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The ups and downs of early mothering

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Abstract

Introduction—The maternal experience of having a young infant is often viewed through a negative lens focused on psychological distress due, in part, to a historical focus on identifying threats to prenatal, perinatal, and postpartum well-being of women and infants. This report examines maternal appraisal of both positive and negative experiences during and after pregnancy and introduces a new scale that assesses both uplifts and hassles that are specific to early motherhood.

Methods—The sample included 136 women who began study participation during pregnancy and completed an existing scale designed to evaluate pregnancy-specific hassles and uplifts. When infants were 6 months old, participants completed the newly developed Maternal Experience Scale (MES) along with questionnaires related to anxiety, depression, attachment, parenting stress and infant temperament characteristics.

Results—In general, women with 6-month old infants rated their maternal experiences far more positively than negatively. MES hassles and uplift scores reflected both convergent and discriminant validity with general measures of psychological well-being and parent-specific measures. Appraisal of the pregnancy experience significantly predicted appraisal of early motherhood for hassles, uplifts, and a composite score reflecting emotional valence. Women became relatively more uplifted and less hassled from pregnancy to 6 months postpartum; this was particularly true for multiparous women.

Discussion—The maternal perception of motherhood corresponds to her perception of pregnancy. The MES provides a balanced view of motherhood by including maternal appraisal of the uplifting aspects of caring for an infant.

Keywords

Motherhood; pregnancy; parenting; postpartum distress; infancy; maternal stress

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Declaration of Interest Statement

The authors report no conflicts of interests

Introduction

The birth of an infant catapults women into a world of sleep deprivation, uncertainty in interpreting the needs of a preverbal infant, and disruptions to self-care. At the same time, it also typically ushers in a period of tremendous happiness, profound devotion and emotional absorption. In most instances, motherhood follows a pregnancy which provides a period of acclimation or accommodation to this impending event. Prior work has established that women experience the difficulties and joys of pregnancy quite differently from one another and the experience corresponds, in part, to maternal psychological characteristics ¹. The psychological relationship between mother and offspring begins during pregnancy ² and there is prenatal to postnatal continuity in the subjective experience of women's appraisal of their offspring ³.

There is a large body of research directed at assessing maternal adaptation to motherhood. Instruments include those that focus on ascertaining aspects of maternal functional status including feelings of maternal fulfillment, parenting competence, self-efficacy, and expectations ⁴⁻⁷. In particular, evaluation of maternal depression has been the subject of intense study ⁸⁻¹⁰. Review of this literature is beyond the scope of this report, but, in general, these efforts tend to be focused on the role of maternal characteristics in promulgating infant interactions and care-giving practices that may adversely affect infant development, the maternal-child bond, or maternal psychological well-being.

Consistent with these goals, research on the transition to parenthood in general, and motherhood in particular, often focuses on its negative, stressful aspects, including deleterious effects on marriage ^{11,12}, sleep ^{13,14}, and daily stresses ^{15,16}. Perhaps the most commonly used psychological assessment in studies of early parenting is the Parenting Stress Index, a tool developed over 30 years ago explicitly designed to ascertain sources of stress that are generated from within the child and parent domains ¹⁷. More recently introduced, the *Being a Mother Scale* ¹⁸, has three positive items regarding emotional closeness, help-seeking, and self-confidence but the remaining ten focus on feelings of guilt, isolation, irritation and regret. Similarly, only a third of the Postpartum Bonding Questionnaire ¹⁹ items are positively framed (e.g., I enjoy playing with my baby); the remainder are not (e.g., "I wish the old days when I had no baby would come back").

Thus, it is perhaps not surprising that a meta-analysis of questionnaire and interview data on the transition to parenting concludes that during the first year, parenting is an overwhelming experience characterized primarily by stress and strain ²⁰. There is no doubt that infant care is a consuming endeavor. However, measuring only the more challenging aspects of infant care confers the impression that early motherhood is exclusively a time of psychological distress and obscures the psychologically positive consequences which may supersede negative appraisal. Caution has been raised against interpreting the normal complex emotions experienced by new mothers within a psychiatric framework ^{21,22}.

Pregnancy research has similarly focused on maternal psychological distress, fostered by reliance on measures of anxiety, depression and fear. The Pregnancy Experience Scale (PES) was developed to provide a more balanced framework for studying how pregnancy

contributes to changes in psychological state¹. This instrument was modeled on the Hassles and Uplifts Scale²³ which was designed to measure appraisal of everyday events from a dual perspective of stress and enjoyment. Results confirm that women are much more uplifted by their pregnancies than hassled by them¹. Higher levels of pregnancy hassles, lower levels of uplifts, and/or their ratio are associated with measures of concurrent psychological functioning^{1,24} as well as postnatal depression^{25,26} and daily hassles²⁷, patterns of maternal attachment security²⁸ and maternal reports of infant health during the first year of life²⁷. The PES has also been used to identify pregnancy factors which may interfere with enjoyment of pregnancy, such as gestational diabetes²⁹ and confirm that other circumstances, such as conception via assisted reproductive technology, does not³⁰. During pregnancy, a mindfulness intervention independently affects perceptions of hassles and uplifts³¹. The PES, or its abbreviated version,³² is currently in use in a number of cohort studies and has been translated into other languages, including Dutch, Portuguese, Turkish, Hungarian, and Hebrew, thereby illustrating the perceived need for such an instrument.

We were unable to find a comparable instrument that provided both positive and negative appraisal of early motherhood that would be useful in evaluating whether there was prenatal to postnatal correspondence along these dimensions, and, in response, developed the Maternal Experience Scale (MES). Key to the conceptualization of the original hassles and uplifts approach²³ is the presentation of items in a neutral manner which are then ascribed either a negative or positive valence by the respondent, or both. Equally important to development of this scale is the construct that positive and negative affect can be experienced independently and are measurable both in terms of frequency of experience and intensity of subjective appraisal³³. The primary objective of this report is to evaluate whether women's perception of their pregnancy experience, both positive and negative, portends their experience of early motherhood. To do so, we also present psychometric properties of the MES, evaluate its convergent associations with maternal anxiety and depression, and examine how perceived infant temperament contributes to the maternal experience.

Methods

Overview

The Maternal Experience Scale (MES) was validated in a sample of 136 women with 6-month old infants. As part of a larger longitudinal study, women enrolled during pregnancy and completed the Prenatal Experience Scale (PES) at 24, 30 and 36 weeks gestation. Postnatal data collection included a laboratory visit (not part of this report), a battery of previously validated psychosocial questionnaires, and the newly developed MES. Infants were approximately 6 months old at administration of the questionnaires ($M = 190.2$ days; $sd = 8.2$). The study was approved by the University's Institutional Review Board and women provided informed consent.

Participants

Of the 177 women that began participation during pregnancy, 159 met eligibility criteria (i.e., completed the prenatal protocol, delivered at term, and were absent of major pregnancy

or neonatal conditions) for the follow-up. Eleven declined participation. Of the remaining 148, 10 failed to return questionnaires, resulting in an 86.8% ($n = 138$) follow-up for eligible participants. Two participants overlooked the last page of the MES questionnaire (11 items) and were excluded from the analysis, resulting in a final sample of 136 (85.5%).

Sociodemographic and infant characteristics presented in Table 1 indicate a sample comprised of relatively well-educated, mature, and married women delivering healthy infants.

Psychosocial Assessments

Maternal Experience Scale (MES)—Items were initially generated by incorporating the prenatal PES items with relevance to the postpartum period (e.g., body changes due to pregnancy). Additional items were generated by translation of pregnancy events to postnatal ones (e.g., visits to obstetrician/pediatrician) and by consultation with a group of women from a prior cohort with young infants. The final scale includes 41 items, each rated on the degree to which it poses a hassle and/or an uplift on 4-point scale ranging from 0 (not at all) to 3 (a great deal). The scale is included in the Appendix.

Scores are calculated as the total number of endorsed items not equal to 0 (frequency) and intensity (i.e. sum of scores divided by number of endorsed items) for both hassles and uplifts. Additionally, composite ratios relating hassles to uplifts for both frequency and intensity scale scores were computed such that values greater than 1.0 indicate that the maternal experience is perceived as relatively more hassling than uplifting.

*Spielberger State-Trait Anxiety Scales (STAI)*³⁴ are the most commonly used self-administered measures of anxiety and have been extensively validated. Both scales were administered; each contains twenty 4-point items in which higher scores indicate greater state or trait anxiety level.

*Edinburgh Postnatal Depression Scale (EPDS)*³⁵ is a widely used screening tool to assess symptoms of perinatal depression. Participants score 10 questions corresponding to mood; responses range from 0 (not at all) to 3 (yes, all the time) resulting in a maximum summed scale score of 30.

*Parenting Stress Index – 3rd edition (PSI)*³⁶ evaluates adaptation to parenthood. The short form (36 items) was used (Psychological Assessment Resources, Odessa, FL). Respondents use a 5-point scale ranging from strongly disagree to strongly agree on items related to parent-child dyadic stress, such as “I feel trapped by my responsibilities as a parent”. The total scale (PSI-Total) was used; higher values reflect greater parenting stress.

*Maternal Postnatal Attachment Scale (MPAS)*³⁷ is a validated 19-item tool that assesses perception of the maternal-infant relationship around three constructs: acceptance/tolerance; competence as a parent; and pleasure in proximity. The total (summed) score reflects the global quality of maternal-infant satisfaction with and attachment to the infant.

*Infant Characteristics Questionnaire (ICQ)*³⁸ is a long-standing instrument that ascertains maternal perception of temperament. The scale includes 32 items rated on 7-point scales that

are scored in subsets of the following factors: fussiness/difficultness, unadaptability, dullness, and unpredictability.

Data Analysis

Data analysis included descriptive analyses for individual items and internal (i.e., split-half) reliability using Cronbach's alpha. Variation in MES scores based on maternal and infant characteristics was evaluated by t-tests or analysis of variance (ANOVA); concurrent and discriminant validity was evaluated using Pearson correlations between MES scores, maternal anxiety and depression, and the three scales related to maternal appraisal of the infant/motherhood. Associations with prenatal scores were examined through correlation coefficients, repeated measures analyses and multiple regression.

Results

Table 2 presents the top 10 most commonly endorsed (i.e., scored as > 0) uplifts and hassles, along with their intensity values. The top five most frequent uplifts, endorsed by 100% of the sample, related to meeting baby's needs, baby's developmental progress, baby's activity level, interacting with baby and baby's appearance. There was greater variability in the endorsement of hassles, with the most common hassle "Getting enough sleep" endorsed by 88.2% of the study sample. Uplifts were endorsed more frequently than hassles and the mean intensity of each of the top 10 uplifts was greater than 2. Moreover, the mean intensity value of each of the top 10 uplifts is greater than the highest intensity value of the top hassle. The items least commonly endorsed as uplifts (not shown) were 'Body changes due to pregnancy' and 'Changes in parenting other children due to baby' although these were still endorsed by 66.9% and 71.3% of participants, respectively. The two items least often endorsed as hassles, 'Interacting with your baby' and 'Your baby's appearance' were endorsed by 13.3% and 14.2%, respectively.

Internal reliability for the full scale was greater than .9 for both the uplift ($\alpha=0.93$) and the hassle ($\alpha=0.91$) scales. Mean values for the six MES scores are presented in the first row of Table 3. The mean ratio scores for both frequency and intensity are < 1.0 , indicating that women appraise maternal experiences with greater positive affective valence than negative. However, eight women scored slightly > 1.0 on either frequency or intensity scores indicating equal or greater negativity than positivity; two women generated scores of > 1.0 on both ratio composites.

Relationship of hassles to uplifts

The frequency of nominated hassles was unrelated to the frequency of nominated uplifts, $r(134) = .08$; the association between hassles and uplifts intensity was significant but small, $r(134) = -.18$, $p < .05$, confirming that identification of hassles and uplifts is relatively orthogonal. Women who nominated more hassles also viewed them as having greater intensity, $r(134) = .41$, $p < .001$; the same was true for uplifts, $r(134) = .36$, $p < .001$. The ratio scores for frequency and intensity were most highly correlated, $r(134) = .62$, $p < .001$.

Association with sociodemographic characteristics

The analysis of MES scores in relation to maternal and infant characteristics is presented in Table 3. Parity was unrelated to MES scores with the exception that first time mothers experienced higher intensity of uplifts. Infant sex and maternal characteristics were unrelated to MES scores, with the exception of a trend level of significance for more frequent nomination of uplifts for boys than girls ($p = .08$).

Associations with psychosocial measures

State and trait STAI scores were strongly correlated, $r(135) = .72$, $p < .001$; as a result only the trait anxiety score (Y-2) was used. As shown in Table 4, all scales were significantly associated with MES scores in the expected direction, with the exception of the frequency of uplifts. In general, women who reported themselves to be more anxious, depressed, less attached to their infant and more stressed by parenting also report greater and more intense hassles, and less intense uplifts. Ratio scores relating hassles to uplifts showed consistent associations in the expected directions and accounted for 20% to 32% of the shared variance with psychological measures. Associations with infant temperament, presented in Table 5, reveal that women who perceived their infants to be more fussy and unadaptable also reported more frequent and higher intensity hassles. Ratings of infant dullness and unpredictability were similar, with the exception that higher scores on both were also associated with a lower frequency of uplifts.

Consistency in prenatal (PES) scores

PES frequency, intensity, and ratio scores were highly stable over 6 and 12 weeks of gestation (i.e., 24 to 30 weeks, 30 to 36 weeks, and 24 to 36 weeks). M 's computed for each pair of gestational ages range from a low of $r = .61$ for intensity of hassles to $r = .80$ for frequency of uplifts; r 's range from 124 to 126). As a result, mean values for each PES scale score are used for computing associations with MES scores.

Prenatal to postnatal associations

There were significant correlations ($ps < .0001$) between each prenatal and postnatal measure: frequency of hassles, $r(134) = .66$; frequency of uplifts, $r(134) = .60$; intensity of hassles, $r(134) = .49$; and intensity of uplifts, $r(134) = .61$. Data are categorized into PES tertiles for illustration in Figure 1. ANOVA results were highly significant for each ($ps < .0001$). Composite ratio scores of hassles to uplifts for frequency, $r(131) = .52$ and intensity, $r(134) = .50$, $ps < .0001$, were also significantly related.

Repeated measures analysis of variance examining the magnitude of these two relative scores revealed no change from the prenatal to postnatal period for the frequency ratio, but a decrease in the magnitude of the intensity ratio, $M = .68$ prenatal vs $M = .64$ postnatal, $F(1, 135) = 9.85$, $p < .01$, indicative of greater positivity relative to negativity in the postnatal period. Parity significantly influenced this association, Time X Parity interaction $F(1, 134) = 7.35$, $p < .01$, such that scores of primiparous women were relatively unchanged, $M = .64$ to $.63$, but multiparous women became more intensely positive ($M = .74$ to $.65$).

Prenatal anxiety and depression scales showed comparable levels of prenatal to postnatal stability as the pregnancy and maternal experience scales. To evaluate the possibility that prenatal to postnatal associations between the PES and MES were simply by-products of more generalized psychological distress (or lack thereof), multiple regressions were conducted predicting each frequency, intensity and ratio score on the MES from the analogous PES score, along with postnatal EPDS and STAI values. In six separate equations with MES scores (e.g., MES Intensity Hassles) as the dependent outcome, analogous PES values (e.g., PES Intensity Hassles) were adjusted for EPDS and STAI values. Each PES score was associated with unique significant variance (all t -value $ps < .0001$) while controlling for prenatal depressive symptoms and anxiety in prediction of postnatal MES scores.

Discussion

The maternal appraisal of the experience of pregnancy in the third trimester was significantly predictive of the experience of motherhood, even when controlling for contemporaneous maternal anxiety and stress in the postpartum. This suggests that the perception of hassles, uplifts, and affective valence during pregnancy is a fairly stable feature of maternal psychological functioning and that the maternal response to early motherhood may, in part, be crystallized during pregnancy.

As with the experience of pregnancy^{1,39}, most women view early motherhood through a far more positive lens than a negative one. The Maternal Experience Scale provides an alternative instrument in the evaluation of maternal postnatal wellbeing that includes measurement of the positive aspects of early motherhood. By doing so, it allows a more balanced view of the complex emotions that accompany early motherhood. All participants regarded meeting their infant's needs and appreciation of the baby's behavior and appearance as intensely uplifting. There was lower intensity and greater between-individual variation in the nomination of hassles, although lack of sleep topped the list. In general, uplifts tended to be centered around the infant whereas hassles tended to be maternal-centric and primarily indicative of concerns surrounding self-care. Self-care, along with the tensions that surround it, has emerged as an important construct in evaluating maternal functional status but relatively under-recognized in its evaluation⁴⁰.

Variation in MES scores corresponded to maternally reported levels of anxiety and depression in a manner that would be expected. Similarly, women who reported lower levels of postnatal attachment and higher levels of parenting stress also perceived themselves as more hassled and less uplifted by the maternal experience. This demonstrates convergent validity of the scale but also discriminant validity as even the strongest association (i.e., between maternal anxiety and the MES intensity ratio) accounted for less than one third of the total variance.

The correspondence of MES hassles frequency and intensity to the analogous uplifts indicators was quite low, replicating results found for the prenatal version of the scale¹. This suggests that the scale is not indexing emotional lability per se, and that women independently distinguish the valence of each item. The composite ratio scores are useful in

ascribing an overall affective valence to the maternal experience and, compared to individual hassles or uplifts measures, typically yielded the highest magnitude correlation coefficients in relation to maternal anxiety, depression, and parenting stress.

Maternal characteristics of age, educational level, and parity did not affect maternal MES ratings with the exception of a slightly lower intensity of uplifts reported by women with at least one other child. Women did not perceive the prenatal experience differently whether they had a boy or girl. However, consistent with the literature on the role of infant temperament in the transition to parenthood^{16,41,42} women who reported having more fussy, unadaptable and unpredictable infants also reported more hassles, greater hassle intensity, lower intensity of uplifts, and higher negative valence on both ratio scores. It is important to recall, however, that the temperament ratings were not based on observed infant behavior but on maternal report which is tempered by psychological characteristics^{43,44}.

Although pregnancy was perceived as more positive than negative, women became even more positive from the prenatal period to 6 months postpartum. This was particularly true for multiparous women and may reflect greater relief in the infant's outcome, alleviation of the additional role demands present during pregnancy, improved sleep, or a combination of all three. This finding is reminiscent of the decline in general maternal distress that follows pregnancy and extends through 24 months postpartum observed for multiparous as compared to primiparous women⁴⁵. Note, however, that although mean values are based on the relative relation between hassles and uplifts, the score components were generated from different items in the pre- and postpartum and it is possible that this limits score comparability.

Assumption of a more balanced perspective on women's psychological state during pregnancy and afterwards is consistent with recent syntheses of the large and often conflicting literature on how being a parent affects subjective well-being for both men and women over time. A recent model⁴⁶ posits that parenthood and well-being are mediated by the balance between factors such as finding purpose or meaning in life, social roles, and positive emotions versus negative factors such as sleep disturbance and potentially strained partner relations. Parenthood's "upside" prevails in a comprehensive analysis of data generated by varied sources although there is clearly heterogeneity of experience^{47,48}. Moreover, if the degree to which women regard pregnancy as uplifting portends the degree to which they derive enjoyment from early motherhood, it suggests that maternal postpartum affect may be as much related to feelings about being pregnant as to reactions to having a new baby. This suggests that postpartum affect, negative affect, and functional adjustment may be amenable to prenatal intervention.

This report is limited by the implementation of the MES at a single point midway through the first postpartum year, and as a result, we are unable to provide information regarding test-retest reliability which is an important psychometric component. Consistent with an earlier report¹, the PES exhibits strong test-retest over 3 months of pregnancy, although the postnatal period may provide different threats to stability than the prenatal one. Most of the MES items have face validity beyond this period, but we cannot comment on whether the results presented here would generalize to either younger or older infants as each

developmental stage presents unique eliciting behaviors. For example, maternal appraisal of uplifts relative to hassles might not be as sanguine near the 6th postnatal week, when persistent crying is at its peak. However, given the predictive relations seen from the prenatal to postnatal experiences, and relatively modest contribution of infant temperament, we would expect this pattern of results to continue. Also, item incorporation was based on direct translation from the relevant prenatal items on the PES along with informal interviews of mothers of young infants. Formal methods of ensuring content validity were not employed, so we cannot ascertain that all relevant domains are represented in the scale.

This study is also limited by relative sample homogeneity reflecting self-referred, well-educated women in stable relationships and results may not generalize to populations of women of more diverse racial and ethnicity identities or at greater socioeconomic disadvantage where motherhood may reflect greater strain on resources. Comparative data for perinatal and postnatal indicators of distress in this population is scarce. The transition to parenthood generates greater marital dissatisfaction in more affluent parents¹² and higher income may undermine feelings of meaningfulness when in the company of children⁴⁹. Whether or not women of lower socioeconomic status would respond differently on the MES than women in the current sample remains an empirical question.

Generalizability concerns may also relate to women with psychiatric conditions of depression, anxiety or their comorbidity. While we might expect different patterns of MES responses than reported by our non-clinical sample, it is an open question. However, the addition of a dimension of positivity relative to negativity regarding women's current experience may increase specificity of postpartum depression screening efforts in the general population and may serve to distinguish women of greatest concern among clinical populations. That is, self-appraisal of dimensions of early motherhood as highly uplifting may temper concern over reports of depressive symptoms. On average, women endorsed 51% of the 41 MES items as hassles and 88% of the items as uplifts. Since the items are specific to mothering, this suggests that lack of inclusion of an instrument that measures these sources of stress and joy in research studies will result in the under-detection of both. The benefit of having a scale with neutral wording is that it allows respondents to ascribe their own meaning to events that the appraisal of which are in the eye of the beholder. Clinical utility might be enhanced by development and validation of an abbreviated version of the scale, comparable to the brief version of the PES which includes only the top 10 items nominated as hassles and as uplifts³². We hope this report provides additional insight into understanding the process by which women become mothers and brings balance to evaluation of the experience of early motherhood.

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Appendix

APPENDIX

Below is a list of things you may experience as a mother of an infant which may affect you in a variety of ways. They may make you happy, positive, uplifted or they may make you feel unhappy, negative or upset. Or they may make you feel some of each. Please respond to each of them Make sure that you circle a number on both sides of each question.

0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal How much has this made you feel happy, positive, or uplifted?					0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal How much has this made you feel unhappy, negative or upset?				
0	1	2	3	1. Meeting your baby's needs	0	1	2	3	
0	1	2	3	2. Your weight *	0	1	2	3	
0	1	2	3	3. Getting enough sleep *	0	1	2	3	
0	1	2	3	4. Discussions with spouse/partner about baby care	0	1	2	3	
0	1	2	3	5. Feeding the baby solid foods	0	1	2	3	
0	1	2	3	6. Being a new parent	0	1	2	3	
0	1	2	3	7. Taking care of your own personalneeds	0	1	2	3	
0	1	2	3	8. Your baby's developmental progress	0	1	2	3	
0	1	2	3	9. Your baby's weight	0	1	2	3	
0	1	2	3	10. Discussions with own family about baby care	0	1	2	3	
0	1	2	3	11. Visits to the pediatrician	0	1	2	3	
0	1	2	3	12. Body changes due to pregnancy *	0	1	2	3	
0	1	2	3	13. Physical intimacy *	0	1	2	3	
0	1	2	3	14. Leaving your baby with babysitter or child care	0	1	2	3	
0	1	2	3	15. Your baby's health/physicalsymptoms	0	1	2	3	
0	1	2	3	16. Fitting into pre-pregnancy clothing	0	1	2	3	
0	1	2	3	17. Breastfeeding or bottle-feeding	0	1	2	3	
0	1	2	3	18. Discussions with in-laws about baby care	0	1	2	3	
0	1	2	3	19. Interaction of spouse/partner with new baby	0	1	2	3	
0	1	2	3	20. Getting your baby to sleep	0	1	2	3	
0	1	2	3	21. Your baby's level of fussiness	0	1	2	3	
0	1	2	3	22. Other people giving you advice on baby care	0	1	2	3	
0	1	2	3	23. Sharing baby care responsibilities with spouse/partner	0	1	2	3	
0	1	2	3	24. Your baby's activity level	0	1	2	3	
0	1	2	3	25. Impact of new baby on your other children	0	1	2	3	
0	1	2	3	26. Interaction of own family with baby	0	1	2	3	

0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal How much has this made you feel happy, positive, or uplifted?					0 = Not at all 1 = Somewhat 2 = Quite a bit 3 = A great deal How much has this made you feel unhappy, negative or upset?				
0	1	2	3	27. Comments from others about your appearance	0	1	2	3	
0	1	2	3	28. Other people touching/holding your baby	0	1	2	3	
0	1	2	3	29. Interaction of in-laws with baby	0	1	2	3	
0	1	2	3	30. Changes in parenting other children due to new baby	0	1	2	3	
0	1	2	3	31. Courtesy/assistance from others because you have a baby	0	1	2	3	
0	1	2	3	32. Maternity leave policy related to benefits	0	1	2	3	
0	1	2	3	33. Finding time to spend alone with spouse/partner	0	1	2	3	
0	1	2	3	34. Interacting with your baby	0	1	2	3	
0	1	2	3	35. Your baby's appearance	0	1	2	3	
0	1	2	3	36. Thoughts about whether your baby is normal	0	1	2	3	
0	1	2	3	37. Finding quality child care	0	1	2	3	
0	1	2	3	38. Hearing about babies of friends/acquaintances	0	1	2	3	
0	1	2	3	39. Maintaining friendships	0	1	2	3	
0	1	2	3	40. Balancing work and parenting	0	1	2	3	
0	1	2	3	41. Getting/keeping the baby on a schedule	0	1	2	3	

* Indicates items that are shared verbatim with Pregnancy Experience Scale.

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Current knowledge on the subject:

- Research has generally focused on the negative and stressful features of pregnancy and early parenting.
- Measurement of both uplifts and hassles in the prenatal period reveals that women are more positive than negative about pregnancy.
- Failure to measure positive aspects of mothering contributes to its pathologisation.

What this study adds:

- A new instrument with good internal reliability and both convergent and discriminant validity to measure both the negative and positive appraisal of early motherhood.
- Women's attitudes toward their pregnancy significantly predict their attitudes toward their infants.
- In low risk women, mothering an infant is regarded as consistently more uplifting than hassling.

Figure 1.

Associations between Pregnancy Experience Scale (PES) scores collected during the second half of pregnancy with Maternal Experience Scale (MES) scores recorded at 6 months postpartum. All prenatal to postnatal associations were significant ($p < .0001$).

Table 1Maternal and infant characteristics ($n = 136$)

	<i>M (sd) or %</i>
Maternal age (years)	31.9 (4.4)
Maternal Education (years)	17.1 (1.6)
< 4 years college	8.7%
College degree	39.1%
Any graduate training	52.2%
Married	94.2%
Nulliparous	58.7%
Race	
Non-Hispanic White	78.7%
African-American	8.8%
Asian	12.5%
Gestational age (weeks)	39.5 (1.1)
Birthweight (g)	3390.5 (504.2)
5-minute Apgar	8.9 (0.9)
Female sex	43.5%

Table 2Ten most frequently endorsed MES uplifts and hassles ($n = 136$)

	%	<i>M</i> [*]	<i>sd</i> [*]
Uplifts			
1. Meeting your baby's needs	100	2.9	.4
2. Your baby's developmental progress	100	2.8	.4
3. Your baby's activity level	100	2.7	.5
4. Interacting with your new baby	100	2.9	.3
5. Your baby's appearance	100	2.9	.4
6. Being a new parent	99.2	2.7	.6
7. Feeding the baby solid foods	98.5	2.4	.8
8. Breastfeeding or bottle-feeding	97.8	2.4	.7
9. Hearing about babies of friends/acquaintances	97.8	2.3	.8
10. Maintaining friendships	97.8	2.0	.8
Hassles			
1. Getting enough sleep	88.2	1.6	.9
2. Body changes due to pregnancy	88.2	1.4	.9
3. Balance work and parenting	87.7	1.5	.9
4. Finding time to spend alone with spouse	85.8	1.5	.9
5. Leaving your baby with babysitter or in child care	85.6	1.4	.9
6. Taking care of your own personal needs	81.6	1.2	.8
7. Your weight	81.6	1.4	.9
8. Physical intimacy	80.3	1.3	.9
9. Getting/keeping baby on a schedule	76.3	1.0	.8
10. Getting baby to sleep	72.8	1.1	.9

* Values for intensity ratings

Table 3Means and standard deviations of MES frequency and intensity scales by maternal parity, education, and infant sex ($n = 136$)

	Frequency			Intensity			Ratio	
	Hassles	Uplifts	Hassles	Hassles	Uplifts	Frequency	Intensity	Intensity
All	21.3 (7.6)	35.7 (4.7)	1.4 (.3)	2.3 (.3)	.61 (.22)	.64 (.17)		
Parity								
Nulliparous	21.5 (7.1)	35.4 (4.4)	1.4 (.3)	2.3 (.3)	.62 (.22)	.63 (.16)		
Multiparous	21.0 (8.2)	36.1 (5.0)	1.4 (.3)	2.1 (.3)	.59 (.22)	.65 (.18)		
<i>T</i>	.36	-.90	.84	2.58 [*]	.84	-.91		
Education								
< 4 years college	20.3 (6.6)	33.4 (6.9)	1.4 (.3)	2.3 (.3)	.63 (.23)	.62 (.19)		
College degree	20.0 (7.5)	36.2 (3.8)	1.4 (.3)	2.3 (.3)	.56 (.23)	.65 (.18)		
Any graduate training	22.5 (7.6)	35.7 (4.7)	1.4 (.2)	2.2 (.3)	.64 (.20)	.63 (.15)		
<i>F</i>	1.89	1.80	1.83	.48	1.77	.34		
Sex								
Male	22.2 (7.3)	36.3 (4.3)	1.4 (.3)	2.3 (.3)	.62 (.20)	.64 (.16)		
Female	20.1 (7.8)	34.9 (5.0)	1.4 (.3)	2.2 (.3)	.59 (.24)	.63 (.18)		
<i>T</i>	1.58	1.80 ⁺	1.14	.58	.59	.31		

⁺ $p < .10$ ^{*} $p < 0.05$

Table 4

Associations between MES scores with other psychological measures

	Anxiety [†] (STAI)	Depression [†] (EPDS)	Attachment (MPAS)	Parenting Stress (PSI)
Frequency Hassles	.47***	.40***	-.48***	.48***
Frequency Uplifts	-.19*	-.14	.06	-.15
Intensity Hassles	.45***	.44***	-.32***	.45***
Intensity Uplifts	-.40***	-.27**	.39***	-.37***
Frequency Ratio	.54***	.45***	-.47***	.53***
Intensity Ratio	.57***	.46***	-.46***	.51***

* $p < 0.05$.** $p < 0.01$.*** $p < 0.001$ [†]Values for STAI and EPDS correlations based on $n = 135$; all others $n = 136$.

Table 5Associations between MES and infant temperament ($n = 134$)

	Fussy/Difficult	Unadaptable	Dull	Unpredictable
Frequency Hassles	.38***	.31***	.07	.40***
Frequency Uplifts	-.01	-.01	-.22**	-.21*
Intensity Hassles	.30***	.18*	.20*	.26**
Intensity Uplifts	-.34***	-.29***	-.24***	-.31***
Frequency Ratio	.36***	.33***	.18*	.44***
Intensity Ratio	.42***	.28***	.28***	.36***

* $p < 0.05$.** $p < 0.01$.*** $p < 0.001$