04*	.06*	.03	.01	-.01	.02
Support R²Δ: Block 2/ 3	.26/ .08	.37/ .13	.35/ .09	.41/ .17	.68/ .44	.42/ .21	.19/ .08
Married ^c	-.01	-.03	-.01	-.02	-.00	.04*	.03
Partner Satisfaction	-.03	-.04	-.12**	-.08**	.02	.27**	-.03
Friend Satisfaction	-.08**	-.07**	-.05*	-.07**	-.36**	.13**	.07**
Authenticity	-.15**	-.16**	-.18**	-.16**	-.22**	.12**	.12**
Sharing hurts/fears	.04	.00	.08**	-.03	-.16**	-.03	.01
Feels Seen/Loved	-.13**	-.17**	-.12**	-.17**	-.16**	.14**	.14**
Feels Comforted	-.12**	-.12**	-.09**	-.12**	-.15**	.09**	.08**
Feels Mothered	.05	-.01	.01	-0.02	-.07**	.01	.05*
Total Model R²	.37**	.50**	.48**	.49**	.70**	.54**	.34**

Note. n = 2247. ^a 1=employed, 0=not. ^b one child vs. two or more; ^c 1=married, 0=not. Depress = Depression; Empty = Emptiness; Lonely = Loneliness; Life Satis = Life Satisfaction; Fulfill = Fulfillment.
^d with the exception of this value, all Block R² changes were significant at p < .01. *p < .05; **p < .01

Table 5.
Maternal adjustment and dimensions of feeling loved and comforted: Comparisons on single item questions

Personal adjustment	Feel Seen/Loved						Total $n = 1974$	F	η^2
	Not at all	Not really	Some what	Often	Very often	All the time			
	$n = 46$	$n = 210$	$n = 530$	$n = 400$	$n = 573$	$n = 215$			
	2%	11%	27%	20%	29%	11%			
Anxiety	1.52 _a	0.80 _b	0.27 _c	-0.15 _d	-0.38 _e	-0.50 _e	108.90**	0.22	
Depression	1.51 _a	1.04 _b	0.35 _c	-0.19 _d	-0.47 _e	-0.69 _f	189.20**	0.32	
Stress	1.34 _a	0.88 _b	0.34 _c	-0.18 _d	-0.41 _e	-0.61 _e	131.43**	0.25	
Emptiness	1.38 _a	1.03 _a	0.43 _b	-0.17 _c	-0.51 _d	-0.69 _d	202.82**	0.34	
Loneliness	1.79 _a	1.17 _b	0.49 _c	-0.16 _d	-0.60 _e	-0.81 _f	345.22**	0.47	
Life Satisfaction	-1.55 _a	-1.01 _b	-0.39 _c	0.18 _d	0.50 _e	0.65 _e	191.55**	0.33	
Fulfillment	-1.03 _a	-0.78 _a	-0.25 _b	0.03 _c	0.39 _d	0.58 _d	93.34**	0.19	
Personal adjustment	Feel Comforted						Total $n = 1964$	F	η^2
	Not at all	Not really	Some what	Often	Very often	All the time			
	$n = 53$	$n = 328$	$n = 631$	$n = 379$	$n = 488$	$n = 85$			
	3%	17%	32%	19%	25%	4%			
Anxiety	1.11 _a	0.64 _b	0.17 _c	-0.24 _d	-0.47 _e	-0.69 _e	94.37**	0.19	
Depression	1.18 _a	0.78 _b	0.19 _c	-0.24 _d	-0.60 _e	-0.83 _e	154.48**	0.28	
Stress	1.01 _a	0.69 _a	0.19 _b	-0.22 _c	-0.54 _d	-0.77 _d	114.48**	0.23	
Emptiness	1.03 _a	0.86 _a	0.20 _b	-0.24 _c	-0.61 _d	-0.85 _d	168.12**	0.30	
Loneliness	1.53 _a	1.01 _b	0.23 _c	-0.31 _d	-0.71 _e	-1.00 _f	304.56**	0.44	
Life Satisfaction	-1.13 _a	-0.82 _a	-0.18 _b	0.31 _c	0.55 _d	0.73 _d	147.54**	0.27	
Fulfillment	-0.78 _a	-0.58 _a	-0.14 _b	0.09 _c	0.46 _d	0.73 _d	71.39**	0.15	

Note. Sample sizes based on missing data from the categorical independent variables. Means with the same subscript do not differ significantly from each other. * $p < .05$; ** $p < .01$.

η^2 of .03, .10, and .30 reflect small, medium, and large effect sizes respectively (Cohen, 1988).

APPENDIX

Questionnaires created for this study (response categories are in “Methods”)

Emptiness (Scale 1-5: Not at all true; Not true; Neutral; True; Very true):

Despite everything around me, I still feel empty inside.
I look around at my life and think, “Is this all there is?”
In spite of everything I have, I feel a deep dissatisfaction.
I feel like I should be doing something more meaningful with my time.

Fulfillment (Scale 1-5: Not at all true; Not true; Neutral; True; Very true):

I strive to achieve important goals.
I feel like a useful, contributing member of society.
I work to achieve outcomes that are substantive and important.
I feel personally gratified and fulfilled by what I do.
I do things that others would view as valuable and important.

Satisfaction with Parenting (Scale 1-5: Strongly disagree; Disagree; Not sure; Agree; Strongly Agree):

Being a parent brings me much satisfaction.
If I had to do it over, I would choose not to have children.
My role as a mother is one I value and cherish.
Being a mother is among the most important things in my life.
Being a mother is not as rewarding as I imagined it would be.
I feel fortunate that I had the opportunity to be a mother.
I regret having had children.
Raising my children is one of the most satisfying aspects of my life.

Parenting Guilt (Scale 1-5: Strongly disagree; Disagree; Not sure; Agree; Strongly Agree):

When my child does something bad, I feel as though it is my fault.
I often feel guilty as I reflect on how I’m doing as a mother.
When I lose my temper at my children, I feel guilty afterward.
I worry that I should be giving more of myself as a mother.
When my child fails at something, I question my own parenting.
I worry about whether I make the right decisions in the way that I parent.

Parenting Role Overload (Scale 1-5: Strongly disagree; Disagree; Not sure; Agree; Strongly Agree):

Since becoming a mother, I have little time to do the things I enjoy.
Taking care of my family leaves me little time for myself.
My family’s demands often leave me feeling depleted at the end of the day.
I feel overwhelmed by all I have to do to take care of my family.
Taking care of my family leaves me little time to be with others I am close to.
Since becoming a mother, I don’t take care of myself as well as I used to.
Doing all I have to do as a mother often leaves me exhausted.

Parenting Efficacy (Scale 1-5: Not well; Okay; Well; Very well; Extremely well):

I discipline my child.
I supervise my child.
I spend time with my child.
I understand my child and his/her moods.
I am patient and non-judgmental toward my child.
I know when to set limits and when to let go.
I help my child with his/her personal problems.
I prepare my child for future success.
I earn my child’s respect.
I help my child deal with negative peer pressure.
I help my child to develop a good set of values in life.
I help my child learn to work through relationship problems.
I help my child develop good coping skills.

Child is Positive to me (Scale 1-5: Very rarely; Rarely; Sometimes; Often; Usually):

My child is affectionate to me.
My child is respectful to me.
My child shows appreciation of me.

My child comes to me for comfort.
My child likes to spend time with me.
My child makes me feel loved.

Child is Negative to me (Scale 1-5: Very rarely; Rarely; Sometimes; Often; Usually):

My child is sullen or sulky with me.
My child is argumentative with me.
I feel shut out by my child.
My child treats me badly.
My child is rude to me.

Child Maladjustment (Scale 1-5: Very rarely; Rarely; Sometimes; Often; Usually):

My child is pleasant.
My child is irritable.
My child has mood swings.
My child is unpredictable.
My child gets upset easily.
My child is selfish.
My child is a pleasure to be around.
My child is self-centered.
My child is too demanding.
My child is too needy.
My child has temper-tantrums.
My child is hard to comfort, when troubled.
My child is difficult to take care of.
My child is easygoing.

Partner Satisfaction (Scale 1-5: Strongly disagree; Disagree; Not sure; Agree; Strongly Agree):

My relationship with my partner/spouse brings me much happiness.
My partner/spouse does things that frustrate me.
I share my inner most concerns and fears with my partner/spouse.
My partner/spouse truly knows and understand the person I am.
I think about separating from or divorcing my partner/spouse.
My partner/spouse does things that are hurtful to me.
I like the person my partner/spouse is.
I feel resentment toward my partner/spouse.

Authenticity (Scale 1-5: Not at all true; Not true; Neutral; True; Very true):

The 'self' I show to others – my "outer self" – is very much the same as my "inner self."
People around me don't really know my inner, "true self."
I have thoughts or personal habits that I tend to conceal from others.
I am not really quite the person that people think I am.
I prefer to keep some aspects of my true, inner self private, not showing them to others.
My inner self is very much congruent, or similar, with what I show to others.