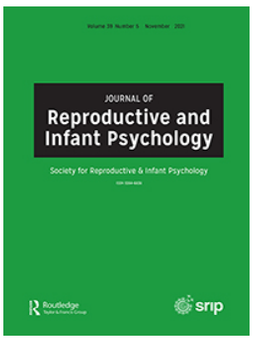

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Examining the association between subjective childbirth experience and maternal mental health at six months postpartum

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ABSTRACT

Problem: Childbirth experience can have long-lasting effects on maternal wellbeing.

Background: Positive childbirth experiences may strengthen maternal self-confidence, in contrast, negativeexperiences may promote a sense of failure or distrust.

Aim: To examine the contribution of maternal hospital childbirth experience on mental health at 6 months postpartum in a community-based, Chilean sample. An additional aim is to examine which childbirth-related aspects contribute to the global birth experience.

Methods: One hundred and forty-eight women completed self-report measures of mental health during the third trimester of pregnancy and 3 and 6 months postpartum. At 3months after childbirth, subjective childbirth experience was assessed. Logistic regression analysis examined the contribution of childbirth experience to maternal mental health.

Findings: Negative subjective experience of childbirth contributes to maternal depression and anxiety up to 6 months after childbirth, controlling for mental health during pregnancy and at 3 months postpartum. Quality of care from health professionals made the largest, statistically significant contribution to the global perception of childbirth.

Discussion and Conclusions: Subjective experience of childbirth is a modifiable risk factor for the development of postpartum maternal depression and anxiety. Health providers in direct contact with childbearing women may promote maternal emotional wellbeing through sensitive and respectful care.

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Postpartum depression; childbirth; anxiety disorders; maternal health

Introduction

Childbirth is a powerful experience that can have long-lasting positive or negative effects on maternal and infant wellbeing (Bell et al., 2016; Ponti et al., 2020; Sánchez-Cunqueiro et al., 2018). It has shown a potential to both strengthen maternal self-confidence and trust in others or, on the contrary, to promote a sense of failure or distrust (Lundgren et al., 2009). Women usually have vivid memories of the event and strong feelings about their birth experiences (Simkin, 1991). However, studies on childbirth memories over time have inconsistent results (Algom & Lubel, 1994). Some studies show that most women have

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consistent assessment of the overall experience over time (Waldenström, 2004), but there is also evidence that the modification of delivery-related memories might be affected by the subjective quality of the experience (Elvander et al., 2013; Fenaroli et al., 2016; Stadlmayr et al., 2006; Waldenström & Schytt, 2009). For instance, in women with an overall positive birth experience, memories of pain intensity decrease during a five-year period. Yet, no changes in pain perception are observed in women who reported a negative birth experience (Waldenström & Schytt, 2009). An earlier systematic review examining the factors determining the positive or negative experience of delivery highlights the role of personal expectations, the amount of support from caregivers, the quality of the caregiver-patient relationship, and involvement in decision making, as the most important factors (Hodnett, 2002).

In agreement with this evidence, the World Health Organization 2018 (World Health Organization [WHO], 2018) guidelines on intrapartum care acknowledge the importance of the quality of the childbirth experience by addressing the need to meet the psychological and emotional needs of women during this process, in addition to providing information about the clinical requirements for a safe labour and childbirth.

Childbirth experience and maternal mental health

Pregnancy, childbirth, and the postpartum period entail important changes for women at a physical, psychological, and social level. These changes may place women at risk for developing mental health difficulties. Perinatal mental health problems, especially symptoms of depression and anxiety, are one of the most frequent and serious complications during the childbearing period (Cameron et al., 2016). Determining the prevalence of maternal mental health problems is complex, partly because one-off assessment procedures do not differentiate transients from persistent forms of maternal distress. This difficulty to assess possible variations in symptomatology may result in higher prevalence rates (Agostini et al., 2019; Matthey & Souter, 2019). Despite this issue, studies suggest that as many as 16% of women may develop symptoms of depression during pregnancy and 5% meet diagnostic criteria for a major depressive disorder (Leight et al., 2010). After childbirth between 10–15% of new mothers may present with major or minor depression in the first 3 months after delivery (Howard & Khalifeh, 2020).

The presence of stressful life experiences, vulnerable socio-economic status, low level of social support, conflict in the couple relationship, previous history of depression, and symptoms of depression and/or anxiety during pregnancy, have been identified as risk factors associated with postnatal depression (Milgrom et al., 2008). Less well studied, but with consistent reports, is that women's childbirth experience has been associated with perinatal depressive symptoms. Bell's (2016) systematic review offers evidence about the contribution of a negative birth to maternal symptoms of postnatal depression (Bell & Andersson, 2016).

Anxiety disorders have a broad range of presentations associated to diverse prevalence. Overall, the prevalence of having at least one or more anxiety disorder during the perinatal period is estimated to be 20.7% (Fawcett et al., 2019). A repeated-measures study in Chile also showed a high prevalence of anxiety symptoms during the transition to motherhood, with 11.5%, 10.7% and 17.8% of women reporting severe anxiety symptoms during pregnancy and at 3 and 6 months postpartum, respectively (Coo et al., 2020).

Risk factors for new onset perinatal anxiety disorders include low educational attainment, living with extended family, multiparity, a family history of psychiatric disorders, hyperemesis gravidarum, co-morbid sleep disorders, and intrapartum oxytocin exposure (Furtado et al., 2018). There is a clear link between traumatic birth and symptoms of post-traumatic stress), which usually involves symptoms of anxiety after exposure to a traumatic experience (Grekin & O'Hara, 2014). Yet, there is very limited evidence on women's birth experience and postnatal anxiety. Although some reports have identified an association between negative birth experience and postnatal anxiety symptoms (Bell & Andersson, 2016).

A positive childbirth experience contributes to maternal wellbeing in the postpartum period (Hosseini Tabaghdehi et al., 2020). A study by Michels et al. (2013) including 664 women showed that those who rated intrapartum care and their birth experience highly were significantly more likely to experience high postnatal functioning than women who did not rate their intrapartum care and birth experience as positively (Michels et al., 2013).

Postnatal mental health impacts maternal wellbeing and infant development. Mothers who present with symptoms of depression are more likely to display disengaged interactions with their infants, who are also less responsive to interpersonal communication cues (Reck et al., 2018; Tronick & Reck, 2009) and are at higher risk of presenting developmental delays (Chorbadjian et al., 2020). Similarly, high levels of maternal anxiety have been associated with intrusive, maternal behaviour towards the infant (Reck et al., 2018); which involve exerting verbal or physical control on the child according to the mother´s own intentions, instead of recognising the child's needs (Ainsworth et al., 1971). In view of these potential negative consequences, it is important to understand whether and how birth experiences can reduce or increase the risk of developing postnatal mental health disorders. This is particularly relevant considering that health care providers can either promote positive birth experiences through supporting women's labour and delivery in a nurturing, respectful and informed manner (Chabbert et al., 2021). Or, in contrast, they may negatively impact the perceived birth experience and increase the risk of experiencing post-traumatic stress symptoms through negative attitudes towards birthing mothers (Simpson & Catling, 2016).

The aim of the present study is to examine the contribution of maternal childbirth experience on maternal mental health at 3 and 6 months postpartum in a community-based Chilean sample. We hypothesise that a negative experience of childbirth will contribute to higher symptoms of depression and anxiety at 3 and 6 months postpartum, controlling for maternal mental health assessed during the third trimester of pregnancy. An additional aim is to examine which specific aspects associated with childbirth – such as pain, fear, and assistance from health professionals – contribute to women's birth experience.

Method

Participants

Adult (18 years of age and older) pregnant women, who were fluent in Spanish, were invited to participate in the study. Between May 2018 and December 2019, 254 pregnant women in their third trimester of pregnancy were assessed. Four mothers were later

excluded due to preterm labour and one due to unplanned home birth. At three months postpartum 182 women completed childbirth experience and maternal mental health questionnaires. The remaining 67 mothers could not be contacted, could not complete the assessment during the required period or expressed their desire to withdraw from the study. At six months postpartum 148 mothers completed maternal mental health questionnaires. Independent samples *t*-test revealed no statistically significant differences in childbirth experiences (i.e. assessed at three months postpartum) between the women who completed the three assessment times and those who did not (childbirth experience: $t(df) = .29$ (178), $p = .77$; pain during childbirth: $t(df) = .11$ (178), $p = .91$; fear during childbirth: $t(df) = .23$ (178), $p = .82$; assistance from health professionals: $t(df) = -.13$ (178), $p = .9$)).

Procedure

Expectant mothers in their third trimester of pregnancy who received care from two public primary health centres in two Chilean cities (i.e. Santiago and Concepción) were invited to participate in this study. Members of the research team approached potential participants at the health centres while they waited for their prenatal consultation. Women who agreed to participate signed an informed consent document and completed the questionnaires on demographic characteristics and mental health at the health centres or by telephone. We contacted the mothers at the health centres or by telephone at 3 and 6 months postpartum to apply the questionnaires for the second and third assessments, respectively.

Ethics approval was obtained from the Ethics Committees of the Universidad del Desarrollo and the Health Service at Concepción. The study was conducted in accordance with the ethical standards of the 1964 Declaration of Helsinki. The cases of women who reported high levels of depression or anxiety were referred to the corresponding health services for assessment and treatment.

Instruments

Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987; Jadresic et al., 1995): This 10-item, self-report questionnaire is used for screening current (i.e. over the past week) symptoms of depression using a 4-point scale with higher scores indicating more depressive symptoms. This scale has been validated in Chile, with high reliability (Cronbach's alpha = .77), sensitivity (100%), and specificity (80%) (Jadresic et al., 1995). Cronbach's alpha was .86 in our sample. Screen-positive cut-off scores are 13 and 10 during pregnancy and the postnatal period, respectively.

Perinatal Anxiety Screening Scale (PASS; Somerville et al., 2014): This 31-item, self-report questionnaire assesses perinatal anxiety over the past month. A total score is calculated by adding the scores of all items and indicates anxiety severity: minimal (0–20 points), mild to moderate (21–41 points) and severe (42–93). The PASS includes four subscales, namely general worry and specific fears; perfectionism, control and trauma; social anxiety; and acute anxiety and adjustment. The authors have reported high reliability for the subscales and the total scale (Cronbach's alpha ranged from .86 to .96). The PASS has been validated for Chilean populations, the Spanish version of the instrument has good

psychometric properties (Cronbach's alpha ranged from .73 to .92 for the four subscales and was .88 for the total scale) (Coo, García, & Medina, In Press). Cronbach's alpha in our study was .94 for the global score.

Demographic and obstetric information

A questionnaire was developed to assess sociodemographic characteristics, history of psychopathology, and perceived social support during pregnancy. This form included the following item to identify the degree of satisfaction with social support 'How satisfied are you with the support you have received from your support network?'. This item had a 7-point Likert scale, being 1 very unsatisfied and 7 extremely satisfied.

At the 3 month follow-up, a questionnaire was developed to raise information on childbirth (i.e. gestational age, type of birth, child weight and size, maternal or child health complications, among others), and assess childbirth satisfaction. Specific questions to assess the degree of satisfaction regarding general birth experience (i.e. How satisfied do you feel with your birth experience?), degree of fear and pain experienced, and satisfaction with the attention provided by healthcare professionals were included. These items were answered in a 7-point Likert scale, which scores were later grouped in low (1–3 points), moderate (4–5points) and high (6–7 points). Also, in the items regarding general satisfaction with the birth experience and healthcare professionals' care, an open question asking women to justify (why?) their answers was included.

Data analysis

We conducted preliminary analyses to evaluate descriptive information and univariate distributions of maternal variables for normality and outliers. We used correlation analyses to assess the association between perceived birth experience, pain, fear and assistance from the health professionals. Using logistic regression analyses, we examined the contribution of these variables to maternal mental health at 3 and 6 months after childbirth, controlling for maternal mental health assessed during the third trimester of pregnancy. When assessing the contribution of maternal childbirth experience to mental health at 6 months postpartum, we also controlled for reports of maternal depression and anxiety at 3 months postpartum. Independent models were tested for symptoms of depression and anxiety.

Linear regression was used to assess the relationship between maternal reports of pain, fear, and satisfaction with the assistance from the health professionals during childbirth to the global birth experience

All the variables were entered in the model using the Enter method. All the analyses were conducted in IBM SPSS 25. We calculated bootstrap confidence intervals for *p* values to minimise the effect of sampling variation.

Results

The women in the study (N = 148) had a mean age of 28.6 years (Range 19–43), all of them were Latinas and the great majority were Chilean (82.9%). Most of the participants were either married or living with a partner (66.9%). In terms of education, 35.1% had a university degree and 3.4% did not complete high school. Sixty-two percent of the women were gainfully employed (see Table 1).

Almost half of the women in the study had a caesarean section and most gave birth in a public hospital, were accompanied during labour and birth by a significant person, and had immediate skin-to-skin contact with their babies. From a qualitative perspective, most mothers reported being satisfied with their birth experience and with the health professional assistance. Most participants also reported experiencing low levels of fear and high levels of pain during labour and-or childbirth (See Table 2).

During the third trimester of pregnancy, 11.5% of the women screened positive for depressive symptomatology according to the EPDS, and 14.2% reported severe anxiety symptoms, according to the PASS. Of the women who screened positive for depressive symptoms in this period 52.9% also reported severe anxiety symptoms. Yet, 80.4% of the participants were below the cut-off scores for depression and severe anxiety symptoms.

At three and six months postpartum 20.2% and 21.6% of the women screened positive for depressive symptomatology, respectively. Similarly, 12.2% and 14.2% of the participants reported severe anxiety symptoms during the same assessment times. Of the

Table 1. Sociodemographic characteristics of the sample.

	(N) %
Age	
18–24	(33) 22.3
25–34	(91) 62.5
>35	(24)16.2
Nationality	
Chile	(121) 82.9
Venezuela	(18)12.3
Other Latin American countries	(7) 4.9
Marital status	
Married or lives with partner	(99) 66.9
Single	(18) 12.8
Other (divorced, doesn't live with partner)	(30) 20.3
Educational level	
Incomplete schooling	(5) 3.4
Completed high school	(29) 19.6
Incomplete university or technical studies	(28) 18.9
Completed technical studies	(34) 23
Completed university studies	(52) 35.1
Work situation	
Gainfully employed	(92) 62.2
Social support satisfaction	
Low (1–3)	(2) 1.4
Moderate (4–5)	(14) 9.7
High (6–7)	(129) 89
Primiparous	
No	(78) 52.7
Yes	(70) 47.3
History of spontaneous miscarriage	
No	(127) 85.8
Yes	(21) 14.2

Table 2. Characteristics of birth, child and childbirth experience.

Gestational age	38.99 (SD = 1.3) weeks
Child weight at birth	3427.34 (SD = 422.6) g.
Child size at birth	50.33 (SD = 2.2) cm.
	(N) %
Accompanied during labour	(138) 93.9
Accompanied during childbirth	(142) 95.9
Gave birth in public hospital	(101) 69.2
Type birth	**(N) %**
vaginal	(60) 40.5
c-section	(77) 52.1
assisted vaginal birth	(11) 7.4
Immediate skin-to-skin contact	(79) 53.4
Satisfaction with birth experience	**(N) %**
Low (1–3)	(23) 15.5
Moderate (4–5)	(30) 20.3
High (6–7)	(95) 64.2
Degree of pain experienced during birth	**(N) %**
Low (1–3)	(53) 36.3
Moderate (4–5)	(33) 22.6
High (6–7)	(60) 41.1
Degree of fear experienced during birth	**(N) %**
Low (1–3)	(67) 45.3
Moderate (4–5)	(40) 27
High (6–7)	(41) 27.7
Satisfaction with health care professional	**(N) %**
Low (1–3)	(7) 4.7
Moderate (4–5)	(17) 11.5
High (6–7)	(124) 83.8

women who screened positive for depressive symptoms at 3 months postpartum 43.3% also reported severe anxiety symptoms, and 53.1% at 6 months postpartum. At 3 and 6 months postpartum 76.2% and 70.9% did not screen positive for depressive or severe anxiety symptoms.

According to logistic regression analyses only antenatal symptoms of depression, but not the maternal subjective perception of childbearing made a statistically significant, although small, contribution to symptoms of depression at 3 months after childbirth (Table 3). However, maternal reports of negative birth experience and fear experienced during childbirth significantly contributed to a small increase in the likelihood of reporting high symptoms of depression (i.e. above the cut-off score) at 6 months postpartum, controlling for symptoms of depression during late pregnancy and at 3 months after childbirth (Table 4). Regarding maternal anxiety, fear during childbirth slightly increased the likelihood of presenting with high symptoms of anxiety at 3 months postpartum (Table 5). Similarly, fear during childbirth made a small contribution to the risk of presenting anxiety at 6 months postpartum, controlling for maternal anxiety during pregnancy and at 3 months after childbirth (Table 6).

Linear regression showed that maternal reports of pain, fear and assistance from the health professionals significantly made small, significant contributions to maternal birth experience, with assistance from health professionals being the most relevant predictor (Table 7).

Table 3. Logistic Regression, contribution of maternal of depression and birth experience to symptoms of depression at 3 months after childbirth.

Variables Included	*B (SE)*	*Wald*	*p*	95% CI for Adjusted Odds Ratio		
				Lower	Adjusted OR	Upper
Step 1						
EPDS-1*	.22 (.05)	22.2	.00	1.14	1.25	1.37
Constant	−3.02 (.45)	44.53	.00	-	.05	-
Step 2						
EPDS-1*	.22 (.05)	21.92	.00	1.14	1.25	1.37
Childbirth experience	−.08 (.12)	.42	.51	.73	.92	1.17
Pain durin1g delivery	.01 (.09)	.01	.94	.84	1.01	1.21
Fear during delivery	.12 (.1)	.03	.87	.83	1.02	1.25
Assistance from health professionals	−2 (.16)	1.56	.21	.6	.82	1.12
Constant	−1.47 (1.38)	1.13	.29	-	.23	-

Note. *Pregnancy, screen-positive cut-off score was 13 or more points. R^2 = 0.17 (Cox-Snell), 0.27 (Nagelkerke). Model X^2 (*df*) = 31.84 (5), p = .00

Table 4. Logistic Regression, contribution of maternal of depression and birth experience to symptoms of depression at 6 months after childbirth.

Variables Included	*B (SE)*	*Wald*	*p*	95% CI for Adjusted Odds Ratio		
				Lower	Adjusted OR	Upper
Step 1						
EPDS-1*	.11 (.06)	3.4	.65	.99	1.12	1.26
EPDS-2**	.21 (.06)	12.52	.00	1.1	1.23	1.38
Constant	−3.56 (.57)	38.35	.00	-	.29	-
Step 2						
EPDS-1*	.14 (.07)	4.22	.04	1.01	1.14	1.3
EPDS-2**	.24 (.07)	12.7	.00	1.12	1.27	1.46
Childbirth experience	.45 (.18)	6.6	.01	1.11	1.58	2.23
Pain during delivery	.1 (.11)	.73	.39	.88	1.1	1.38
Fear during delivery	.28 (.13)	4.67	.03	1.03	1.32	1.69
Assistance from health professionals	.04 (.23)	.03	.88	.67	1.04	1.61
Constant	−8.34 (2.2)	14.65	.00	-	.00	-

Note. *Pregnancy screen-positive cut-off score was 13 or more points **At 3 months post-partum screen-positive cut-off score was 10 or more points. R^2 = 0.3 (Cox-Snell), 0.465 (Nagelkerke). Model X^2 (*df*) = 50.62 (6), p = .00

Table 5. Logistic Regression, contribution of maternal anxiety and birth experience to symptoms of anxiety at 3 months after childbirth.

Variables Included	*B (SE)*	*Wald*	*p*	95% CI for Adjusted Odds Ratio		
				Lower	Adjusted OR	Upper
Step 1						
PASS-1*	.07 (.02)	16.49	.00	1.04	1.07	1.1
Constant	−4.09 (.63)	42.02	.00	-	.02	-
Step 2						
PASS-1*	.07 (.02)	15.61	.00	1.04	1.07	1.11
Childirth experience	.38 (.19)	3.98	.05	1.01	1.47	2.14
Pain during delivery	.08 (.12)	.47	.49	.86	1.09	1.38
Fear during delivery	.39 (.15)	6.39	.01	1.09	1.47	1.99
Assistance from health professionals	−.24 (.24)	.98	.32	.49	.79	1.26
Constant	−6.98 (2.16)	10.41	.00	-	.00	-

Note. *Pregnancy. R^2 = 0.16 (Cox-Snell), 0.32 (Nagelkerke). Model X^2 (*df*) = 29.91 (6), p = .00

Table 6. Logistic Regression, contribution of maternal anxiety and birth experience to symptoms of anxiety at 6 months after childbirth.

Variables Included	*B (SE)*	*Wald*	*p*	95% CI for Adjusted xOdds Ratio		
				Lower	Adjusted OR	Upper
Step 1						
PASS-1*	.04 (.02)	2.52	.11	.99	1.04	1.08
PASS-2**	.07 (.02)	8.81	.00	1.02	1.07	1.12
Constant	−4.31 (.75)	33.37	.00	-	.01	-
Step 2						
PASS-1*	.57 (.03)	4.89	.03	1.01	1.06	1.11
PASS-2**	.54 (.02)	5.02	.03	1.01	1.06	1.11
Childbirth experience	.16 (.17)	.94	.33	.85	1.12	1.63
Pain during delivery	.05 (.13)	.17	.68	.82	1.01	1.35
Fear during delivery	.55 (19)	8.3	.00	1.19	1.74	2.54
Assistance from health professionals	−.16 (.27)	.34	.56	.51	.86	1.45
Constant	−7.33 (2.4)	9.36	.00	-	.00	-

Note. *Pregnancy, **3 months post-partum. R^2 = 0.3 (Cox-Snell), 0.49 (Nagelkerke). Model X^2 (*df*) = 45.26 (6), p = .00

Table 7. Linear Regression, contribution of perceived pain, fear, and assistance from health professionals to maternal childbirth experience.

	t	p	B (SE)	Standardised B	F(df)	p
Model					31.33 (3,176)	.00
Pain during delivery	−4.1	.00	−.20 (.05)	−.25		
Fear during delivery	−3.65	.00	−.20 (.06)	−.23		
Assistance from health professionals	6.31	.00	.61(1)	.4		
Constant	4.26	.00	3.3 (.78)	-		

Note. Adjusted R^2 = .34

Discussion

Our results indicate that the subjective experience of childbirth makes a significant, although modest, contribution to maternal symptoms of depression at 6 months after childbirth, and to symptoms of maternal anxiety at both 3 and 6 months postpartum, independent of earlier maternal reports of mental health.

Maternal postpartum mental health is a complex phenomenon influenced by a wide range of physiological and psychosocial factors. Many of these risk factors, such as a previous history of mental health problems or young maternal age, cannot be modified. Others, such as maternal self-efficacy, quality of the couple relationship, and social support, can be effectively modified through preventive interventions (Rowe & Fisher, 2010). Although effective, these interventions, demand extensive resources and may face implementation challenges to reach all in risk women (Rahman et al., 2013) The results from our study contribute to a better understanding of how the quality of care that health professionals offer during delivery impacts maternal assessment of her childbirth experience and postpartum mental health. The recognition of quality care as a factor to promote maternal emotional wellbeing in the postpartum period is especially relevant considering most women give birth with healthcare assistance.

The WHO (2018) framework for improving quality of care for childbearing women recognises the relevance of the experience of care, highlighting the need for policies that promote respectful and women-centred obstetric practices, usually referred to as respectful maternity care (RMC). RMC involves practices that provide continuous support during labour and childbirth, limits harm and mistreatment, and respects women´s dignity,

privacy, and confidentiality. Interventions to promote RMC include training in interpersonal communication skills, values, and attitudes transformation, as well as monitoring of disrespect and abuse, improving staff work conditions and educating women about their rights. These practices are related to maternal subjective experiences of good-quality care and reduced experiences of mistreatment (Downe et al., 2018).

In Chile, the Ministry of Health acknowledges the relevance of RMC and has promoted it since 2007 in both the public and private health systems via the 'Model of integrated and humanized health services' and its accompanying clinical guidelines. Which include personal and continued support by a healthcare professional during labour and delivery, helping to generate a space of intimacy, security and autonomy, early skin to skin contact with the newborn, among others (Ministerio de Salud [MINSAL], 2015). Binfa et al. (2016) assessed the implementation of this woman-centred model in a representative sample of 1882 women and found that the provision of RMC has increased over the years since first implementation and that a large proportion of women reported optimal (37%) and adequate (30%) perceived well-being during labour and childbirth. However, the researchers also report that most births are not managed according to the guidelines (Pantoja et al., 2020). Intrusive medical procedures are common, and some women still report experiences of mistreatment. This indicates that additional efforts are needed to ensure the effective implementation of RMC nationwide.

When examining the contribution of some aspects of the childbirth experience to women's perception of this phenomenon, we found that pain, fear, and especially the quality of care from health professionals made a statistically significant, although small, contribution. This is consistent with a recent Chilean study, which found that professional quality of care, respect for the childbearing woman, and comfortable physical infrastructure made the largest contribution to women´ satisfaction with their childbirth experience (other areas measured were depersonalising treatment, opportunity to eat and drink, mother-child contact, companion of choice, and freedom of movement) (Pantoja et al., 2020).

A large proportion of women in our study (52.1%) had caesarean deliveries, which is -unfortunately – consistent with national data. Chile has one of the highest rates of caesarean deliveries in the world. The national estimated rate reaches 46% (OECD, 2017), which greatly surpasses the 10–15% rate or caesarean births recommended by the World Health Organization [WHO] (2015). Interesting differences are found between public and private health systems, which report 40.9% and 69% of caesarean deliveries, respectively (Instituto Nacional de Derechos Humanos [INDH], 2016). There is some evidence that delivery mode is associated with maternal mental health after childbirth, with caesarean deliveries being related to higher somatisation, depression, and anxiety. Unplanned caesarean deliveries may also increase the risk of developing PTSD symptoms (Dekel et al., 2019) and may increase the risk of developing postpartum depression (Smithson et al., 2020). According to our preliminary, descriptive analyses, we did not find any significant differences in mental health according to type of delivery or type of caesarean section (i.e. planned v/s unplanned). This may be related to our high national prevalence of caesarean deliveries and a possible normalisation of this practice in our health system. Despite this, future studies could address this issue, as it may have a relevant role in maternal mental health.

Our results should be considered in light of some limitations. First, this study involved a community sample of overall healthy women. Different results may be obtained with high-risk samples. Second, mental health was assessed with self-report measures, through mental health screening instruments, but diagnostic confirmation was not performed by clinical trained staff. Also, the instruments we used for assessing maternal mental health screen for symptoms over different time frames. The EPDS addresses symptoms experienced over the past seven days, whereas the PASS assesses maternal anxiety over the past month. This may lead to inaccuracies in our assessment of maternal emotional wellbeing. Finally, maternal self-reports of the birth experience were not complemented with obstetric data from medical records or from health professional reports. Women were recruited in primary public health centres and delivered their babies in different public and private hospitals. Although our national perinatal health guidelines recommend that health professionals provide women centred, respectful care, in our study it was not possible to assess if and how these practices were implemented by health care providers, either from their own perspective or through objective assessment measures (i.e. observation).Future studies could address these limitations by targeting diverse populations and combining self-report measures with complementary data collection strategies.

Despite these limitations, our study has several strengths. The repeated measures design used to follow up women from the third trimester of gestation until 6 months after childbirth enabled the assessment of the contribution of the birth experience to maternal wellbeing independent of maternal symptoms of depression and anxiety during gestation. The assessment of the childbirth experience addressed a variety of aspects (i.e. pain, fear, treatment from health professionals, etc.), and the sample was representative of the general urban population of women who receive medical care from the Chilean public health system.

Conclusion

Some aspects of the subjective experience of childbirth are modifiable risk factors for the development of maternal depression and anxiety symptoms in the postpartum period. Health providers in direct contact with childbearing women may either promote or hinder maternal emotional wellbeing. The negative consequences of depression and anxiety symptoms for childbearing women and their families warrant further efforts to promote positive maternal mental health. Initiatives and interventions to continue promoting RMC through the training and implementation of sensitive and caring health professionals are crucial.

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The data that support the findings of this study are available on request from the corresponding author, Coo, S. The data are not publicly available due to their containing information that could compromise the privacy of research participants.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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