Sexual & Reproductive Healthcare 46 (2025) 101155

Contents lists available at ScienceDirect

Sexual & Reproductive Healthcare

journal homepage: www.elsevier.com/locate/srhc

Quality of couple relationship among first-time mothers and partners, during pregnancy and the following eight years after childbirth

Angelica Holst [a,b,*], Frida Lygnegård [c], Jenny Hallgren [d], Caroline Bäckström [e]

[a] Faculty of Caring Science, Work Life and Social Welfare, University of Borås SE-501 90, Borås, Sweden
[b] Region Västra Götaland, Regionhälsan, Youth Guidance Centre, SE-521 46 Falköping, Sweden
[c] Department of Rehabilitation, CHILD, School of Health and Welfare, Jönköping University, SE-551 11 Jönköping, Sweden
[d] School of Health Sciences, University of Skövde, Post Box 408, SE-541 28 Skövde, Sweden
[e] Department of Caring Science, University of Borås SE-501 90 Borås, Sweden

ARTICLE INFO

Keywords:
Pregnancy
Parenting
Transition to parenthood
Midwife
Antenatal care
Child health care

ABSTRACT

Objective: The couple's relationship is affected by the transition to parenthood, but research findings are mixed, with some studies showing positive effects on the relationship and others indicating negative impacts. This study aims to explore first-time mothers' and their partners' perceived quality of dyadic relationship (QDR36) during pregnancy and the following eight years after childbirth as well as what factors that are associated with a higher QDR36.

Methods: A prospective longitudinal cohort study on 917 Swedish parents, with repeated questionnaires at: gestational week 25 (T1); first week after childbirth (T2); six months (T3); one year (T4); two years (T5); four years (T6), and eight years (T7) after childbirth. Non-parametric tests and Cohen's effect size calculation were conducted to analyze change over time in QDR36. Multiple linear regressions were carried out with index for QDR36 as dependent variable, at all time points (T1-T7).

Results: QDR36 varied over time among both first-time mothers and partners, showing an increase between T1 and T2, followed by a decrease between each point in time. QDR36 was statistically lower at T7 compared to all other points in time (T1-T6). Variations were observed in the variables that were associated with a higher QDR36 at different time points, however higher sense of coherence (SOC-13) and social support (MSPSS) were consistently associated.

Conclusion: First-time mothers and partners' perceived quality of couple relationship declines the first eight years after birth. To support them in their couple relationship, healthcare professionals should acknowledge parents' sense of coherence and social support.

Background

Becoming a parent can be understood as a life-changing events in a person's life [1] that can bring positive feelings of joy, love and meaning in life as well as individual development and a strengthened couple relationship [2]. On the other hand, becoming a parent can also be described as a complex and vulnerable time, where parenthood and the couple relationship mutually influence each other [3]. The quality of the parents' relationship affects not only the individual parents but also the child's upbringing environment and health, which means that the parents' couple relationship is important for the health of the entire family [4]. That the couple's relationship is affected by the transition to parenthood has been known for a long time and demonstrated in several international studies. Research findings are mixed, with some studies showing positive effects on the relationship [5], and others indicating negative impacts [6–9]. At the same time, a decrease in marital satisfaction is also evident among couples without children [10], who report a more gradual deterioration in their relationship [7]. Couples who report more relationship problems before the child is born also report a greater decline in relationship quality after birth. The same trend is observed in parents who are insecurely attached or have children with challenging temperaments [11]. A *meta*-analysis examining couples' relationships during the first two years after childbirth, showed that marital satisfaction declines during this period. Furthermore, one partner's satisfaction decreases significantly when the other partner reports a substantial drop in marital satisfaction [9].

* Corresponding author at: Västra Drottningvägen 11, 522 30 Tidaholm, Sweden.
E-mail address: angelica.holst@hb.se (A. Holst).

https://doi.org/10.1016/j.srhc.2025.101155
Received 9 May 2025; Received in revised form 26 September 2025; Accepted 15 October 2025
Available online 16 October 2025

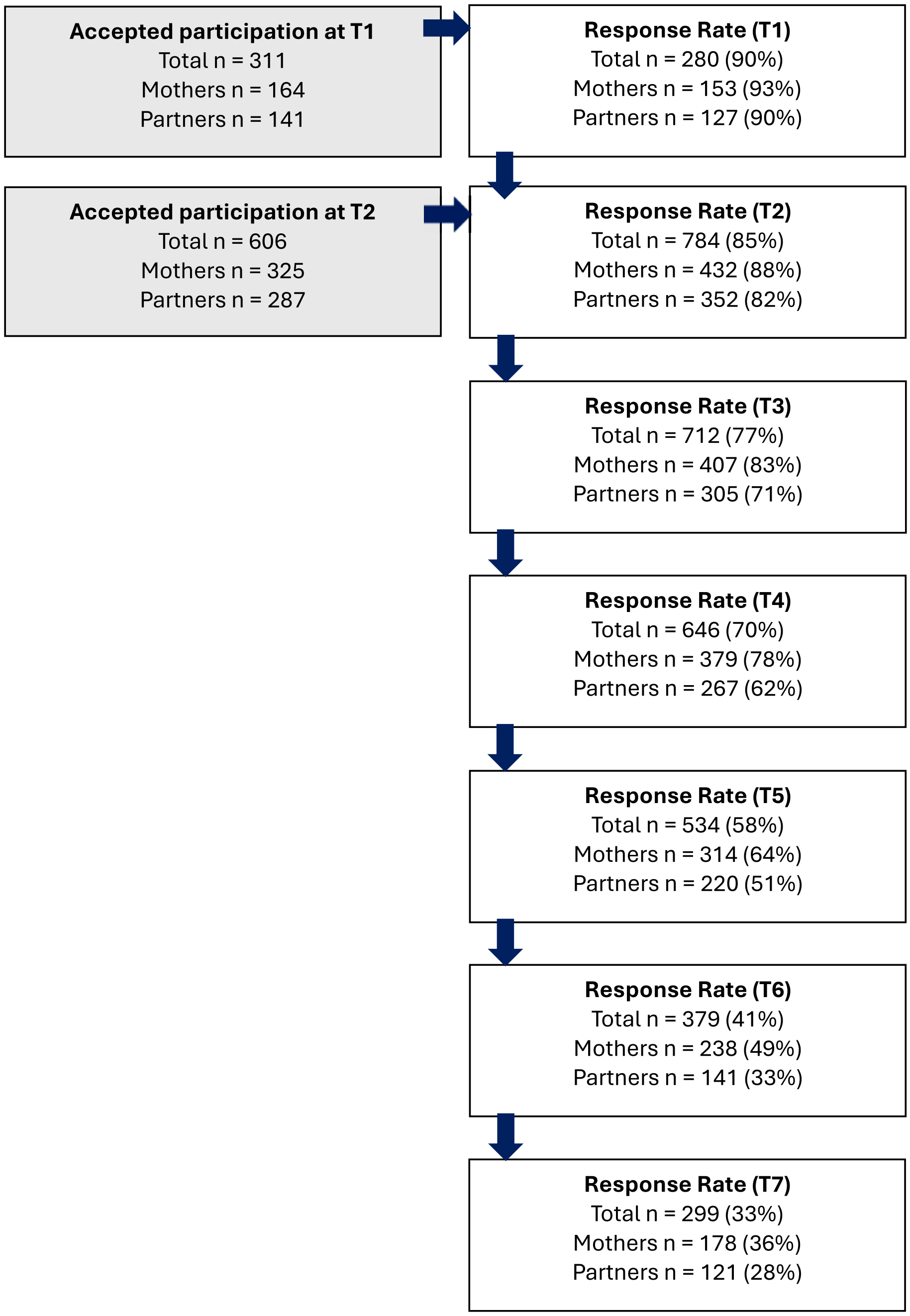

Fig. 1. Flowchart.

First-time fathers report higher marital satisfaction both before and after the birth of the child, compared to fathers with multiple children. They also report a more pronounced decline in marital satisfaction compared to fathers with multiple children [12]. First-time parents' perceived couple's sensuality has been shown to decrease between six months and eight years after birth, while sexuality remains at a low level both six months, four and eight years after birth [13]. A *meta*-synthesis showed that parents feel unprepared for the impact that the transition to parenthood has upon their couple's relationship. Both positive and negative effects are seen and relate to the adjustments that the parents go through with a focus on the baby. As well, there is a change in how the parental couple communicate and practice intimacy which both can put strain on the relationship as well as strengthen the relationship [14]. Furthermore, it is known that the couple relationship is important for people's mental as well as physical health [4]. A need for more longitudinal research on parents' couple relationships has been shown, to increase knowledge about how care can support parents' couple relationships [14].

In Sweden, an instrument called the Quality of Dyadic Relationship (QDR36) [15] has been used to assess Swedish parents' perceived quality of their couple relationship. QDR36 has been used in various longitudinal studies, yielding varied results. In a study from 2018 [8], first-time parents' perceived quality increased between pregnancy and the first week after birth, with a following decrease until six months after birth. Furthermore, higher sense of coherence and social support is shown to be associated with the parents' higher reported quality at six months after birth. The perceived quality was found to be lower six months after birth compared to during pregnancy [8]. In another Swedish study published in 2012 by Hansson and Ahlborg [13], a decrease in quality was shown between six months and four years after

Table 1
Overview characteristics and measurements.

	T1 (gestational week 25) N=280	T2 (first week after birth) N=784	T3 (six months after birth) N=712	T4 (one year after birth) N= 646	T5 (two years after birth) N=534	T6 (four years after birth) N=379	T7 (eight years after birth) N=299
Age (yrs.), Mean (SD), Range	29.0 (5.33), 19-55	28.9, (5.41), 18-75	#	#	#	#	#
First-time mothers	27.7 (4.24), 19-40	27.7, (4.21), 18-43					
Partners	30.5 (6.05), 20-55	30.43, (6.29), 20-75					
Country of birth, n (%)		#	#	#		#	#
Sweden	265 (95.0)				451 (84.5)		
Norway, Finland, Denmark, Island	2 (0.7)				3 (0.6)		
Europe	6 (2.1)				12 (2.2)		
Other country outside Europe	7 (2.5)				12 (2.2)		
Education, n (%)		#	#	#			
Compulsory school	4 (1.4)				12 (2.2)	2 (0.5)	2 (0.7)
High school	148 (52.9)				209 (39.1)	168 (44.3)	103 (34.4)
University	128 (45.7)				257 (48.1)	208 (55.0)	193 (64.5)
Civil status, n (%)							
Married	56 (20.0)	189 (24.1)	206 (29.0)	204 (31.6)	203 (38.0)	189 (50.0)	167 (56.0)
Co-habiting	219 (78.2)	589 (75.1)	492 (69.3)	436 (67.5)	319 (59.8)	174 (46.0)	108 (36.1)
Not living together	5 (1.8)	5 (0.7)	7 (1.0)	5 (0.8)	11 (2.1)	15 (3.9)	23 (7.6)
Couple relationship, (yrs.), Mean (SD), Range	4,8 (3.0), 1-19	#	#	#	7.32 (3.3)	9.3 (3.5)	13.1 (3.8)
Still in a relationship with same partner as at T2, n (%)	#	#	#	#	#		
Yes						360 (95.0)	262 (87.6)
No						19 (5.0)	36 (12.0)
Expecting first child, n (%)		#	#	#	#	#	#
Yes	268 (95.7)						
No (only partners, mothers excluded)	11 (3.9)						
The child born at T2 was my first child, n (%)	#	#	#	#		#	#
Yes					461 (86.3)		
No					17 (3.2)		
The child born at T2 was from a planned pregnancy, n(%)		#	#	#		#	#
Yes	212 (75.7)				414 (77.5)		
No	59 (21.1)				59 (11.0)		
Do not know	#				6 (1.1)		
Pregnant/Expecting new child, n (%)	#	#				#	#
Yes			8 (1.1)	61 (9.4)	135 (25.3)		
No			698 (98.3)	584 (90.4)	395 (74.0)		
Had further birth(s) after T2, n (%)	#	#	#	2 (0.3)			
Yes, one birth				#	103 (11.2)	255 (67.3)	174 (58.2)
Yes, two births				#	5 (0.5)	13 (3.4)	66 (22.1)
Yes, more than two births				#	1 (0.1)	1 (0.3)	6 (2.0)
No				641 (99.2)	425 (79.6)	#	#
Employment, n (%)	248 (88.6)	311 (39.7)	260 (36.6)	261 (40.4)	408 (76.4)	270 (71.2)	263 (88.0)
Employed outside home	248 (88.6)	311 (39.7)	260 (36.6)	261 (40.4)	408 (76.4)	270 (71.2)	263 (88.0)
On parental leave	3 (1.1)	416 (53.1)	414 (58.3)	355 (55.0)	80 (15.0)	78 (20.6)	15 (5.0)
Student	10 (3.6)	23 (3.0)	17 (2.4)	17 (2.6)	29 (5.4)	22 (5.8)	13 (4.3)
Unemployed	11 (1.8)	15 (1.8)	8 (1.1)	8 (1.2)	2 (0.4)	3 (0.8)	1 (0.3)
Other (including sick leave)	5 (1.8)	14 (1.8)	8 (1.1)	5 (0.8)	12 (2.2)	6 (1.6)	7 (2.3)
Perceived economy, n (%)							
Very good	41 (14.6)	150 (19.1)	64 (9.0)	48 (7.4)	78 (14.6)	68 (17.9)	47 (15.7)
Good	160 (57.1)	429 (54.7)	327 (46.1)	254 (39.3)	287 (53.7)	186 (49.1)	150 (50.2)
Sufficient	65 (23.2)	181 (23.1)	258 (36.3)	266 (41.2)	133 (24.9)	98 (25.9)	78 (26.1)
Strained	12 (4.3)	22 (2.8)	59 (8.3)	76 (11.8)	36 (6.7)	27 (7.1)	24 (8.0)
Measurements							
QDR36 index, Mean (SD)	24.6 (2.2)	25.3 (2.1)	23.9 (2.6)	23.8 (2.8)	23.3 (2.9)	22.5 (3.2)	22.0 (3.5)

(*continued on next page*)

Table 1 (*continued*)

	T1 (gestational week 25) N=280	T2 (first week after birth) N=784	T3 (six months after birth) N=712	T4 (one year after birth) N= 646	T5 (two years after birth) N=534	T6 (four years after birth) N=379	T7 (eight years after birth) N=299
Dimensions							
Consensus	5.2 (0.5)	5.3 (0.5)	5.1 (0.5)	5.1 (0.5)	5.1 (0.6)	5.0 (0.6)	4.9 (0.7)
Cohesion	4.9 (0.7)	5.2 (0.7)	4.8 (0.8)	4.8 (0.8)	4.6 (0.9)	4.5 (0.9)	4.4 (1.0)
Satisfaction	5.1 (0.5)	5.3 (0.4)	5.0 (0.6)	5.0 (0.6)	4.9 (0.6)	4.5 (0.6)	4.5 (0.6)
Sensuality	5.4 (0.6)	5.5 (0.6)	5.1 (0.8)	5.0 (0.8)	4.8 (0.9)	4.7 (1.0)	4.4 (1.1)
Sexuality	4.1 (0.7)	4.0 (0.7)	3.9 (0.8)	3.9 (0.7)	3.9 (0.7)	3.8 (0.8)	3.7 (0.9)
SOC-13 index, Mean (SD)	67.8 (11.6)	71.6 (10.6)	70.8 (11.8)	70.8 (12.2)	70.3 (12.3)	69.7 (12.1)	67.8 (12.1)
Dimensions							
Comprehensibility	25.2 (5.3)	26.5 (5.0)	26.3 (5.4)	26.4 (5.5)	26.3 (5.4)	25.9 (5.5)	23.3 (5.3)
Manageability	20.5 (4.2)	21.7 (3.8)	21.6 (4.2)	21.5 (4.4)	21.2 (4.2)	21.0 (4.3)	20.6 (4.2)
Meaningfulness	22.1 (3.7)	23.3 (3.4)	22.9 (3.7)	23.0 (3.7)	22.8 (3.9)	22.7 (3.8)	21.8 (3.9)
MSPSS index, Mean (SD)	72.8 (10.7)	78.4 (7.9)	73.2 (10.8)	72.6 (11.7)	71.4 (12.4)	70.8 (13.1)	70.1 (13.7)
Dimensions							
Family	24.0 (4.8)	26.1 (3.4)	24.4 (4.5)	24.1 (4.7)	23.7 (4.9)	23.2 (5.3)	22.9 (5.7)
Friends	23.0 (4.7)	25.0 (4.0)	23.1 (4.8)	23.0 (5.0)	23.0 (5.0)	22.6 (5.2)	22.7 (5.7)
Significant Others	25.8 (3.4)	27.3 (2.0)	25.8 (3.4)	25.5 (3.8)	25.1 (4.1)	24.9 (4.3)	24.7 (4.4)

#=variable missing at this time point.
QDR36 (Quality of Couple Relationship).
SOC-13 (Sense of Coherence).
MSPSS (The Multidimensional Scale of Perceived Social Support).

birth. In their study, they found that the first-time parents reported an increase in their perceived quality at eight years after birth, compared to during four years after birth. This indicates that perceived quality of couple relationship varies among Swedish first-time parents during the transition to parenthood, which is consistent with international research [9]. However, there is a need to broaden knowledge about how parents perceive the quality of their couple relationship in connection with parenthood through further longitudinal research. There is also a need to explore trends in how Swedish parents perceive their relationship during the sensitive transition to parenthood and the years after childbirth. Such knowledge could contribute to developing a healthcare system that meets the needs of parents. Therefore, this study aims to explore first-time mothers' and their partners' perceived quality of dyadic relationship (QDR36) during pregnancy and the following eight years after childbirth as well as what factors that are associated with a higher perceived QDR36. Specifically, two research questions are explored: 1) How do first-time mothers and their partners perceive their quality of dyadic relationships (QDR36) during pregnancy and the eight years following childbirth? 2) What factors are associated with a higher QDR36?

Methods

Current study is part of a larger research project, The Study of Parental Support, which consists of both qualitative and quantitative data [8,16]. The design of the study was a prospective longitudinal cohort study, conducted in a county located in southwestern Sweden, encompassing approximately 280,000 residents. The county includes a mix of urban, suburban, and rural areas, rendering it representative of the broader Swedish population. The labor ward at the county hospital managed approximately 2,700 births annually during the years of recruitment of participants.

Participants and recruitment

For this study, expectant first-time mothers and their partners (both fathers and co-mothers) were invited to participate based on the following inclusion criteria: (1) singleton pregnancy, (2) an expressed intention to give birth/given birth at the county hospital, and (3) proficiency in understanding and speaking Swedish. Recruitment was conducted by midwives at antenatal care units during prenatal assessments carried out at Gestational Week 25. During the recruitment process, an adjustment was made which meant that parents were also recruited by midwives at the postnatal care unit at the county hospital (Fig. 1). Each parent could be enrolled in the study only once (either during pregnancy [T1] or postpartum [T2]), ensuring that every participant in the study is unique. In some cases, the partner was not present at the time of the invitation to participate, which resulted in the first-time mother forwarding written information about the study to the partner. The recruitment period spanned from September 2014 to January 2016. During the period of recruitment, an estimated 3,400 parents were eligible for inclusion in the study (1,700 first-time mothers and 1,700 partners). However, statistics available are lacking regarding the number of parents who were actually invited to participate.

Data collection

Data was collected with repeated web-based questionnaires at different points in time (T): Gestational week 25 (T1); First week after birth (T2); Six month (T3); One year (T4); Two years (T5); Four years (T6), and Eight years (T7) after birth. Participants were sent a link to the questionnaire via an email, and they answered the questionnaire using the EvaSys computer system. At T2 the participants had the possibility to answer the questionnaire using a computer at the postnatal unit at the county hospital. Participants were encouraged to complete the questionnaires independently of their partner. Up to three reminders were sent to those participants who did not answer a questionnaire, at each of the seven time points (T1-T7). Prior to the main study, a pilot study was conducted in which participants reported that completing the questionnaires took between 10 and 25 min. In Fig. 1, the response rate for the questionnaires is presented.

Instruments

The questionnaires consisted sociodemographic questions (such as age, country of birth, education, length of couple relationship, number of pregnancies/births, economic situation etc.), and various instruments as shown in Table 1. For the first research question, how first-time

Fig. 2. Change over time in Quality of Couple Relationship QDR36 index and dimensions.

mothers and their partners perceive their quality of dyadic relationships during pregnancy and the eight years after childbirth, the instrument QDR36-Quality of Couple Relationship has been used.

Quality of Couple Relationship – QDR36.

QDR36 is a Swedish instrument to assess parents' perceived quality of couple relationship [15], it consists of 36 items (Likert scale from 1 to 6). An QDR36 index is calculated as the sum of the mean values across five dimensions, resulting in a score range of 5–30. Higher scores indicate a stronger perceived quality of the relationship (above QDR36-index 20). The dimensions are: *Dyadic Consensus* which relates to family finances and household work, etc.; *Dyadic Cohesion* concerning the couple's exchange of ideas, discussion and laughter, etc.; *Dyadic Sensuality*, relates to how often the couple are hugging or kissing each other, etc.; *Dyadic Satisfaction,* which is how often it work well between the couple, how often a divorce/separation has been considered, etc., and *Dyadic Sexuality,* which is sexual desire and needs.

For the second research question, *what factors are associated with a higher perceived QDR36*, the QDR36 was used as the outcome variable, and the following instruments as independent variables along with sociodemographic variables (Table 1).

Sense of Coherence – SOC-13.

SOC-13 was used to assess parents' Sense of Coherence; it comprises 13 items distributed across three dimensions: *Comprehensibility; Manageability* and *Meaningfulness* [17,18]. Each item is rated on a Likert scale ranging from 1 to 7, and index is calculated by summing the scores of all items, resulting in a possible range of 13 to 91, with higher scores indicating a stronger Sense of Coherence [18].

The Multidimensional Scale of Perceived Social Support – MSPSS.

To assess parents perceived social support, MSPSS [19,20] was used; it includes twelve items covering three dimensions: *Family, Friends* and *Significant others.* The items are presented as seven-pointed Likert scales ranging from 1 to 7. By summing the items, a total score is calculated with possible range 12–84, and a higher score indicates a higher perceived social support.

Data analysis

The outcome variable QDR36 was normally distributed at all measurement points T1-T7. The variable for education was dichotomised as university (1) or compulsory school and high school (0), and the variable for employment as parental leave (1) or employed outside home, student, unemployed or other including sick leave (0).

To answer the first research question: *How do first-time mothers and their partners perceive their quality of dyadic relationships (QDR36) during pregnancy and the eight years following childbirth?* non-parametric tests were used, specifically Friedman's test followed by Wilcoxon post hoc tests. To analyse differences in QDR36 index between first-time mothers and partners, Cohen's d was calculated for effect size and "First-time mother" was chosen to be the grouping variable. This means that the analysis was conducted to observe how the effect size for the different QDR36 indices at the various measurement points (T1-T7) differs between first-time mothers and partners. The effect size was defined as small ($\eta2 > 0.01$), medium ($\eta2 > 0.06$), or large ($\eta2 > 0.14$) [21].

To answer the second research question: *What factors are associated with a higher perceived QDR36?* univariate regressions were initially conducted to explore which variables that were associated with QDR36 index at measurement points T2-T7. These univariate regressions were conducted for all participants. The variables that were found to be significant were then included in multiple linear regression analyses, together with change in QDR36 index between T2 and the following time points respectively. This was done to explore which variables had an association with QDR36 index at T2-T7. Thereafter, separate multiple linear regression analyses for first-time mothers and partners were conducted. Regarding the variable for employment, some respondents provided multiple answers, such as both "employed outside home" and "on parental leave." The variable was therefore consolidated by prioritizing responses that deviated from "employed outside home." If a respondent provided multiple answers, the response that was not "employed outside home" was registered in the consolidated variable. Additionally, analyses were conducted between the group of participants included at T1 and those included at T2; age, perceived economy, QDR36, SOC-13, or MSPSS. In this study a *p*-value of < 0.05 was considered significant. Analyses were undertaken with SPSS version 28.

Table 2
Change over time in QDR36 index and dimensions for all participants (total) at all time points (T1-T7), with estimated effect size calculation.

	Change between T1 and T2		Change between T2 and T3		Change between T3 and T4		Change between T4 and T5		Change between T5 and T6		Change between T6 and T7		Change between T2 and T7	
	η2	*p*-value	η2	*p*-value	η2	*p*-value	η2	*p*-value	η2	*p*-value	η2	*p*-value	η2	*p*-value
QDR36 index	−0.268#	0.005**	0.437#	<0.001***	0.131	0.003**	0.328#	<0.001***	0.384#	<0.001***	0.166	<0.001***	1.117###	<0.001***
Dimensions														
Consensus	−0.317#	<0.001***	0.267#	<0.001***	0.031#	0.423	0.115	0.051	0.088	0.028*	0.314#	<0.001***	0.578##	<0.001***
Cohesion	−0.540##	<0.001***	0.484#	<0.001***	0.087	0.018*	0.233#	<0.001***	0.221#	<0.001***	0.111	0.038*	0.581##	<0.001***
Satisfaction	−0.420#	<0.001***	0.351#	<0.001***	0.193	<0.001***	0.188	<0.001***	0.798###	<0.001***	0.121	0.050	1.322###	<0.001***
Sensuality	0.022#	0.920	0.389#	<0.001***	0.185	<0.001***	0.287#	<0.001***	0.299#	<0.001***	0.219#	<0.001***	1.264###	<0.001***
Sexuality	0.168	0.029*	0.110	0.015*	−0.004	0.928	0.119	0.024*	0.108	0.069	0.013	0.953	0.650##	<0.001***

Results from non-parametric test (Wilcoxon Signed Rank test) and Cohen's d effect size calculation η2 = Eta-squared.
η2 interpretation sensu Cohen's d: #0.2 small effect, ##0.5 medium effect; ###0.8 large effect.
***p*-values:** $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.
QDR36 (Quality of Couple Relationship).

Table 3
Covariates of perceived quality of couple relationship (QDR36) at T2-T7. Results from univariate linear regressions.

	T2 (one week after birth)		T3 (six months after birth)		T4 (one year after birth)		T5 (two years after birth)		T6 (four years after birth)		T7 (eight years after birth)	
	B	*p*-value	B	*p* –value	B	*p* –value	B	*p* –value	B	*p* –value	B	*p* –value
Age (yrs.)	−0.04	0.038*	−0.01	0.571	−0.03	0.185	−0.05	0.064	−0.02	0.537	−0.01	0.794
Education (ref. university)	#	#	#	#	#	#	0.82	0.003**	0.06	0.873	0.75	0.095
Education, (yrs.)	#	#	#	#	#	#	0.14	0.008**	0.04	0.547	0.11	0.094
Cohabiting with partner	−2.99	0.151	4.02	0.002**	−3.16	0.251	4.80	<0.001***	1.96	0.204	−2.31	0.039*
Couple relationship, (yrs.)	#	#	#	#	#	#	−0.05	0.219	0.07	0.153	0.03	0.619
Still in a relationship with same partner as at T2	#	#	#	#	#	#	#	#	−0.71	0.545	−1.41	0.054
The child born at T2 was my first child	0.21	0.724	0.51	0.416	0.17	0.804	−0.08	0.918	0.51	0.599	−0.57	0.665
The child born at T2 was from a planned pregnancy	#	#	#	#	#	#	0.33	0.426	0.69	0.218	1.36	0.063
Pregnant/Expecting new child	#	#	−2.29	0.053	−0.89	0.017*	−0.89	0.017*	#	#	#	#
Had further birth(s) after T2	#	#	#	#	4.69	0.016*	−0.01	0.975	#	#	#	#
Number of further births after T2	#	#	#	#	#	#	−0.10	0.903	−0.14	0.870	−0.14	0.773
Employment (ref. on parental leave)	0.05	0.754	0.14	0.521	−0.29	0.204	−0.11	0.765	0.42	0.298	0.42	0.676
Perceived economy	0.34	0.004**	0.77	<0.001***	0.93	<0.001***	1.07	<0.001***	1.02	<0.001***	0.96	<0.001***
SOC-13 index	0.09	<0.001***	0.10	<0.001***	0.11	<0.001***	0.12	<0.001***	0.15	<0.001***	0.11	<0.001***
MSPSS index	0.10	<0.001***	0.10	<0.001***	0.10	<0.001***	0.11	<0.001***	0.11	<0.001***	0.11	<0.001***
QDR index change between T2 and T3 (all participants)	#	#	−0.64	<0.001***	#	#	#	#	#	#	#	#
QDR index change between T2 and T4 (all participants)	#	#	#	#	−0.65	<0.001***	#	#	#	#	#	#
QDR index change between T2 and T5 (all participants)	#	#	#	#	#	#	−0.68	<0.001***	#	#	#	#
QDR index change between T2 and T6 (all participants)	#	#	#	#	#	#	#	#	−0.68	<0.001***	#	#
QDR index change between T2 and T7 (all participants)	#	#	#	#	#	#	#	#	#	#	−0.78	<0.001***

#=variable missing at this time point.
***p*-values:** *p < 0.05, **p < 0.01, ***p < 0.001.
QDR36 (Quality of Couple Relationship).
SOC-13 (Sense of Coherence).
MSPSS (The Multidimensional Scale of Perceived Social Support).

Results

In total, 917 parents (first-time mothers n = 489; partners n = 428) accepted participation, the first-time mothers were between 18 and 43 years old (mean 27.7 years), and partners were between 20 and 75 years old (mean 30.4). Among the participants, there were 406 unique couples, while the remaining participants took part without their partners being involved in the study. At T1, 20 % were married, 78,2% cohabited, and 1,8% were not living together. At T6, 95 % were still in the same relationship as at T2. At T7, 87,6% reported relationship stability. At T4, 9,4% were pregnant and 0,3% had given birth to a further child (Table 1). Additionally, analyses were conducted between the group of participants included at T1 and those included at T2; age, perceived economy, QDR36, SOC-13, or MSPSS.

Research question 1: How do first-time mothers and their partners perceive their quality of dyadic relationships (QDR36) during pregnancy and the eight years following childbirth?

The trends in how first-time mothers and partners perceive their quality of couple relationship is shown in Fig. 2 illustrating both *QDR36 index* and *dimensions*. Analyses showed that the change in *QDR36 index* between each time point was significant, as were the clinical effect sizes for change in QDR36 index between the timepoints T1-T2, T2-T3, T4-T5, T5-T6 and T6-T7. For the dimension *Cohesion* there were significant changes between each point in time indicating that the level of *Cohesion* is increasing between pregnancy and the first week after birth (T1-T2), which is followed by a decrease in the following eight years (T2-T7) (Fig. 2, Table 2).

Research question 2: What factors are associated with a higher perceived QDR36?

The univariate regression analyses, showed that a more positively reported *Perceived economy, SOC-13, MPSSS* or *Change in QDR36 index* were associated with a higher perceived *QDR36 index* at all time points (T2-T7). At T2, age was associated with a higher *QDR36 index*. At T3, *Cohabiting with partner* was associated with a higher *QDR36 index*. At T4, *Pregnant/Expecting new child* and *Had further births* were associated with a higher *QDR36 index* indicating that if parents are pregnant, expecting a new child or had further births, they also report a higher *QDR36 index* two years after the birth of their first child. At T5, *Education degree* were associated with a higher *QDR36 index* as well as *Cohabiting with partner* and *Pregnant/Expecting new child*. At T7, *Cohabiting with partner* were associated with a higher *QDR36 index* (Table 3).

For the multiple regressions, variations were observed in the variables that were associated with a higher *QDR36 index* at different time points. This was the case for the analyses conducted for all participants, as well as for the analyses conducted separately for first-time mothers and partners. For the multiple regressions on all participants, a higher *SOC-13* and *MSPSS* were associated with a higher *QDR36 index* at all points in time (T2-T7). *Cohabiting with partner* was associated with a higher *QDR36 index* at T5 and T7. The variables *Pregnant/Expecting new child* and *Had further births* were associated with a higher *QDR36 index* at T4. *Perceived economy* was associated with a higher *QDR36 index* at T5 (Table 4a).

When the data was split, and multiple regressions were conducted separately for first-time mothers and partners, *Cohabiting with partner*

Table 4a
Results from multiple linear regressions. All participants.

	T2 (one week after birth) ¤		T3 (six months after birth)¤		T4 (one year after birth)¤		T5 (two years after birth) ¤		T6 (four years after birth)¤		T7 (eight years after birth)¤	
	B¤	*p*-value¤	B¤	*p* −value¤	B¤	*p* −value¤	B¤	*p* −value¤	B¤	*p* −value¤	B¤	*p* −value¤
Age (yrs.)¤	−0.02 ¤	0.181¤	−0.01 ¤	0.838¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
Education (ref. university?)¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.33 ¤	0.171¤	#¤	#¤	#¤	#¤
Cohabiting with partner (ref. living together?)¤	#¤	#¤	1.71¤	0.328¤	#¤	#¤	1.68¤	0.044*¤	#¤	#¤	−2.48 ¤	<0.001*** ¤
Pregnant/Expecting new child (ref. yes?)¤	#¤	#¤	#¤	#¤	−0.68 ¤	0.011*¤	0.05¤	0.841¤	#¤	#¤	#¤	#¤
Had further birth(s) after T2 (ref. yes?)¤	#¤	#¤	#¤	#¤	5.33¤	0.001***¤	#¤	#¤	#¤	#¤	#¤	#¤
Perceived economy¤	−0.02 ¤	0.840¤	0.14¤	0.428¤	0.08¤	0.458¤	0.28¤	0.036*¤	−0.01 ¤	0.939¤	−0.16 ¤	0.366¤
SOC-13 index¤	0.06¤	<0.001*** ¤	0.05¤	<0.001*** ¤	0.04¤	<0.001*** ¤	0.03¤	<0.001*** ¤	0.04¤	<0.001*** ¤	0.04¤	0.003**¤
MSPSS index¤	0.06¤	<0.001*** ¤	0.04¤	0.009**¤	0.03¤	<0.001*** ¤	0.04¤	<0.001*** ¤	0.04¤	<0.001*** ¤	0.03¤	0.012*¤
QDR index change between T2 and T3 (all participants)¤	#¤	#¤	−0.52 ¤	<0.001*** ¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T4 (all participants)¤	#¤	#¤	#¤	#¤	−0.55 ¤	<0.001*** ¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T5 (all participants)¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.55 ¤	<0.001*** ¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T6 (all participants)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.58 ¤	<0.001*** ¤	#¤	#¤
QDR index change between T2 and T7 (all participants)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.70 ¤	<0.001*** ¤

#=variable missing at this time point.
¤= too small sample size to perform statistical analysis.
***p*-values:** *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
QDR36 (Quality of Couple Relationship).
SOC-13 (Sense of Coherence).
MSPSS (The Multidimensional Scale of Perceived Social Support).

was associated with mothers' higher *QDR36 index* at T5, and a higher *SOC-13* was associated with a higher *QDR36 index* at T2 and T4. For the variable *Change in QDR36 index,* no significant results were found for the mothers' own *Change* in quality at any of the time points. However, significant results were observed indicating that a greater decrease in the variable *Change in QDR36 index* for the partner influenced the mothers' *QDR36 index* negatively at all points in time (T2-T6) (Table 4b). For the partners, significant results revealed that a higher *SOC-13* was associated with a higher *QDR36 index* between T2 and T5. Similarly, significant results indicated that a higher *MSPSS* influenced a higher *QDR36 index* at T2 and T4-T5. When analyzing the variable *Change in QDR36 index* for partners, significant results were found for that the partner's own *Change in QDR36 index* was associated with their *QDR36 index* for all measurement time points. However, no significant results were observed indicating that the mothers' *Change in QDR36 index* was associated with the partner's *QDR36 index* (Table 4c).

Discussion

For the present study, the aim was to explore first-time mothers' and their partners' perceived quality of dyadic relationship (QDR36) during pregnancy and the first eight years after birth as well as what factors that are associated with a higher perceived QDR36. The results revealed that QDR36 varied over time among both first-time mothers and partners since there was an increase between pregnancy week 25 and the first week after childbirth. This was followed by a decrease between each point in time throughout the eight years after childbirth. These results are in line with previous research showing that marital satisfaction decreases after the birth of the first child [6–9]. However, this differs from previous research showing that QDR36 increases between four and eight years after childbirth [13]. In current study, eight years after childbirth, QDR36 was lower than in pregnancy week 25 indicating that the birth of the first child influenced couples' relationships negatively. Previous studies strengthen the notion that pregnancy and the transition to parenthood have a negative impact [6–9]. However, marital satisfaction also declines among couples who do not have children [10]. Current results notably indicate that partners' greater decrease in QDR36 influenced both the partners' and first-time mothers' QDR36 negatively at all time points. In contrast, first-time mothers' greater decrease in QDR36 was not associated with either their own or their partners' QDR36. This indicates that the partner's perception of the relationship has an influence on both the first-time mothers, as well as their own of how the relationship functions. Previous research on dyadic data analyses has also shown that partners affect each other [9], and that mothers' relationship satisfaction is associated with the support they receive from their partner and how the couple manages stress together [22]. Additionally, when couples transition into parenthood, they tend to encounter increased marital conflicts and greater dissatisfaction with their relationship [23], although these conflicts could decrease when they provide support [22]. Researchers have previously highlighted that healthcare professionals can support parents in managing their leisure activities during the transition to parenthood to promote their well-being [24]. Altogether, this stresses the value of midwifery and child healthcare that meets and supports both parents' needs during

Table 4b
Results from multiple linear regressions. First-time mothers.

	T2 (one week after birth)¤		T3 (six months after birth)¤		T4 (one year after birth)¤		T5 (two years after birth)¤		T6 (four years after birth)¤		T7 (eight years after birth)¤	
	B¤	*p*-value¤	B¤	*p* −value¤	B¤	*p* −value ¤	B¤	*p* −value ¤	B¤	*p* −value¤	B¤	*p* −value¤
Age (yrs.)¤	−0.04 ¤	0.114¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
Education (ref. university?)¤	#¤	#¤	#¤	#¤	#¤	#¤	0.41¤	0.676¤	#¤	#¤	#¤	#¤
Cohabiting with partner¤	#¤	#¤	¤¤	¤¤	#¤	#¤	7.85¤	0.002** ¤	#¤	#¤	¤¤	¤¤
Pregnant/Expecting new child (ref. yes?)¤	#¤	#¤	#¤	#¤	−0.80 ¤	0.455¤	0.78¤	0.354¤	#¤	#¤	#¤	#¤
Had further birth(s) after T2 (ref. yes?)¤	#¤	#¤	#¤	#¤	¤¤	¤¤	#¤	#¤	#¤	#¤	#¤	#¤
Perceived economy¤	0.05¤	0.756¤	0.55¤	0.113¤	0.30¤	0.459¤	0.12¤	0.810¤	−0.15 ¤	0.083¤	4.67¤	0.089¤
SOC-13 index¤	0.07¤	<0.001*** ¤	0.04¤	0.058¤	0.06¤	0.009** ¤	0.05¤	0.111¤	0.11¤	0.083¤	−0.01 ¤	0.927¤
MSPSS index¤	0.03¤	0.119¤	−0.002 ¤	0.937¤	0.03¤	0.466¤	0.08¤	0.070¤	0.04¤	0.474¤	−0.15 ¤	0.383¤
QDR index change between T2 and T3 (First-time mothers)¤	#¤	#¤	0.07¤	0.427¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T3 (Partners)¤	#¤	#¤	−0.34¤	<0.001*** ¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T4 (First-time mothers)¤	#¤	#¤	#¤	#¤	0.04¤	0.632¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T4 (Partners)¤	#¤	#¤	#¤	#¤	−0.33 ¤	0.006** ¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T5 (First-time mothers)¤	#¤	#¤	#¤	#¤	#¤	#¤	0.14¤	0.193¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T5 (Partners)¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.28 ¤	0.012*¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T6 (First-time mothers)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.02 ¤	0.903¤	#¤	#¤
QDR index change between T2 and T6 (Partners)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.44 ¤	0.045*¤	#¤	#¤
QDR index change between T2 and T7 (First-time mothers)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.08 ¤	0.916¤
QDR index change between T2 and T7 (Partners)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.37 ¤	0.499¤

#=variable missing at this time point.
= too small sample size to perform statistical analysis.
***p*-values:** *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

pregnancy and the following eight years after childbirth.

In this study, variations were observed in the variables that were associated with a higher perceived QDR36 at different time points. However, first-time mothers' and partners' higher sense of coherence (SOC-13) and social support (MSPSS) were consistently associated at T2-T7. This indicates the value of maintaining a high sense of coherence and social support. These results are in line with previous studies showing that SOC-13 [8,13] and MSPSS [8] are associated with a higher relationship quality. Besides, social support has previously been associated with positive outcomes in families [25]] to prevent parental separations, it has also been stressed previously that parents could be supported in their relationship quality, SOC and social support [16].

In line with previous studies [8,13], current results showed that how parents perceive their economy is associated with their higher QDR36. Parents' perceptions of their financial situation may depend on the degree of equality within their relationship since parents who share parental leave more equally contribute to fathers reporting higher satisfaction with their partner relationship 18 months after the birth [26]. In this study, notably, the univariate regression analysis showed no significant association between employment and QDR36, at any point in time.

At T4, 9.4 % of the participants were pregnant and 0.3 % had given birth to a further child which was found to be associated with a higher QDR36 at various points in time. Previously, first-time fathers have reported higher marital satisfaction than fathers with multiple children, on the other hand they have reported a more pronounced decline in marital satisfaction over time compared to father with multiple children [12]. In current study, all mothers were first-time mothers, but the partners could have further children. The results showed no associations between however the child born at T2 was the first child or not.

Current results showed that at T7, eight years after childbirth, 12.0 % of the participants had separated. This means that the parents in this study separated to a lesser extent than Swedish parents of young children on average. In Sweden, parental separation is roughly equally common throughout each year of childhood, affecting around 3 % of children in each age group [27]. Not being happy in one's marriage could mean suffering from more medical conditions and lower life expectancy than being unmarried, divorced or widowed [28]. Parents' well-being, mental health and marital satisfaction are associated with the child's attachment stability [29], which highlights the value for the whole family. However, this was not explored in current study and could, therefore, carry the potential to be explored in the future; from both a child and parental perspective grasping the whole family's lifeworld experiences.

Methodological Considerations

The mean age among participants was 28,9 years which is moderately lower than the mean age among first-time parents in the setting during 2014: first-time mothers 29,1 years; first-time fathers 31,5 years

Table 4c
Results from multiple linear regressions. Partners.

	T2 (one week after birth) ¤		T3 (six months after birth)¤		T4 (one year after birth)¤		T5 (two years after birth) ¤		T6 (four years after birth)¤		T7 (eight years after birth)¤	
	B¤	*p*-value¤	B¤	*p* −value¤	B¤	*p* −value¤	B¤	*p* −value¤	B¤	*p* −value¤	B¤	*p* −value ¤
Age (yrs.)¤	0.00¤	0.983¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
Education (ref. university?) ¤	#¤	#¤	#¤	#¤	#¤	#¤	−1.29 ¤	0.064¤	#¤	#¤	#¤	#¤
Cohabiting with partner¤	#¤	#¤	#¤	#¤	#¤	#¤	0.61¤	0.630¤	#¤	#¤	¤¤	¤¤
Pregnant/Expecting new child¤	#¤	#¤	#¤	#¤	−0.76 ¤	0.243¤	0.58¤	0.344¤	#¤	#¤	#¤	#¤
Had further birth(s) after T2 ¤	#¤	#¤	#¤	#¤	¤¤	¤¤	#¤	#¤	#¤	#¤	#¤	#¤
Perceived economy¤	−0.08 ¤	0.634¤	0.36¤	0.132¤	0.27¤	0.247¤	0.18¤	0.652¤	0.24¤	0.645¤	0.74¤	0.631¤
SOC-13 index¤	0.07¤	<0.001*** ¤	0.05¤	0.010*¤	0.07¤	0.002**¤	0.06¤	0.033¤	−0.01 ¤	0.851¤	0.09¤	0.251¤
MSPSS index¤	0.08¤	<0.001*** ¤	0.02¤	0.215¤	0.04¤	0.084¤	0.04¤	0.056¤	0.08¤	0.158¤	0.02¤	0.757¤
QDR index change between T2 and T3 (First-time mothers)¤	#¤	#¤	0.07¤	0.228¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T3 (Partners)¤	#¤	#¤	−0.51 ¤	<0.001*** ¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T4 (First-time mothers)¤	#¤	#¤	#¤	#¤	0.05¤	0.362¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T4 (Partners)¤	#¤	#¤	#¤	#¤	−0.49 ¤	<0.001*** ¤	#¤	#¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T5 (First-time mothers)¤	#¤	#¤	#¤	#¤	#¤	#¤	0.12¤	0.166¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T5 (Partners)¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.47 ¤	<0.001*** ¤	#¤	#¤	#¤	#¤
QDR index change between T2 and T6 (First-time mothers)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	0.03¤	0.801¤	#¤	#¤
QDR index change between T2 and T6 (Partners)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.74 ¤	<0.001*** ¤	#¤	#¤
QDR index change between T2 and T7 (First-time mothers)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.14 ¤	0.588¤
QDR index change between T2 and T7 (Partners)¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	#¤	−0.75 ¤	0.024*¤

#=variable missing at this time point.
¤ = too small sample size to perform statistical analysis.
***p*-values:** *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

[30]. The age range among participants was between 18 and 75 years which results in a breadth and variation among the participants. This refers to external validity and generalizability and strengthens that the findings could be transferred to other groups of parents in other settings [31]. A potential limitation of the study is the low representation of participants born outside Sweden. Future research could specifically target these groups of parents to enhance generalizability. It is noteworthy that participants generally reported high scores for their perceived quality of the relationship (above a QDR36 index of 20) at all measurement points. This may be due to parents with higher perceived relationship quality being more likely to participate in the study than those with lower perceived quality. Future research could specifically focus on parents with lower perceived relationship quality to increase understanding of how their QDR36 scores change over time. Due to the recruitment of parents during pregnancy via antenatal care progressing at a slower pace than anticipated, an adjustment was made to the recruitment procedure. This adjustment involved recruiting parents postpartum through postnatal care. The adjustment aimed to increase the number of participants and thereby enhance external validity [31]. However, this adjustment meant that not all participants had the opportunity to respond to the first questionnaire during pregnancy which may be seen as a limitation. The baseline in this study was therefore both pregnancy week 25 (T1) and first week after childbirth (T2), which limits the understanding of how participants perceived their relationship prior to the pregnancy. The instruments used for analysis were previously validated which strengthens the internal validity [31] together with the fact that the questionnaires were pilot tested in two steps prior data collection: in the first step 16 parents answered the questionnaires in paper format; in the second step 22 parents answered the web-based questionnaires. Further strength with the study is the longitudinal design which covers the time of parental transition and beyond. However, a limitation with longitudinal, follow-up studies, could be the potential loss of participants [31]. In this study, the response rate was 33 % (n = 299) for the last questionnaire, which could be considered as a relatively high response rate, considering that the follow-up spanned eight and a half years and included seven questionnaires. Furthermore, a strength of the study lies in the inclusion of both first-time mothers, fathers, and co-mothers, all of whom were approached and completed the same questionnaires. Nevertheless, most participants were in heterosexual relationships and only parents experiencing pregnancy and childbirth were included in the study, which means that parenthood beyond the biological capacity to have children

was not represented. Current results complement previous research and uniquely encompasses the COVID-19 pandemic, as parents were followed before, during, and after the pandemic: between 2014 and 2024. The study approach reinforces the argument that the results capture first-time mothers' and partners' perspective and lifeworld in relation to their perceived quality of couple relationship throughout pregnancy and the following eight years after childbirth, during the unique period of the COVID-19 pandemic.

Conclusion

There are differences in how first-time mothers and partners perceive the quality of their couple relationship (QDR36) during pregnancy and in the years following childbirth. Both groups reported the highest QDR36 scores during the first week after childbirth (T2) and the lowest scores eight years after childbirth (T7). For first-time mothers, a change in perceived quality was not associated to higher QDR36 at any point in time. However, the partners change in QDR36 was associated with both partners' and first-time mothers' higher QDR36. This points to the value of including both parents in midwifery and child health care and support, to strengthen the parents in their couple relationship. Care and support should aim to strengthen first-time mothers and partners as individuals, since their SOC plays a significant role to their higher QDR36. Also, it should aim at strengthening the parents' social support since their MSPSS plays a significant role to their higher QDR36. To summarize, from the parents' perspective during the transition to parenthood and beyond, it becomes evident that healthcare should acknowledge and support parents both as individuals and as a couple to strengthen their ability to maintain a high perceived quality of couple relationships during parental transition and the following eight years after childbirth.

Ethics approval and consent to participate

The study was approved by the Regional Ethical Review Board in Gothenburg, Sweden (Dnr: 197–14; Dnr T: 623–14) and was carried out in accordance with the Helsinki Declaration [32]. Participation was voluntary and could be withdrawn at any time without providing a reason. All participants were given both oral and written information about the study, and they gave their informed consent to participate.

Funding

This study was funded by the Regionhälsan, Västra Götalandsregionen, Sweden; Department of Caring Science, University of Borås, Sweden and the Research and Development Centre (R&D) Skaraborg, Sweden.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We wish to acknowledge the parents participating in this study.

References

[1] Fridbäck L, Wikner A, Ericson J. Parental prenatal expectations and experiences of parenthood—a mixed-method study. J Perinat Educ 2024;33(1):38.
[2] Apostolou M, Kagialis A. What makes parenthood rewarding: an exploratory analysis of perceived advantages of having children. Evol Psychol Sci 2025:1–12.
[3] Zhang Y, Xie R, Yan R, Wang D, Ding W, Sun B. Bidirectional longitudinal relationships between parents' positive co-parenting, marital satisfaction, and parental involvement. J Soc Pers Relat 2024;41(7):1892–912.
[4] Umberson D, Thomeer MB. Family matters: Research on Family Ties and Health, 2010 to 2020. J Marriage Fam 2020;82(1):404–19.
[5] Kluwer ES, Johnson MD. Conflict frequency and relationship quality across the transition to parenthood. J Marriage Fam 2007;69(5):1089–106.
[6] Simonelli APM, Sacchi C, De Palo F, Vieno A. The role of father involvement and marital satisfaction in the development of family interactive abilities: a multilevel approach. Front Psychol 2016;7(01725).
[7] Doss BD, Rhoades GK, Stanley SM, Markman HJ. The effect of the transition to parenthood on relationship quality: an 8-year prospective study. J Pers Soc Psycho 2009;96(3):601–19.
[8] Bäckström C, Kåreholt I, Thorstensson S, Golsäter M, Mårtensson LB. Quality of couple relationship among first-time mothers and partners, during pregnancy and the first six months of parenthood. Sexual and Reproductive Healthcare 2018;17:56–64.
[9] Bogdan I, Turliuc M, Candel OS. Transition to parenthood and marital satisfaction: a meta-analysis. Front Psychol 2022;13(901362).
[10] Lawrence E, Rothman AD, Cobb RJ, Rothman MT, Bradbury TN. Marital satisfaction across the transition to parenthood. J Family Psychol 2008;22(1):41–50.
[11] Doss BD, Rhoades GK. The transition to parenthood: impact on couples' romantic relationships. Curr Opin Psychol 2017;Feb(13):25–8.
[12] Mack JT, Brunke L, Staudt A, Kopp M, Weise V, Garthus-Niegel S. Changes in relationship satisfaction in the transition to parenthood among fathers. PLoS One 2023;18(8):e0289049.
[13] Hansson M, Ahlborg T. Quality of the intimate and sexual relationship in first-time parents – a longitudinal study. Sex Reprod Healthc 2012;3:21–9.
[14] Delicate A, Ayers S, McMullen S. A systematic review and meta-synthesis of the impact of becoming parents on the couple relationship. Midwifery 2018;61:88–96.
[15] Ahlborg T, Lillengen A-M, Lönnfjord V, Petersen C. Quality of dyadic relationship in swedish men and women living in long-term relationships and in couples in family counseling - Introduction of a new self-report measure, QDR36. Nord Psychol 2009;61(3):23–46.
[16] Gamgam Leanderz Å, Hallgren J, Henricson M, Larsson M, Bäckström C. Parental couple separation during the transition to parenthood. Nurs Open 2021.
[17] Antonovsky A. The structure and properties of the sense of Coherence scale. Soc Sci Med 1993;36(6):725–33.
[18] Langius A, Björvell H, Antonovsky A. The sense of coherence concept and its relation to personality traits in swedish samples. Scand J Caring Sci 1992;6(3):165–71.
[19] Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. J Pers Assess 1988;52(1):30–41.
[20] Ekbäck M, Benzein E, Lindberg M, Årestedt K. The swedish version of the multidimensional scale of perceived social support (MSPSS) - a psychometric evaluation study in women with hirsutism and nursing students. Health Qual Life Outcomes 2013;11(168).
[21] Cohen J. Statistical power analysis for the behavioral sciences. Second edition. New Jersey: Lawrence Erlbaum Associates, Inc; 1988.
[22] Vrankić Pavon M, Wagner Jakab A, Löw A. Exploring relationship satisfaction in mothers of children with disabilities: the predictive role of interparental conflicts and moderating role of dyadic coping. Front Psych 2024;8(14):1307827.
[23] Bouchard G, Boudreau J, Hébert R. ransition to parenthood and conjugal life: comparisons between planned and unplanned pregnancies. J Family Issues 2006;27:1512–31.
[24] Zheng LR, Naurin E, Markstedt E, Olander P, Elden H, Linden K. A Longitudinal Dyadic Study of six leisure Activities in Swedish Couples during the transition to Parenthood. Sex Roles 2023;88(5–6):210–24.
[25] McLeish J, Redshaw M. Peer support during pregnancy and early parenthood: a qualitative study of models and perceptions. BMC Pregnancy Childbirth 2015;12(15):257.
[26] Lidbeck M, Bernhadsson S. What happens to the couple relationship when sharing parental leave? a prospective, longitudinal study. Scand J Psychol 2021;62(1):95–103.
[27] Statistics Sweden. Children and young individuals aged 0-21 years living at home whose parents have separated during the year, by gender, age, and year https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START_LE_LE0102_LE0102F/LE0102T30/2024.
[28] Lawrence EM, Rogers RG, Zajacova A, Wadsworth T. Marital happiness, marital status, health, and longevity. J Happiness Stud 2019;20:1539–61.
[29] Tan ES, McIntosh JE, Kothe EJ, Opie JE, Olsson CA. Couple relationship quality and offspring attachment security: a systematic review with meta-analysis. Attach Hum Dev 2018;20(4):349–77.
[30] Statistics Sweden. The average age at childbirth by region, birth order of the child, parent, and yea https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START_BE_BE0101_BE0101H/MedelAlder1/table/tableViewLayout1/: Statistics Sweden, SCB; 2014.
[31] Polit D, Beck CT. Essentials of nursing research : appraising evidence for nursing practice. Philadelphia: Wolters Kluwer; 2022.
[32] World Medical Association. World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. J Am Med Assoc 2013;310(20):2191–4.