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**Changes in Mothering Ideology After Childbirth
and Maternal Psychological Health in French Women**

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Abstract

The prevailing dominant discourse about motherhood in western societies reflects a set of interconnected beliefs referred to as intensive mothering ideology. Little is known about how intensive mothering ideology changes after childbirth, and the associations between intensive mothering ideology and maternal psychological health. The current study aims to explore how intensive mothering ideology may evolve after childbirth in both primiparous and multiparous women, and whether any observed changes in this ideology impact maternal psychological health. French women ($n = 144$) completed a set of study measures during late pregnancy and then again at two months and four months postpartum, which assessed intensive mothering ideology, postpartum depression, and maternal burnout symptoms. As expected, the results indicated that intensive mothering ideology increases after childbirth. However, changes in ideology were not stronger in primiparous women compared to multiparous women. Of note, multiparous women reported stronger challenge and sacrifice beliefs. Finally, linear mixed models showed that changes in intensive mothering ideology were associated with maternal psychological health in contradictory ways, while controlling for parity and unemployment. Mainly, growth in sacrificial beliefs seems to be detrimental to maternal psychological health. These findings have implications for the well-being of mothers after childbirth and call for challenging the self-sacrifice beliefs that underpin intensive mothering ideology and promoting self-care.

Keywords: intensive mothering ideology, mothers, parental attitudes, parental role, postpartum

Changes in Mothering Ideology After Childbirth and Maternal Psychological Health in French Women

According to the World Health Organization, women's psychological health cannot be disconnected from their roles in societies (WHO, 1993). Similarly, various scholars have argued that mothers' experiences cannot be understood without considering existing gender ideologies (Arendell, 2000). Many studies have been conducted on the role of gender ideologies (Davis & Greenstein, 2009); however, less is known about specific beliefs about motherhood and childcare in relation to women's psychological health. The current study was designed to explore intensive mothering ideology changes after childbirth in primiparous and multiparous women, and the associations between these changes and maternal psychological health, specifically depression symptoms and burnout.

Intensive mothering ideology

According to Hays's seminal work (1996), the prevailing dominant discourse about motherhood should be regarded as an ideology that centers on three interconnected beliefs: mothers are the best caregivers for children; parenting is a difficult, all-consuming, child-centered and expert-guided activity, as well as the most important and fulfilling job; and children must be cherished because of their innocence and preciousness. In the same vein, according to Liss et al. (2013), intensive mothering ideology also incorporates the belief that mothers are better at parenting than fathers (essentialism); being a parent is rewarding (fulfilment); child-rearing is difficult (challenge); children must be intellectually stimulated (stimulation); and child-rearing should be focused on the child's individual needs and rhythms (child-centrism).

The intensive mothering ideology concept, although it originated in the United States, has been successfully applied to French mothers and mothers-to-be with some subtle

adjustments, presumably because of cultural and social variation (Loyal et al., 2020, 2017). Indeed, American and French women share some ideas about childcare and motherhood, but they may also exhibit differences (Bornstein, 2012; Suizzo & Bornstein, 2006). For instance, compared to American mothers, French women have been found to place less value on bonding, breastfeeding, sacrificing their own needs and responding quickly to those of the baby, and to place more value on equal task-sharing between parents and child autonomy (Suizzo, 2004). Moreover, the United States and France have very different child and family policies (Thevenon, 2011). Unlike American parents, French parents benefit from childcare provisions, paid parental leave and family allowances (Thevenon, 2014).

It has been shown that intensive mothering ideology is more endorsed by mothers than by childless women (Liss et al., 2013; Loyal et al., 2020). This may be because women who endorse intensive mothering ideology may be more likely to start a family (self-selection bias). In addition, women giving birth may experience a growth in intensive mothering ideology as a part of their role transition (role transition effect). It has been observed that after the birth of a child, mother's gender role attitudes become more traditional (Baxter et al., 2015; Corrigan & Konrad, 2007; Evertsson, 2013; Katz-Wise et al., 2010; Regnier Loilier, 2009). In the same vein, one can reasonably expect that during the transition to motherhood, women may exhibit various changes regarding their ideas about motherhood and children such as intensive mothering ideology. One longitudinal study found that intensive mothering ideology did not increase between 4 and 16 months postpartum (Walls et al., 2014). However, no longitudinal studies have been conducted regarding changes in intensive mothering ideology after the birth of a child.

It is often assumed that primiparous mothers face greater and more numerous changes than multiparous women when having a child because they are experiencing an entirely new role (Dipietro et al., 2008). Indeed, it has been observed that after the birth of a child,

primiparous mothers experience greater changes in gender role attitudes than multiparous mothers (Baxter et al., 2015; Katz-Wise et al., 2010). Presumably, primiparous mothers might also exhibit stronger changes regarding their ideas about motherhood and children, such as intensive mothering ideology.

Postpartum Depression and Maternal Burnout

There is no doubt that blissful motherhood is a collective aspiration, but it is well established that many women experience distress after the birth of a child (World Health Organization [WHO], 2009). The literature about mental health during the perinatal period is dominated by discussions of postpartum depression (O'Hara & McCabe, 2013; Rallis et al., 2014; WHO, 2009), which is prevalent in 13–19% of women giving birth (O'Hara & McCabe, 2013). Postpartum depression is associated with stigma (McLoughlin, 2013) and may have important consequences for children (O'Hara & McCabe, 2013; WHO, 2009), such as psychopathological disorders (Goodman et al., 2011), impaired cognitive development (Kingston et al., 2012), and insecure attachment (Misri & Kendrick, 2008).

Some scholars have also started to explore psychological distress in parents by looking at it from the perspective of burnout (Mikolajczak, Brianda, et al., 2018; Mikolajczak, Raes, et al., 2018; Roskam et al., 2017). Whereas burnout was originally thought to be limited to job-related stress, and chiefly to healthcare, social, and teaching occupations (Schaufeli et al., 2009), some scholars are now applying the concept to non-professional activities (e.g., postgraduate education, sports, parenting; Bianchi et al., 2014). According to Roskam et al. (2017), parental burnout encompasses three dimensions: exhaustion (extreme physical and emotional tiredness in the parental role), emotional distancing (diminished involvement in childcare), and feelings of incompetence as a parent. Those dimensions to some extent mirror the original occupational burnout dimensions (Schaufeli et al., 2009). Parental burnout may have serious consequences such as conjugal conflict or neglect and violence against children

(Mikolajczak, Brianda, et al., 2018). It may affect up to 13% of parents (Roskam et al., 2017), although it is difficult to establish cut-off and prevalence values regarding burnout (Brisson & Bianchi, 2016).

According to attachment theory, women's deep involvement in mothering supports maternal satisfaction and competence as well as child development (Bowlby, 1951, 1969). Nevertheless, according to some scholars, normative aspects of motherhood could be significant contributors to distress in mothers (Arendell, 2000; Beck, 2002; McLoughlin, 2013; Patel et al., 2013; Tummala-Narra, 2009). Indeed, Rizzo et al. (2013) observed that in mothers of toddlers, essentialism and challenge were associated with lower life satisfaction and more symptoms of depression and stress while controlling for social support. In addition, Meeussen and Van Laar (2018) found that intensive mothering ideology was associated with higher parental burnout through maternal gatekeeping behavior. However, Walls (2010) found no association between intensive mothering ideology assessed at four months postpartum and maternal wellbeing at 16 months postpartum. Finally, Henderson et al. (2016) found that intensive mothering ideology was not associated with maternal self-efficacy, stress or anxiety. However, pressure to be perfect and guilt for not meeting expectations were associated with maternal self-efficacy, stress or anxiety. However, those studies had various limitations. Most of them were cross-sectional (Henderson et al., 2016; Meeussen & Van Laar, 2018; Rizzo et al., 2013) or failed to use validated tools to assess intensive mothering ideology (Henderson et al., 2016; Meeussen & Van Laar, 2018; Walls, 2010). Only Walls's study (2010) was longitudinal, and only Rizzo et al.'s study (2013) used the Intensive Parenting Attitude Questionnaire (IPAQ).

Aim of the Current Study

The current study was designed to explore intensive mothering ideology changes after childbirth in primiparous and multiparous women and the associations between these changes

and maternal psychological health (depression symptoms and burnout). It was hypothesized that endorsement of intensive mothering ideology would be stronger after childbirth (H1). Intensive mothering ideology changes were expected to be stronger in primiparous mothers than in multiparous mothers (H2). Growth in intensive mothering ideology was expected to be associated with lower maternal psychological health (i.e., more depression symptoms and burnout) (H3).

Method

Participants and Procedure

Participants were expectant women who were followed up after childbirth. They had to be fluent in French (spoken and written) and older than 18. Women with multiple pregnancies or who had undergone medically assisted procreation, which might be a source of medical complications and emotional distress, were excluded (Blondel & Kermarrec, 2010; Choi et al., 2009; Hammarberg et al., 2008). The participants were recruited at the maternity ward of a local French university hospital during a required informational meeting about childbirth pain management. Approximately 640–960 women were invited to participate, and 144 were recruited (a participation rate of around 15–23%). Women who chose not to participate may have done so because they did not meet the inclusion/exclusion criteria or because they did not wish to participate.

Before the birth (T1), participants ($n = 144$) were received individually in a quiet office of the maternity ward. They were given information regarding the study, signed an informed consent form and completed a set of self-administered questionnaires. Then, two months (T2) and four months (T3) after the birth, they were asked to answer various self-administered questionnaires online. Between T1 ($n = 144$) and T2 ($n = 138$), six participants were lost (4.2%). Between T2 ($n = 138$) and T3 ($n = 129$), nine participants were lost (6.5%).

Informed consent was obtained from all individual participants included in the study. All procedures were in accordance with the ethical standards of the institutional and national research committees and with the 1964 Declaration of Helsinki and its later amendments. The study was reviewed and approved by an institutional review board prior to data collection.

Measures

Intensive Mothering Ideology

The *Mesure de l'Ideologie du Maternage Intensif* (MIMI) was administered (Loyal et al., 2017) at T1, T2 and T3. This French scale contains both translated items from the Intensive Parenting Attitude Questionnaire (IPAQ) (Liss et al., 2013) and items derived from semi-structured interviews with French mothers and mothers-to-be (Loyal et al., 2017). The MIMI contains 21 items assessing six dimensions of intensive mothering ideology: *essentialism* expresses the idea that mothers are the best caregivers for children (seven items); *consuming fulfillment* expresses the idea that being a parent is a fulfilling, rewarding and all-consuming *role* (five items); *child-centrism* conveys the idea that child-rearing should be focused on the child's individual needs and rhythms (two items); *challenge* expresses the idea that child-rearing is the hardest job in the world (two items); *sacrifice* conveys the idea that parents should set aside their own desires (three items); and *stimulation* expresses the idea that children should be properly stimulated (two items). Participants were asked to answer each item on a Likert scale ranging from 1 (*disagree very strongly*) to 6 (*agree very strongly*). Score for each dimension was calculated (mean). Higher score indicate a higher endorsement of the intensive mothering belief. The full scale is available in the original validation study (Loyal et al., 2017). The distinction between challenge and sacrifice did not appear explicitly in the pioneering conceptualization of intensive mothering ideology (Hays, 1996) or in the IPAQ (Liss et al., 2013), but was observed in the MIMI development process (Loyal et al., 2017).

In the present sample, Cronbach alphas were computed for each dimension at T1, T2, and T3, respectively: essentialism ($\alpha = .74, .81, .80$), consuming fulfillment ($\alpha = .63, .68, .67$), child-centrism ($\alpha = .77, .86, .80$), challenge ($\alpha = .57, .70, .83$), sacrifice ($\alpha = .51, .59, .72$) and stimulation ($\alpha = .37, .53, .59$). Those alpha values are in accordance with those obtained in the validation study with mothers and mothers-to-be indicating a lower reliability of the challenge (.61), sacrifice (.61) and stimulation (.64) dimensions (Loyal et al., 2017). Cronbach alphas depend heavily on the number of items (Lance, 2006; Streiner, 2003). Thus, we have computed mean interitem correlations, a better way to assess internal consistency (Clark & Watson, 1995). Inter-item correlations were computed for essentialism (.27–.37), consuming fulfillment (.25–.32), child-centrism (.61–.74), challenge (.46–.73), sacrifice (.29–.43) and stimulation (.31–.44). As recommended by Clark and Watson (1995), all mean interitem correlations are higher than .15 (also $>.40$ indicates a narrower construct). Of note, the Brown-Spearman prophecy formula indicates that increasing the number of items for fulfilment (adding three items), challenge (two items) sacrifice (two items), and stimulation (one item) might increase the Cronbach alphas to adequate levels ($>.70$). However, the MIMI has previously shown good criterion validity through its significant association with motherhood, housewifery and education (Loyal et al., 2020).

Depressive Symptoms

To assess depressive symptoms, the French version of the Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987; Guedeney & Fermanian, 1998) was administered at T1, T2 and T3. This scale contains 10 items with four possible responses (0-3). Each item has different response options. The EPDS Score is the total of the scale (from 0 to 30). Higher scores indicate higher depressive symptoms. This scale was chosen because it has been widely used and validated with new mothers and, to a lesser extent, pregnant women

(Gibson et al., 2009). Internal consistencies were satisfactory at T1, T2 and T3 ($\alpha = 0.83$, 0.86 , and 0.80 , respectively).

Maternal Burnout

To assess burnout, two instruments were used during the postnatal period (T2 and T3) but not during pregnancy (T1) because burnout associated with parenting was the area of concern. First, the French translation of the Shirom Melamed Burnout Measure (SMBM) was administrated (Sassi & Neveu, 2010; Shirom & Melamed, 2006). The SMBM is a 14-item scale assessing physical exhaustion (six items), cognitive exhaustion (five items), emotional exhaustion (three items) and global exhaustion (all items). Each item was offered with a Likert scale ranging from 1 (*never*) to 7 (*always*). A few modifications were made to adapt the scale to mothers, for instance, the emotional exhaustion items: “I feel I am unable to be sensitive to the needs of my child.” Scores are computed for each dimension (mean). Higher scores indicate more symptoms of burnout. Exploratory factor analyses (principal factor analysis and oblimin rotation) were conducted. The structure of the scale was the same as expected, and internal consistencies were satisfactory for physical, cognitive, emotional and global exhaustion at T2 ($\alpha = .91$, $.96$, $.78$ and $.92$, respectively) and T3 ($\alpha = .93$, $.95$, $.85$ and $.93$, respectively).

Second, the Questionnaire d’Auto-Evaluation de la Compétence Educative Parentale (QAECEP; Terrisse & Trudelle, 1988) was used. This scale is the French adaptation of the Parental Sense of Competence Scale (PSOC; Gibaud-Wallston & Wandersman, 1978; Johnston & Mash, 1989). The QAECEP was used because a sense of incompetence is one of the three components of burnout (Roskam et al., 2017) that is not assessed by the SMBM. The QAECEP is a 16-item scale offered with a Likert scale ranging from 1 (*strongly agree*) to 6 (*strongly disagree*). Scores are computed for each dimension (mean). Higher scores indicate more competence and satisfaction. Exploratory factor analyses (principal factor analysis,

oblimin rotation) were conducted. The structure of the scale was quite different from the original one. Six items (items 3, 4, 8, 9, 13 and 16) were loading on the satisfaction dimension (“Although I’ve only been a mother for a short time, I feel comfortable in this role”). Five items (items 1, 6, 7, 10 and 11) were loading on the competence dimension (“A new mother could learn to be a good mother by following my example”). Finally, two items (items 12 and 14) were combined in an unexpected interest dimension (“If being a mother of a young child was more interesting, I would be more motivated to play my role as a mother”). Items 2, 5 and 15 were dropped because of low loadings. Internal consistencies were computed for satisfaction, competence and interest at T2 ($\alpha = .81, .65$ and $.65$, respectively) and T3 ($\alpha = .78, .72$ and $.76$, respectively). The different factor structure means that our results should not be compared directly to previous ones using the original factor structure.

Data Analyses

Analyses were performed with R Software (<https://www.r-project.org/>). First, participants who were lost during the follow-ups ($n = 15$) were compared to the others ($n = 129$) with a Fisher exact test and mean comparisons. Then a two-way mixed MANOVA (Multivariate analysis of variance) was computed including time (within subjects, three levels: T1, T2 and T3) and parity (between subjects, two levels: primiparous and multiparous women). When needed, post-hoc comparisons (with Bonferroni correction) were computed to check for significant differences. Second, linear mixed models were computed (<https://cran.r-project.org/package=lcm>) to test various models predicting changes in depression symptoms and burnout according to changes in intensive mothering ideology. Linear mixed models are specifically designed for the analysis of longitudinal data (Laird & Ware, 1982). This approach offers the advantage of considering multiple observations within a subject, taking intrasubject correlations into account. It also enables adjustments for numerous potential confounding variables. All models were controlled for parity (primiparous vs multiparous

women) and unemployment. Models predicting changes in burnout were controlled for changes in depressive symptoms.

Results

Descriptive Statistics

Participants' characteristics are described in Table 1. The Fisher exact test demonstrated that women who did not complete the whole protocol ($n = 15$) were more likely to have had an unplanned pregnancy (53% vs 12%, $p < .05$). They were more often born abroad (20% vs 5%, $p < .05$) and had a lower level of education (53% vs 26%, $p < .05$). They also had lower essentialism ($t(142) = 2.77$, $p < .01$), and sacrifice ($t(142) = 2.09$, $p < .05$) scores.

INSERT TABLE 1

Changes in Intensive Mothering Ideology (H1)

First, as expected, intensive mothering ideology (with the exceptions of essentialism and stimulation) grew stronger (Table 2). Thus, our first hypothesis (H1) regarding growth in intensive mothering ideology was mostly confirmed. Differences were significant only from T1 (pregnancy) to T2 or T3 (two or four months after childbirth), suggesting somewhat early changes.

INSERT TABLES 2 AND 3

Changes in Mothering Ideology According to Parity (H2)

No interaction was observed between time and parity (Table 2), indicating that primiparous women did not exhibit higher changes in intensive mothering ideology compared to multiparous women. Our second hypothesis (H2) was not confirmed. However, challenge and sacrifice scores were higher in multiparous women than in primiparous women (Tables 2 and 3).

Changes in Mothering Ideology and Maternal Psychological Health (H3)

Changes in intensive mothering ideology were associated with changes in depression and burnout symptoms (Table 4). Mainly, increases in sacrifice ideas were associated with more depression as well as more physical, cognitive, emotional and global exhaustion. ($\beta = .13, .37, .26, .28$ and $.36$) and lower parental satisfaction, competence and interest ($\beta = -.41, -.20$ and $-.17$). Increases in challenge were associated with more physical exhaustion ($\beta = .18$) but also with more interest in the parental role ($\beta = .17$). Essentialism was associated with more depression ($\beta = .13$) but also with more satisfaction and competence in the parental role ($\beta = .20$ and $.22$) and less emotional exhaustion ($\beta = -.20$). Increases in other dimensions of intensive mothering ideology seem to be generally positive. Increases in consuming fulfillment were associated with more satisfaction, competence and interest in the parental role ($\beta = .27, .20$ and $.66$). Increases in child-centrism were associated with more satisfaction and competence in the parental role ($\beta = .17$ and $.16$). Finally, increases in stimulation were associated with less emotional exhaustion ($\beta = -.59$). Our last hypothesis (H3) was only partly confirmed. Only increased sacrifice seemed to have clearly deleterious effects.

INSERT TABLE 4

Discussion

Our results show that most dimensions of intensive mothering ideology increased after the birth of a child. However, this increase in intensive mothering ideology was not higher in primiparous women compared to multiparous women. Of note, the challenge and sacrifice dimensions were higher in multiparous women than in primiparous women. In addition, sacrifice was the only dimension for which increases were consistently associated with more symptoms of depression and burnout.

Past research has shown that intensive mothering ideology is endorsed more strongly by mothers than by childless women (Liss et al., 2013; Loyal et al., 2020). This effect might be partly explained by a self-selection bias because women who endorse intensive mothering

ideology more strongly may also be more likely to start families. However, our results suggest that this effect might also be explained by changes occurring after the birth of a child (role transition effect). In sum, after the birth of a child, women are more convinced that childcare is a consuming and fulfilling activity, that it is a challenge that requires many sacrifices, and that it should be organized according to a child's needs and rhythms. Thus, our first hypothesis was confirmed. Becoming a mother is a role transition accompanied by changes in values and beliefs. To our knowledge, this is the first longitudinal study to bring to light intensive mothering ideology changes associated with the birth of a child. As with gender ideology (Corrigan & Konrad, 2007), intensive mothering ideology is not a strictly fixed property of individuals but rather may evolve to accommodate reproductive and family life stages.

Interestingly, changes were mainly observed between pregnancy (T1) and two or four months after childbirth (T2 or T3), but not between two months (T2) and four months after childbirth (T3). Thus, intensive mothering ideology growth may occur early after childbirth (role attainment effect) but not thereafter (role practice effect). However, our sample was mostly composed of highly educated women with skilled jobs who had resumed their professional activity at four months after childbirth (see Table 1). Continuous changes could occur in women who do not resume their professional activities.

Only essentialism and stimulation beliefs did not increase after childbirth. This outcome is consistent with previous findings that demonstrated stimulation beliefs were not higher in French mothers than in childless women (Loyal et al., 2020). However, it has been previously observed that essentialism is stronger in mothers than in childless women (Liss et al., 2013; Loyal et al., 2020). Growth in essentialism beliefs might occur earlier during pregnancy, or even during pregnancy planning, or later when new mothers have endured

months of conflicting work and family demands and unbalanced division of parental and domestic duties (Regnier Loilier, 2009).

Inconsistent with our hypothesis, primiparous women did not exhibit stronger changes in intensive mothering ideology than multiparous women. This result is at odds with various studies showing that after the birth of a child, primiparous mothers experience greater changes in gender role attitudes than multiparous mothers (Baxter et al., 2015; Katz-Wise et al., 2010). However, the women in our sample were first assessed only one month before giving birth (Table 1). It may be possible to observe greater changes in primiparous women earlier in the pregnancy, or even during pregnancy planning.

Regarding the effects of intensive mothering ideology changes on symptoms of depression and burnout, the results showed mixed effects. Thus, considering intensive mothering ideology as a whole to be detrimental to maternal psychological health may not provide much insight into its effects. In fact, different intensive mothering ideology components might produce different effects.

First, growth in consuming fulfillment, child-centrism and stimulation had positive effects. Women who are consumed by a fulfilling and child-centered parental role requiring child-stimulating activities experience more satisfaction, feelings of competence, interest in the parental role and connectedness with their child. This is in accordance with canonical theories suggesting that a mother's personal investment in motherhood promotes maternal psychological health (Bowlby, 1951, 1969). Supporting positive, sensitive and stimulating interactions between the mother and the child is known to be of paramount importance when dealing with depressed mothers (Milgrom, 2001).

Second, growth in essentialism and challenge was associated with paradoxical effects. Believing that childcare is difficult women's work promotes feelings of satisfaction, competence, interest and connectedness but is also a source of depression as well as physical

and general exhaustion. Construing childcare as a difficult activity that rests on the mother's shoulders might help in building mothering identity, role meaning and pride (Nelson et al., 2014), but it might also increase exhaustion and depression because of higher perceived costs (WHO, 2009). Of note, essentialist beliefs may be a source of partner under-involvement in childcare through a possible association with gatekeeping, a collection of behaviors that inhibit partner involvement (Meeussen & Van Laar, 2018). Indeed, lack of conjugal support is a well-known source of distress in new mothers (O'Hara & McCabe, 2013), but instrumental support provided by the partner might also decrease the mother's feelings of self-efficacy (Sasaki et al., 2010). The role of unmet expectations regarding partner support might also be an important variable, as it is known to produce distress (Biehle & Mickelson, 2012; Goldberg & Perry-Jenkins, 2004; Gremigni et al., 2011; Khazan et al., 2008).

Finally, women who felt that parenthood requires sacrifice felt less competent, satisfied and interested in their role, as well as more depressed and exhausted physically, cognitively, emotionally and globally. This outcome is in accordance with the suggestions of various scholars that some normative aspects of motherhood could contribute to distress in new mothers (Beck, 2002; McLoughlin, 2013; Patel et al., 2013; Tummala-Narra, 2009). Those results could be specific to French women. Indeed, previous studies have shown that, compared to American women, French women place less value on bonding, breastfeeding and sacrificing their own needs while responding quickly to those of the baby, and more value on equal task-sharing between parents and child autonomy (Suizzo, 2004). Beliefs about sacrifice might conflict strongly with French women's desire for independence and work-family life balance. Moreover, sacrifice beliefs could be similar to "self-silencing," or women's restrictions on their self-expression within their relationships to meet the needs of others (Boughton & Street, 2007; Jack, 1991). Our results reinforce the need for reduction of sacrificial beliefs and instead fostering self-care promotion goals directed at mothers-to-be

and new mothers (Cuijpers et al., 2008; Leight et al., 2010; Milgrom, 2001; Sockol et al., 2011).

Of note, multiparous women had higher sacrifice and challenge scores than primiparous women. This finding might be explained by the fact that multiparous women are subjected to stronger family demands because they are raising older children (Dipietro et al., 2008; Grant et al., 2008). This could explain why multiparous women are sometimes found to experience more distress after the birth of their child (Bell et al., 2016; Grant et al., 2008; Milgrom et al., 2008; Yelland et al., 2010).

Limitations and Future Research

This study also has some limitations. First, there is now a specific and well-validated scale (Parental Burnout Inventory; Roskam et al., 2017) designed to measure parental burnout. This scale was not yet available when this study was conducted. Measuring parental burnout with specific rather than generic tools not directed at parents (the SBMB) could have provided more accurate results. Second, changes in intensive mothering ideology were modest in magnitude (≤ 10) (Sullivan & Feinn, 2012). This might be explained by our sample, which was mostly composed of highly educated women engaged in skilled occupations (see Table 1). This is a quite common limitation in perinatal research (Ross et al., 2006). According to Bloss (2001), mother identity may be more strongly endorsed in poorly educated new mothers with precarious and less-skilled jobs. Thus, studying intensive mothering ideology changes in disadvantaged populations could be a promising research avenue. Third, participants were followed up only from late pregnancy to two and four months after childbirth. This narrow follow-up period prevented us from catching early changes that could have occurred since the planning of the pregnancy and late changes that could have occurred after months of conflicting family and work demands and unequal distribution of domestic and parental chores between spouses. For instance, it would be

interesting to study how changes in intensive mothering ideology might be associated with professional issues when women return to work. Thus, further research should explore how intensive mothering ideology could change over longer periods of family life and how it may influence familial and professional issues. Finally, this study does not include data regarding women who did not become mothers (control group). It is possible that women of childbearing age might also exhibit changes over time in intensive mothering ideology without having a child.

Practice Implications

Our results highlight a need for professionals working with expectant women and new mothers (physician, midwives, social workers, etc.) to pay attention to changes in patients' ideas and beliefs about motherhood and mothering. Sacrifice beliefs, and to a lesser extent challenge and essentialism beliefs, could be monitored to reduce factors that were shown to be related to depression and burnout after a birth, especially in multiparous women. Such beliefs could be discussed during prenatal classes or addressed through flyers or short videos. For instance, maternal gatekeeping behaviors (Allen & Hawkins, 1999; Fagan & Barnett, 2003; Gaunt, 2006, 2008; McBride et al., 2005; Puhlman & Pasley, 2013) and preconceived ideas regarding the decisive and dominant role of mothers in childcare over fathers could be targeted, possibly through humor (Riquelme et al., 2019).

Family members could also be called upon to address those beliefs in everyday life. New fathers could benefit from advice or interventions to assert firmly, at an early stage, their domestic and childcare skills and their rightful role with newborns (Doherty et al., 2006). They could also be trained to spot and counter, in a caring manner, sacrifice beliefs and maternal gatekeeping in their loved ones.

Conclusions

As expected, our results confirm that intensive mothering ideology grows stronger after childbirth. This is the first time that such changes are documented. Intensive mothering ideology is not a strictly fixed property of individuals but rather may evolve to accommodate reproductive and family life stages. This result call for further longitudinal research. Moreover, some intensive mothering ideology dimensions (challenge and sacrifice) are higher in multiparous women than in primiparous women probably indicating a higher domestic and parental load in multiparous women. However, contrary to our hypothesis, intensive mothering ideology increases are presumably not stronger in primiparous women. Finally, the effects of intensive mothering ideology changes on symptoms of depression and burnout were mixed. Considering intensive mothering ideology as a whole to be detrimental to maternal psychological health may not provide much insight into its precise effects. However, growth in sacrificial beliefs clearly favors the development of mental health issues. It calls for interventions efforts to question our collective concept of motherhood. The tendency to sacrifice oneself is mostly understood as a positive and desirable feature especially in the motherhood context. Calling into question this motherly ideal will certainly be difficult but is a promising avenue.

Declarations

Funding. None.

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

Research Involving Human Participants. All procedures were in accordance with the ethical standards of the institutional and national research committees and with the 1964 Declaration of Helsinki and its later amendments.

Informed Consent. All participants in this work provided informed consent.

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Table 1*Participants Characteristics during Pregnancy (Time 1, N = 144)*

Variable	M (SD) or %
Age (years)	30.9 (4.15)
Born in France	93.75 %
Engaged in a relationship	97.9%
First time mother	72.9%
Previous child	27.1%
One child	84.6 %
Youngest child age (<i>months</i>)	37.51 (18.86)
Delay to Delivery	29.28 (13.24)
≥ 3 years post-secondary Education	70.8 %
Skill Level	
White collar / highly qualified	41.1 %
Intermediate professional	39 %
Employees	19.9 %
Employed	80.6 %
≥ 35 hours a week	90.5 %
Pregnancy	
Planned	84%
Happy to be pregnant	82.6%
Obstetric complication	
Complicated or urgent C-section	8.7%
Prematurity (>30 days)	0%
Underweight (<2kg)	0%
Incubator (>4 weeks)	0%

Table 2

Two-Way Mixed MANOVA according to Time and Parity

	df	Mean Square	<i>F</i>	Sig	Partial Eta ²	Post-hoc
Time						
Essentialism	1.754	0.691	1.245	.287	.010	
Consuming Fulfillment	1.454	1.713	3.464	.048*	.027	T1<T2&T3
Child-centrism	1.638	6.761	7.623	.001**	.058	T1<T2&T3
Challenge	1.737	2.795	2.747	.074†	.022	T1<T3
Sacrifice	1.685	6.834	10.071	.000**	.075	T1<T2&T3
Stimulation	1.750	0.035	0.207	.784	.002	
Parity						
Essentialism	1	0.414	0.395	.531	.003	
Consuming Fulfillment	1	0.960	1.277	.261	.010	
Child-centrism	1	0.177	0.110	.741	.001	
Challenge	1	8.575	4.749	.031*	.037	MP>PM
Sacrifice	1	11.020	11.472	.001**	.085	MP>PM
Stimulation	1	0.007	0.028	.867	.000	
Time x Parity						
Essentialism	1.754	0.259	0.467	.602	.004	
Consuming Fulfillment	1.454	0.868	1.756	.184	.014	
Child-centrism	1.638	1.492	1.682	.193	.013	
Challenge	1.737	0.190	0.187	.799	.002	
Sacrifice	1.685	0.106	0.157	.819	.001	
Stimulation	1.750	0.074	0.439	.618	.004	

Note. T1: Pregnancy; T2: 2 months after childbirth; T3: 4 months after childbirth; MP: Multiparous women; PM: Primiparous women. Post-hoc comparisons with Bonferroni corrections are significant at $p<.05$. $p<.01$ (**), $p<.05$ (*) or $p<.10$ (†).

Table 3*Descriptive Statistics regarding Intensive Mothering Ideology according to Time and Parity*

	T1. <i>M (SD)</i>	T2 <i>M (SD)</i>	T3 <i>M (SD)</i>
Essentialism	MP. 3.20 (0.66)	MP. 3.29 (1.02)	MP. 3.44 (0.74)
	PM. 3.18 (0.66)	PM. 3.27 (0.83)	PM. 3.26 (0.95)
	All. 3.19 (0.66)	All. 3.27 (0.88)	All. 3.30 (0.89)
Consuming Fulfillment	MP. 4.67 (0.76)	MP. 5.01 (0.67)	MP. 4.82 (0.70)
	PM. 4.87 (0.59)	PM. 4.95 (0.77)	PM. 5.03 (0.72)
	All. 4.81 (0.64)	All. 4.97 (0.75)	All. 4.97 (0.71)
Child-centrism	MP. 4.11 (0.97)	MP. 4.71 (1.06)	MP. 4.51 (0.91)
	PM. 4.19 (0.98)	PM. 4.41 (1.10)	PM. 4.59 (0.98)
	All. 4.17 (0.97)	All. 4.50 (1.09)	All. 4.57 (0.96)
Challenge	MP. 4.74 (1.13)	MP. 5.01 (0.90)	MP. 4.90 (1.20)
	PM. 4.34 (1.01)	PM. 4.65 (1.08)	PM. 4.65 (1.19)
	All. 4.45 (1.05)	All. 4.75 (1.04)	All. 4.72 (1.19)
Sacrifice	MP. 3.02 (0.67)	MP. 3.33 (0.97)	MP. 3.55 (0.76)
	PM. 2.70 (0.76)	PM. 2.94 (0.82)	PM. 3.12 (0.95)
	All. 2.79 (0.75)	All. 3.04 (0.88)	All. 3.24 (0.92)
Stimulation	MP. 5.74 (0.37)	MP. 5.73 (0.43)	MP. 5.73 (0.46)
	PM. 5.68 (0.46)	PM. 5.74 (0.45)	PM. 5.76 (0.40)
	All. 5.69 (0.43)	All. 5.73 (0.44)	All. 5.75 (0.42)

Note. T1: Pregnancy; T2: 2 months after childbirth; T3: 4 months after childbirth; MP: Multiparous women; PM: Primiparous women; All: All participants.

Table 4.*Linear Mixed Models Predicting Changes in Symptoms of Depression and Burnout*

	β	SE	Wald	Sig
Model 1. Depression				
Essentialism	.13	.07	1.78	.07†
Consuming Fulfillment	.04	.09	0.45	.65
Child-centrism	-.09	.06	-1.37	.17
Challenge	.01	.06	0.25	.80
Sacrifice	.27	.08	3.60	.00**
Stimulation	-.17	.13	-1.35	.18
Model 2. Satisfaction				
Essentialism	.20	.09	2.06	.04*
Consuming Fulfillment	.27	.12	2.25	.02*
Child-centrism	.17	.10	1.78	.07†
Challenge	-.02	.08	-.0.25	.80
Sacrifice	-.41	.10	-3.98	.00**
Stimulation	-.02	.17	-0.10	.91
Model 3. Competence				
Essentialism	.22	.08	2.55	.01*
Consuming Fulfillment	.20	.11	1.80	.07†
Child-centrism	.16	.09	1.86	.06†
Challenge	.01	.07	0.11	.91
Sacrifice	-.20	.09	-2.19	.03*
Stimulation	.18	.16	1.17	.24
Model 4. Interest.				
Essentialism	.12	.08	1.41	.16
Consuming Fulfillment	.26	.11	2.35	.02*
Child-centrism	.13	.08	1.52	.13
Challenge	.17	.07	2.42	.02*
Sacrifice	-.17	.09	-1.89	.06†
Stimulation	.10	.16	0.62	.54

Model 5. Physical Ex.				
Essentialism	-.01	08	-0.11	.91
Consuming Fulfillment	-.16	12	-1.46	.14
Child-centrism	.04	08	0.45	.65
Challenge	.18	07	2.59	.00**
Sacrifice	.37	09	4.04	.00**
Stimulation	.04	16	0.23	.82
Model 6. Cognitive Ex.				
Essentialism	-.04	08	-0.51	.61
Consuming Fulfillment	.11	11	1.03	.31
Child-centrism	-.05	09	-0.53	.59
Challenge	.07	07	0.94	.35
Sacrifice	.26	09	2.89	.00**
Stimulation	-.14	16	-0.89	.37
Model 7. Emotional Ex.				
Essentialism	-.20	10	-1.97	.04*
Consuming Fulfillment	-.15	14	-1.11-	.26
Child-centrism	-.12	10	1.17	.24
Challenge	-.03	08	-0.30	.76
Sacrifice	.28	12	2.36	.02*
Stimulation	-.59	21	-2.73	.00**
Model 8. Global Ex.				
Essentialism	-.05	08	-0.61	.54
Consuming Fulfillment	-.08	11	-0.72	.47
Child-centrism	-.02	08	-0.19	.85
Challenge	.16	07	2.25	.02*
Sacrifice	.36	09	3.96	.00**
Stimulation	-.07	16	-0.48	.63

Note. In each model, parity and unemployment are controlled. Depressive symptoms changes are controlled in all models expecting Model 1. $p < .01$ (**), $p < .05$ (*) or $p < .10$ (†).