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Quality of the intimate and sexual relationship in first-time parents – a longitudinal study

Abstract

Objectives: To describe experienced relationship quality, and in particular sensuality and sexuality, in first-time parents over time from when the firstborn is six months (T1), four years (T2) and eight years (T3) of age, to describe gender differences and the factors which may affect experienced relationship quality.
Method: A longitudinal design with repeated measures using the self-reporting questionnaire Quality of Dyadic Relationship, QDR36, which was answered by 258 parents at all three occasions. Data was analysed primarily using Friedman's test and multiple regression analysis.

Results: The relationship quality statistically significantly decreased at T2 and then significantly increased again at T3 but not back to the level of origin at T1 ($p<0.000$). Both sexes showed a similar change over time in the QDR-index. The dimension Dyadic Sensuality statistically significantly decreased at all three occasions ($p<0.000$) and Dyadic Sexuality showed no significant differences over time but remained at a low level at all three occasions. Sexual Frequency and Contentment decreased at T3 after a small increase at T2. Four covariates of perceived relationship quality at T3 were statistically significant; strained relationship with the child, strained health, Sense of Coherence and strained economy. Cronbach's alpha showed a high reliability (0.95) at T3 and indicates a development of the QDR 36.
Conclusion: The results showing low intimacy in the relationship indicate a need of support from professionals, e.g. midwives, to couples with small children, for instance by enhancing communication skills and emphasizing the role of sensuality and sexuality.

Keywords: marital quality; sexuality; sensuality; first-time parents; intimate relationship; QDR36.

Introduction

When a couple gets their first child the relationship is affected by the baby being the focus of attention, usually at the expense of the couple's intimate relationship. Regarding the relatively high level of separations and divorces among parents of pre-school children, it was important to follow couples over time, as there is no such research in Scandinavia, which was the motivation of this study.

Becoming a parent changes one's perspective on life and can be described as a life crisis that demands changes in adaptation patterns. A crisis is not just a negative situation; it can be a turning point which is accompanied by increased opportunities to change for the better. The transition made by couples from partners to parents usually requires coping strategies [1, 2] and the success of this transition may depend on the individual's resources relating to Sense of Coherence (SOC) described by Antonovsky [3].

Women generally experience higher levels of stress and depression than men, this being due to pregnancy and parenthood being more emotionally and physically challenging for women [4, 5, 6, 7]. Women also tend to take the primary responsibility for the infant [8]. Parents tend to experience a decrease in social activities outside the family after the birth of their first child and these changes have been associated with parental adjustment and depression [9]. The main issues facing women tend to be tiredness, change in body shape and doubts about parenting competence. For men they tend to be the ability to provide financially for the family, tiredness and decline in their partner's sexual interest. Studies [2, 10] claim that fatigue and less time for leisure were strains that mainly affected women.

Age was a factor that affected relationship stability in Norwegian mothers. Mothers in the normative childbearing age group (<28 years) reported a decline in relationship stability while the mothers in the delayed childbearing age group (>28 years) demonstrated a slight increase [6].

The transition into parenthood can be interconnected with feelings of stress, increased fatigue, reduced self-esteem and a significant decline in relationship quality [11, 12, 13, 14, 15, 16]. In a British study most couples were concerned about how their sexual life was going to affect the relationship once the baby was born. Both women and men requested more information and advice during the pregnancy about sexuality [17]. Many parents felt isolated and abandoned due to having little or no information on the subject and this could lead to a

feeling of discontent in the relationship and in some cases separation [18]. Separation affects physical and mental health adversely both for parents and their children [19,20].

Housework has been identified as a problem for parents. Ahlborg [21] describe that parents, especially mothers, experienced housework as very tiring. Housework was found to be a significant predictor for relationship satisfaction in both mothers and fathers [22].

In the cross-sectional study of Ahlborg [21] the quality of the mutual communication within the couple was correlated with the experienced relationship quality and the communication was the main essence in an interview study in first-time parents six months after delivery [23].

One instrument, (Quality of Dyadic Relationship, QDR36), developed to measure the concept relationship quality in the present study includes therefore variables about communication, but also experienced fatigue and the partners' consensus about housework, meeting friends, relatives and financial matters among other things. These are factors potential to affect parents mentioned in earlier research described above. One of the five dimensions in QDR36 (being Dyadic Consensus, Cohesion, Satisfaction, Sensuality, and Sexuality) is Satisfaction with items about relationship confidence, about relationship dedication and conflicts. In the American study of Doss [15] relationship quality is defined as relationship functioning measured by the first item of Marital Adjustment Test (MAT), observed marital communication, relationship confidence, relationship dedication and poor conflict management (communication).

In the study of Doss [15] parents showed a sudden deterioration in their relationship quality following birth and this deterioration tended to persist throughout the eight years of study There was also a control group of "non-parents" who indicated a more gradual deterioration in their relationships during the first eight years of marriage. This result is reinforced by Lawrence [14] and Kurdek [24]. In Schulz [25] there was no decline found in relationship quality in the group of childless couples. Not all parents, however, show a decline in relationship quality during the transition into parenthood. In Shapiro [12] approximately 33% of couples reported stability or an increase in their relationship quality. In White [26] the family dynamics remained stable across the childbearing period. There are various reasons for diverse results in relationship quality. One example from the American culture is that highly religious mothers experience greater relationship quality after the first child than mothers with a lower level of religiousness [27]. The covenant married couples see a marriage as a lifelong

commitment and the community supports that thought [28]. Other factors which need to be considered are family structure, economy, race, etc in order to understand the nature of the transition of the couple from partners to parents [29]. In Sweden, the parental leave system differs from other countries in its generosity. It entails one and a half years of leave from work, including two months which are specifically reserved for the father.

The Swedish survey conducted by Ahlborg [30] 820 respondents revealed that when the first child was six months of age most parents were happy in their relationships, but both mothers and fathers were discontented with the dyadic sexuality. A similar result is shown in another Swedish study [31] that reports less sexual closeness at one year than during the pregnancy.

Physical sexual problems are common after childbirth. More than 50% of the mothers in Barrett [32] experienced pain during intercourse up to six months after delivery. In Olsson [10] the women express dissatisfaction with the physical changes they experienced after childbirth. It was essential to get reassurance and confirmation from professionals that they were physically back to normal. According to Ahlborg [30] the couples resumed sexual activity on average three months after delivery. The frequency of intercourse was “once to twice a month” but the sexual desire for mothers was “twice a month to once a week” and for fathers “twice a week to once a day”. Despite this the fathers were more satisfied in the relationship in general than the mothers, but the fathers were more dissatisfied sexually [30]. The sexual contentment in the follow-up study at four years after the birth of the first child [33] showed that less than half of the parents (45.7%) were sexually content and that the fathers were still less satisfied sexually that the mothers. Differences in libido between the couple can be a risk factor for the stability of the relationship [34]. As the sensuality and sexuality are dimensions that make an intimate relationship between to loving partners special compared to other human relationships, these dimensions should be especially focused when describing the experienced relationship quality.

Decline in relationship quality during transition into parenthood can be related to the cognitive consequences of sleep deprivation. If fatigue can be reduced then experienced relationship quality including the intimacy can be improved (35, 2¸ 16].

Ahlborg [21] suggest that a follow-up study when the first child is eight years of age will provide a useful continuing picture of the development of the marital relationship over a longer period. Therefore, the aim of this study was 1) to describe the relationship quality over

time from when the first born was six months, four years and now eight years of age, 2) to describe the variation of sensual and sexual variables over time, 3) to examine gender differences over time 4) to distinguish which variables can act as covariates for how the relationship was experienced when the first child was 4 and 8 years of age.

Methods

Design

This research is based on a longitudinal design with repeated measures of the perceived intimate relationship quality in first-time parents in the year 2002 (T1) when the first child was six months of age, 2006 (T2) when the first child was four years of age, and finally 2010 (T3) when the first child was eight years of age.

Measurements

In T1 and T2 a Modified Dyadic Adjustment Scale based on the American instrument, Dyadic Adjustment Scale (DAS) was used [35]. Modification of the instrument involved adding variables about communication, sensuality and sexuality, according to results from the Ahlborg and Strandmark interview study [23]. The modified version has been thoroughly described, tested and validated with its psychometric properties [37]. The Modified Dyadic Adjustment Scale has further been developed resulting in Quality of Dyadic Relationship (QDR36). It has been used and psychometrically tested in a study of 90 men and women living in long-term relationships and on 94 men and women before and after family counselling. The conclusion was that QDR36 provides a useful and comprehensive measurement of relationship quality in different periods and situations in life [38].

In T3 the validated QDR36 questionnaire was used and it consists of following five dimensions:

1. *Dyadic Consensus*, 11 variables about family finances, meeting friends and family, values and religious issues, aspirations and goals in life, amount of time together, decision making, household work, leisure activities and recreation and finally career and personal development decisions.

2. *Dyadic Cohesion*, 4 variables about stimulating exchange of ideas with partner, laughing together, calmly discussing something and finally cooperation on a task.

3. *Dyadic Satisfaction*, 11 variables about how often they have been considering a divorce/separation, how often does it work well between you, confide in their partner, how often does your partner take responsibility, how often do you get on each other´s nerves, how often do you quarrel, listen to partners expressed wishes, how often do you misunderstand each other, problems of not showing love and appreciation and finally partner giving support and comfort.

4. *Dyadic Sensuality*, 5 variables about how often hugging and kissing the partner, how often wishing to cuddle, frequency of hugging and cuddling and finally how consistent is it with the wishes.

5. *Dyadic Sexuality*, 5 variables about sexual desire, problems with fatigue related to low sex frequency, sex frequency during the last four weeks and does that approve to their wishes and finally partners' attention of sexual needs.

There are at total of 36 variables with six possible answers for each variable, thus forming a Likert scale with responses ranging from 1-6. The quality of the relationship is measured by an index which is the sum of mean values from the five different dimensions, giving a possible spread of 5-30. QDR36 as questionnaire is fully presented in Ahlborg [38].

Psychosocial single variables added in the questionnaire at T2 and T3 were: experience of household work, experience of parenthood and social support, experienced strains in relationships with child, economy, health and work outside home.

At all three times of measurement, when first child was 6 months (T1), 4 years (T2) and 8 years of age (T3), Sense of Coherence, SOC-13-item [3] was also included in the questionnaire. See Table 1a.

Table 1a. Measurements used in the longitudinal study, investigating intimate relationships, when first child was 6 months (T1), 4 years (T2) and 8 years of age (T3).

Questionnaires	T1 (2002)	T2 (2006)	T3 (2010)
Modified DAS	X	X	
QDR36			X
Psychosocial variables		X	X
Sense of Coherence, SOC	X	X	X

Ethical Concerns

This study was performed in the same manner at all three times of measurement. Respondents were informed of guaranteed anonymity when they received the questionnaire. The informed consent was that the participants answered the questionnaire. They could respond by mail or internet at T3. The local ethics committee of the medical faculty at the University of Gothenburg approved the study in 2002, Ö 584-01.

Participants and procedure

The inclusion criteria at all three times of measurement were the following: (1) first-time parents (the mother's and the father's first baby together); (2) married or cohabiting parents (at the time of all three measurements); (3) Swedish speaking (to ensure comprehension of the questionnaire); and (4) healthy child (to avoid the extra strain caused by an ill child). In T1 there were 820 respondents (response rate 65%). The analysis unit of this longitudinal study was 258 responding mothers and fathers remaining at T3 (response rate 62%), who answered all three questionnaires, see the flowchart Figure 1.

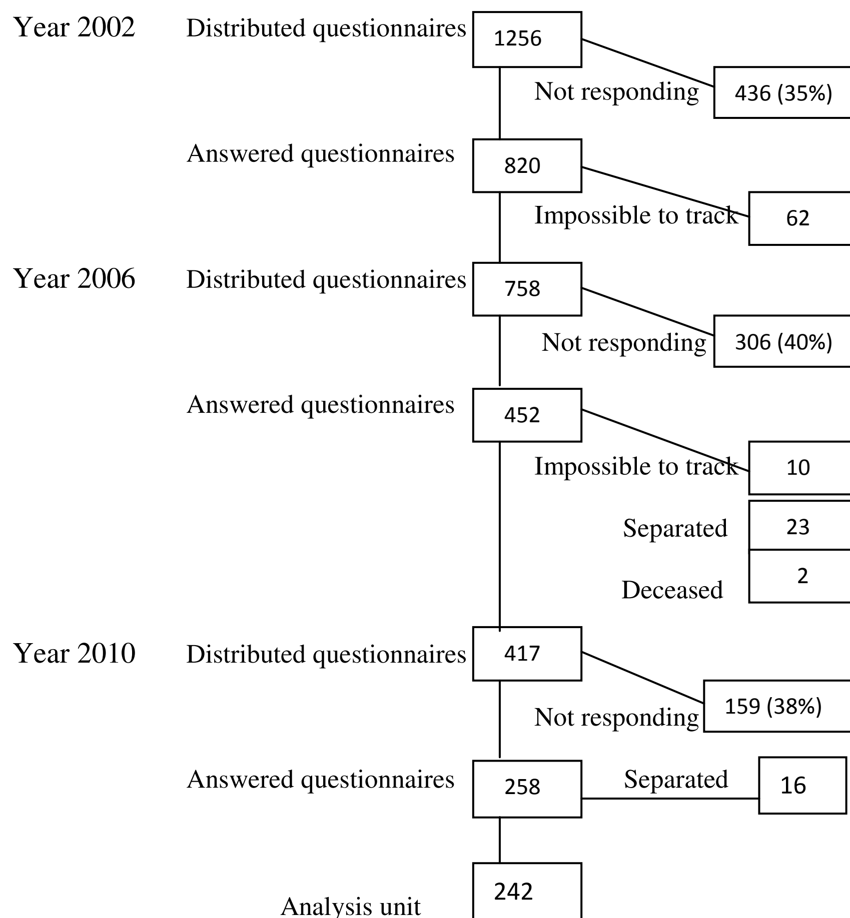

Figure 1. Flowchart of longitudinal study among parents when first child was six months (2002, T1), four years (2004, T2) and eight years of age (2010, T3).

Non-respondents

Between T1 and T2 the non-respondents (40%) could be analysed. The values of the five dimensions of the QDR at T1 did not differ between respondents and non-respondents at T2. Comparisons between the respondents and the non-respondents at T2 were carried out using the following variables: gender, age, type of relationship, number of years in intimate relationship before the birth of the first child, economy, and employment and education level. Among the non-respondents the education level was lower and they were more often fathers than mothers.

At T2, however, 20% of the 306 who did not respond, (n=61) were living at different addresses, indicating that they probably were separated and therefore had a natural reason not to respond to the questionnaire. Separated parents should not be included in further analysis.

At T3 there was a non-response rate of 38% and here 15% of the 159 who did not respond (n=24) were living at different addresses. The groups at T3 also had no significant differences in the dimensions of the QDR at T2, but they differed in regard to their economical situations ($p = 0.04$). This was the only significant difference between the groups.

Respondents

The frequency of separations among the respondents at T2 was 5% (n=23) and at T3 6% (n=16). They were asked to answer the psychosocial variables and also experienced Sense of Coherence-13-items, which was included in the questionnaire, but not the QDR-questions. The mean age of the respondents at T1 was 30.3 for mothers and 32.4 for fathers, which is somewhat higher than the average age of first-time parents in Sweden. The civil status of the respondents was representative of Swedish new parents with 46% married and 54% cohabiting [39]. In Sweden it is common to obtain a higher level of education and gain a number of years of working experience before entering into parenthood. In this study the education level was higher than average for Swedish new parents. All couples were heterosexual and 98% of the mothers and 93% of the fathers had no children from previous relationships. The mean duration of the intimate relationship before the birth of their first child was 5.1 years. In Table 1b there is a description of the respondents at T3.

Table 1b. Description of the analysis unit of still cohabiting parents responding at 8 years after birth of first child (T3) but also having been respondents when first baby was 6 months (T1) and 4 years (T2), n = 242

Variables	**Mothers** n = 143 n (%)	**Fathers** n = 99 n (%)	**Totally** n = 242 n (%)
Employed outside home	131 (92)	95 (96)	226 (93)
Number of weekly working hours			
as employed, means (SD)	35 (9.4)	39 (7.9)	37 (8.7)
Unemployed	5 (3.5)	3 (3.0)	8 (3.3)
On parent leave, totally	7 (5.0)	1 (1.0)	8 (3.3)
On parent leave, partly	22 (15)	4 (4.0)	26 (10)
On parent leave, sometimes	10 (7.0)	19 (19)	29 (12)
Students	10 (7.0)	2 (2.0)	12 (5.0)
Children born after 2006	34 (23.8)	29 (29)	63 (26)

The procedure for data collection was the following: at T1, primary care nurses at family health care centres in the Gothenburg region, Sweden, distributed the self-report questionnaires to the first-time parents consecutively one period in springtime and one in autumn, when the baby was six months old [30]. The family health care centres represented a varying socio-demographic structure. At T2 and T3 the questionnaires were mailed by post. Two reminders were sent at all three times of measurements and at T3 they could also answer on the internet. The questionnaire was mailed to them informing about the web responding possibility, but only about a third responded on Internet.

Statistical analyses

SPSS (Statistical Package for the Social Sciences) version18 was used for the registration and analysis of the data. The non-parametric Friedman's test was used to compare results at

T1, T2 and T3. The Wilcoxon Signed Rank test was used to test differences between time points. All tests were two-tailed and conducted at the 5% significance level. The Bonferroni method was applied to correct for multiple comparisons errors [40].

The results were illustrated in plots of the means with the parametric one-way repeated measures ANOVA to make possible a graphic description of variations of data from T1, T2 and T3. The same method was used to make plots of six variables separately: sensual and sexual desire, frequency and contentment over time. A comparison between the sexes at T1, T2 and T3 was conducted using the Mann Whitney U-test. Multiple regression analysis was used to find covariates with the QDR-index at T2 and T3 as a dependent variable.

Results

The variations of QDR-index as a measure of relationship quality, the five dimensions and especially the sensual and sexual dimensions' items will be presented. The results showed a decline of the QDR- index at four years after the birth of the first child (T2) and that the quality of the intimate relationship increased at eight years (T3) but not quite up to the level of origin at six months (T1). The one-way repeated measures ANOVA displayed a graphic description of variations in the QDR index of perceived relationship quality at T1, T2 and T3, confirming the result of the Friedman's test on the QDR index (Figure 2).

QDR-index of relationship quality

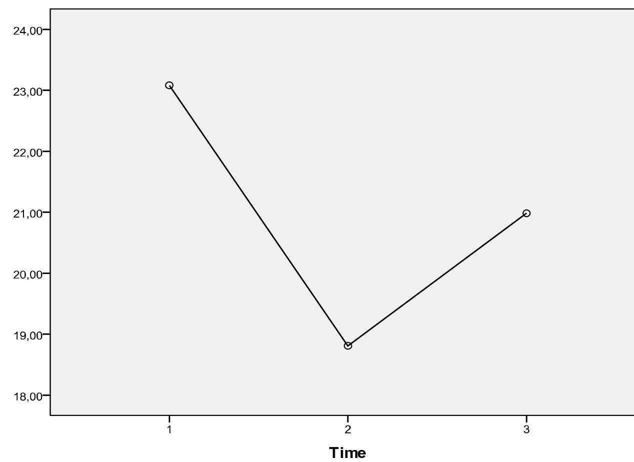

Figure 2. Variation over time in the QDR index of relationship quality at T1, T2 and T3. $p<0.000$

A post-hoc test with Wilcoxon showed that the differences in the QDR index between T1-T2, T2-T3 and T1-T3 were all significant at p = .000. Both mothers and fathers showed a similar change over time in the QDR index with a decline at T2 and then an increase at T3.

The variation over time of relationship quality as an index and its dimensions is also described in Table 2.

Table 2. Quality of Dyadic Relationship of 242 cohabiting first-time parents responding when the firstborn was 6 months (T1=2002), 4 years (T2=2006) and 8 years of age(T3=2010).

QDR	T1-2002		T2-2006		T3-2010	
	M(SD)	Md	M(SD)	Md	M(SD)	Md
QDR index	23.08 (2.41)	23.42	18.92 (2.63)	19.03	20.80 (5.76)	22.34***
Dimensions:						
Consensus	5.09 (.44)	5.09	4.01 (.50)	4.00	4.69 (1.32)	5.00***
Cohesion	4.63 (.71)	4.50	3.27 (.82)	3.25	3.94 (1.45)	4.25***
Satisfaction	5.10 (.50)	5.19	3.58 (.53)	3.60	4.32 (1.39)	4.73***
Sensuality	4.88 (.86)	4.88	4.52(.90)	4.63	3.99 (1.44)	4.20***
Sexuality	3.46 (.87)	3.50	3.52 (.87)	3.50	3.43 (1.24)	3.80 NS

*p <0.05 **p <0.01 ***p <0.001

The three dimensions Dyadic Consensus, Cohesion and Satisfaction showed the same pattern, while this result from table 2 is not shown in figures. Exceptions were seen in Dyadic Sensuality which showed a decrease at all three occasions (p<0.000), thus being the only dimension that displayed a steady decline, see figure 3.

Dyadic sensuality

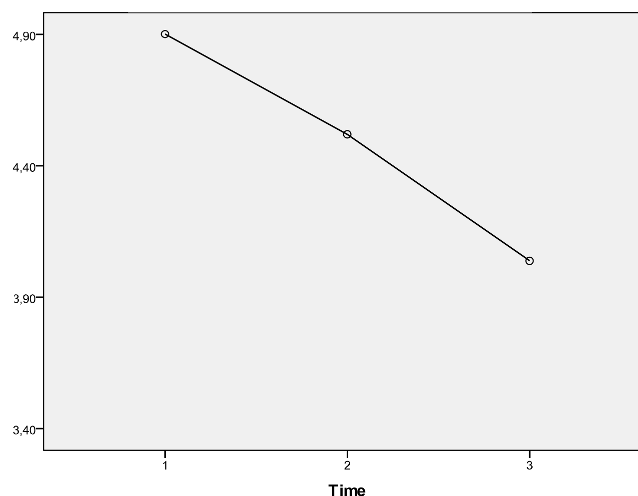

Figure 3 Variation over time in Dyadic Sensuality at T1, T2 and T3. $P<0.000$

Also the Dyadic Sexuality did not follow the curve of the QDR-index, but remained at a low level at all three times without significant differences T1-T2 and T2-T3 (p = 0.55), see Figure 4.

Dyadic sexuality

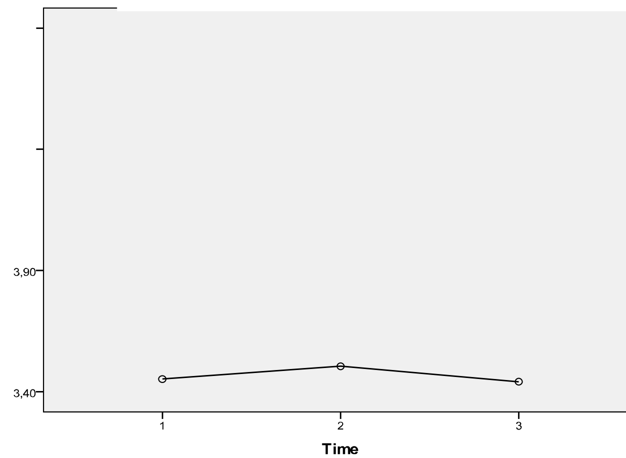

Figure 4 Variation over time in Dyadic Sexuality at T1, T2 and T3. NS

In the dimension of sensuality all variables: desire, frequency and contentment, showed a significant decline over time with the lowest score at T3 (p<0.000), (Figure 5a, b, and c).

Sensual desire

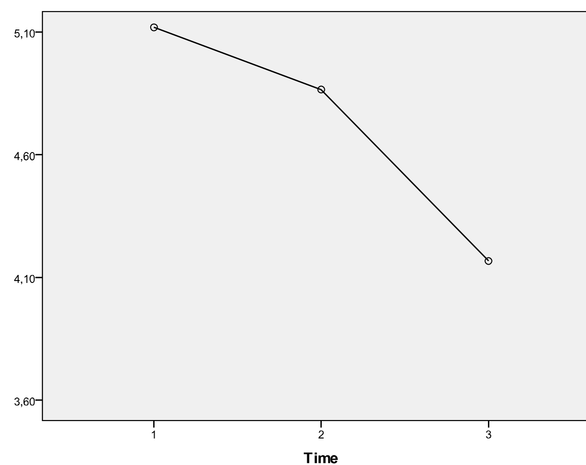

Figure 5a. Sensual desire at T1, T2 and T3. (p<0.000)

Sensual frequency

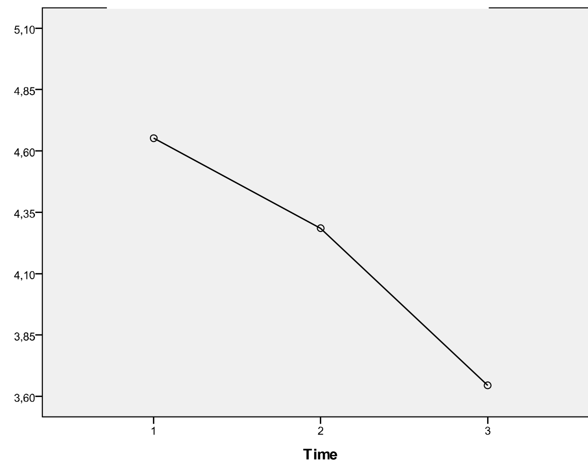

Figure 5b. Sensual frequency at T1, T2 and T3. (p<0.000)

Sensual contentment

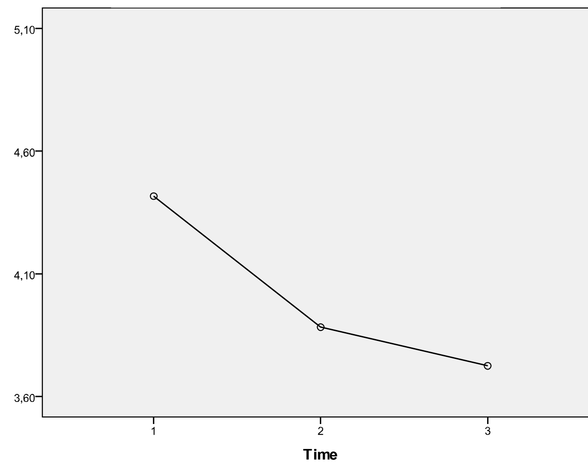

Figure 5c. Sensual contentment at T1, T2 and T3.
p<0.000, T2-T3: NS

The differences in sensual contentment between T1-T2 and T1-T3 were statistically secured, (p<0.000), while the difference between T2-T3 was non-significant (p=0.07).

The experienced sexuality also showed the lowest score at T3 in all the variables sexual desire, frequency and contentment. The variable sexual desire was rather stable between T1 and T2 and then showed a significant decline between T2 and T3, see Figure 6a.

Figure 6a. Sexual desire at T1, T2 and T3. p = 0.001, T1-T2 NS

The difference in sexual desire between T1-T2 was non-significant, while the differences between T2-T3 and T1-T3 were statistically secured, (p=0.001).

Sexual frequency showed a small increase between T1 and T2 and then a decrease at T3, see Figure 6b.

Sexual frequency

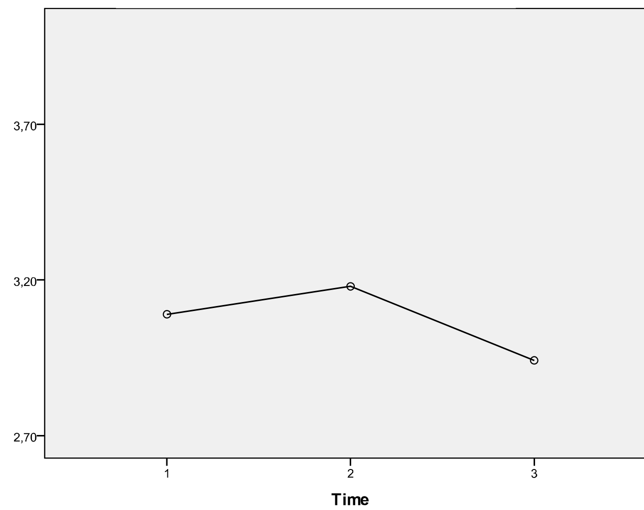

Figure 6b. Sexual frequency at T1, T2 and T3. NS, T2-T3, *p*=0.008

The differences in sexual frequency between T1-T2 and T1-T3 were non-significant, while the difference between T2-T3 was statistically secured, p=0.005, after Bonferroni correction p=0.008. The mean value of 3 represents a sexual frequency of once to twice per month at T3.

Sexual contentment showed an increase at T2 but then decreased again at T3, see Figure 6c.

Sexual contentment

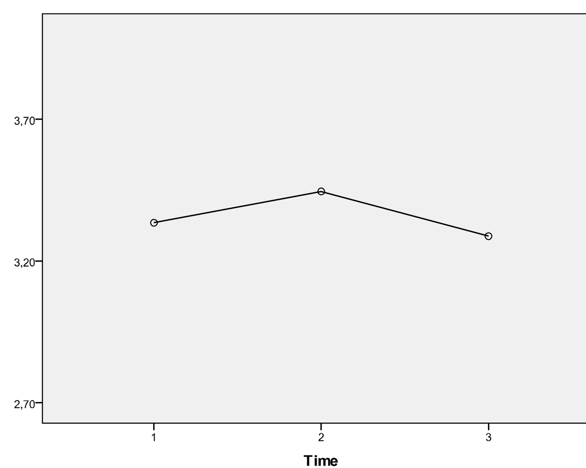

Figure 6c. Sexual contentment at T1, T2 and T2. NS

The differences of sexual contentment between T1, T2, T3 were all non-significant.

One other variable in the dimension Dyadic Sexuality was fatigue and the question asked was “Has being too tired to have sex with your partner been a problem during the last 4 weeks?” In T1 39.5% thought that fatigue was a problem and in T2 as many as 51% responded that they were too tired to have sex. In T3 this had decreased significantly to 42.2% leading to the conclusion that parents had most problems with sexual frequency related to tiredness at T2.

Gender differences of the QDR-index were statistically secured only at T1, p=0.003 mothers having the lowest values. The dimensions showing statistically secured differences at T1 were the following: Dyadic Cohesion (p=0.003), Dyadic Satisfaction (p= 0.03), Dyadic Sensuality (p=0.04), and Dyadic Sexuality (p=0.007). The mothers’ values were lower than the fathers’ in all these dimensions.

A gender difference at T1 was shown in regard to sensual contentment (p=0.04) and in sexual desire ($p<0.0005$), indicating less sensual contentment and less sexual desire in mothers. At both T2 and T3 responding mothers had lower sensual and sexual desire ($p<0.05$ respectively $p<0.0005$). At T3 the sexual contentment was lower in fathers (p=0.025), as low as in T1, see Table 3.

Table 3. Gender differences in QDR in mothers (n=143) and fathers (n=99) responding when the firstborn was 6 months (T1), 4 years (T2) and 8 years of age (T3). Mann-Whitney U-test.

QDR	T1-2002		T2-2006		T3-2010	
	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
QDR index	22.70 (2.44)**	23.64 (2.25)**	18.71 (2.83)	19.22 (5.84)	20.64 (5.71)	21.03 (5.84)
Dimensions:						
Consensus	5.06 (.45)	5.13 (.42)	4.01 (.56)	4.00 (.68)	4.67 (1.31)	4.70 (1.33)
Cohesion	4.52 (.71)**	4.77 (.68)**	3.20 (.84)	3.36 (.79)	3.83 (1.48)	4.09 (1.40)
Satisfaction	5.04 (.51)*	5.18 (.48)*	3.55 (.57)	3.64 (.46)	4.24 (1.45)	4.44 (1.31)
Sensuality	4.79 (.88)*	5.01 (.82)*	4.49 (.91)	4.55 (.87)	3.92 (1.43)	4.10 (1.47)
Sexuality	3.31 (.92)**	3.67 (.74)**	3.42 (.91)	3.65 (.80)	3.44 (1.26)	3.41 (1.22)
Items of Sensuality and Sexuality:						
Sensual desire	5.04 (.91)	5.23 (.87)	4.74 (1.07)*	5.06 (.84)*	3.98 (1.60)*	4.34 (1.56)*
Sensual frequency	4.55 (1.13)	4.77 (1.19)	4.33 (1.08)	4.22 (1.15)	3.59 (1.46)	3.66 (1,54)
Sensual con-tentment	4.22 (1.52)*	4.62 (1,27)*	3.82 (1.58)	3.93 (1.46)	3.68 (1.58)	3.75 (1.76)
Sexual desire	3.47 (.93)***	4.58 (.89)***	3.53 (.90)***	4.46 (.86)***	3.98 (1.60)***	4.34 (1.56)***
Sexual frequency	3.01 (1.03)	3.19 (1.03)	3.17 (1.00)	3.19 (1.03)	2.91 (1.19)	2.93 (1.30)
Sexual con-tentment	3.46 (1.56)*	3.02 (1.60)*	3.57 (1.57)	3.29 (1.56)	3.46 (1.56)*	3.02 (1.60)*

*p <0.05 **p <0.01 ***p <0.001

To find what covariates that could affect the relationship quality in parents of small children, the psychosocial variables and Sense of Coherence were put into a regression model with the QDR-index at T3 as a dependent variable and Multiple regression analysis was thus generated to obtain a picture of potential factors affecting relationship quality. The independent constant variables were: Experience of household work, parenthood, social support, Sense of Coherence, strained relationship to the child, economy, work outside home and health.

Four covariates of perceived relationship quality at T3 were statistically significant; strained relationship with the child, strained health, Sense of Coherence and finally strained economy. The coefficient of determination was 67% (Table 4).

Table 4. Covariates of perceived relationship quality when the first child is eight years of age (T3=2010) Multiple regression analysis. n = 242

Independent variables 2010 R^2=0,67=67%	B	SE	β	Significance
Experience of:				
Household work	0.476	0.248	0.094	0.099
Parenthood	0.508	0.319	0.065	0.336
Social support	0.361	0.401	0.038	0.593
Sense of Coherence	0.057	0.026	0.099	0.027*
Experienced as a strain:				
Relationship to child	1.920	0.404	0.291	0.000***
Economy	0.840	0.368	0.134	0.044*
Work outside home	-.031	0.360	-.005	0.933
Health	2.078	0.422	0.319	0.000***

**p* <0.05 ***p* <0.01 ****p* <0.001

The reliability, measured with Cronbach's alpha coefficient, of the QDR-index on this sample (n=242) responding at T1, T2 and T3 were r_{T1}=0,73, r_{T2}=0,74, r_{T3}=0,95, indicating a development of the QDR36 from a modified DAS with a high reliability at T3. The reliability of the different dimensions measured with Cronbach's alpha in the present study at T3 were: consensus= 0,98, cohesion= 0,94, satisfaction= 0,97, sensuality= 0,94 and sexuality= 0,87.

Discussion

The main finding of this study was that the relationship quality between T2 and T3 had significantly increased but not all the way up to the level of origin at T1. Kurdek [24] reported that the intimate relationship changes over time with a decrease in the first four years then it stabilizes for some time and declines again at eight years. Doss [15] also found that American

parents had a sudden deterioration of relationship quality after the birth of the first child and that this persisted throughout the eight years of the study. The result of this study confirms the decrease at four years but had a more positive outcome at eight years with a significant increase seen in the relationship quality.

The change of the QDR-index over time was similar for both mothers and fathers. The gender similarity is supported by Figueiredo [41]. Could the increase in marital quality be due to parents developing healthy coping strategies over time [1, 2] or children growing up and becoming more autonomous? At T2 the majority of respondents had an additional child which led to the experience of strained parenthood. Many Swedish parents want to have their children close together in age due to economical consequences of the parental leave system. However, interestingly, the group without a new child at T2 was as tired and dissatisfied sexually as those with new children [21, 33]. In the group without a new child, it was more of a problem that the partners did not show each other love and appreciation [21].

There was only a significant difference in the QDR index between the sexes at T1 where the mothers had the lowest values. This could be due to pregnancy and the transition into parenthood being more challenging for women because they tend to take the primary responsibility for the infant [5, 6, 7, 8]. A recent Swedish study showed that mothers had lower self-related emotional health than fathers at one year after delivery [42].

Dyadic sensuality significantly decreased at all three occasions and dyadic sexuality was low at all three occasions with no significant difference over time. This result is notifying and can be an important threat for the stability of the relationship. However, sensuality may compensate for the lack of sexuality and help strengthen the relationship when dyadic sexuality is low, according to interviews in first-time parents [23].

In the present study, the mothers had lower sexual desire than the fathers at all three occasions of measurement. Maybe the mothers got their sensual needs fulfilled by their closeness to the child and therefore did not have the same need for closeness and sexuality as their partners. If intimacy is failing there is a risk that the couple detaches emotionally and physically from each other [17]. Parenting education can help partners become aware of their patterns of withdrawal and become more attentive to one another [22]. Worth noting is that responding fathers were significantly less content with the sexuality in their relationships than

the mothers at T1 and T3. The responding mothers still had lower sexual desire than the fathers. This imbalance of libidos and the sexual situation may become a threat to the relationship and this has also been described by Bitzer & Alder [34].

It is remarkable that all three variables in sexuality show the lowest score at T3 despite the fact that hormonal and physical changes should have stabilised over time. Sexual desire showed no significant difference between T1 and T2, but between T2 and T3 there was a significant decrease. Sexual frequency showed a small increase at T2 but then significantly decreased again at T3. Sexual contentment showed the same pattern but here the differences were all non-significant. This is in strong contrast to the total relationship quality, which increased at eight years. Could this be that the parents do not give priority to the sensual and sexual relationship during this intensive period of life? Experienced fatigue was still a hindrance to sexual activity at eight years, and according to Olsson [10] fatigue and less time for leisure were strains that mainly affected women, and this study also showed that they had low sexual desire. The results from this study are supported by the Portuguese study by Gameiro [7] which reported that the main problem experienced was that parents were too tired for sexual activity and parents reported a decline in the sexual relationship over time. Couples tend to become more focused on daily routines rather than on emotional expression during the initial years after the first child is born. This leads to less satisfaction in relationship elements such as sexuality, romance and friendship [19, 20]. It seems that the other three dimensions of relationship quality balanced the lack of sensual and sexual interaction.

However, as stated above the low sensual and sexual activity could jeopardize the relationship and partially explain part of the high separation figures in parents of small children. The separation rate in Sweden is 17% when the first child is four years old, and 30% when the first child is 8 years old [38]. An estimate based on results from T2 [21] shows 12.5% (5% of the respondents + 20% of the dropouts divided by two), and at T3 our estimate could be 5.5% (6% + 5% divided by two). The cumulative rate can be assumed to be 18%, which is lower than the national rate of 30%. This could be explained by our respondents having a higher level of education than the national average, which is possibly due to the respondents living in or around a big city with a large university. Another factor might be the

somewhat higher mean age at the birth of their first child, which indicates a more stable relationship according to Lorensen [6]. A final factor could be that by partaking in the study our sample had spent time reflecting on their relationships and were encouraged to seek family counselling if needed. The rate of separation is relatively high in Sweden. This might be due to women in Sweden being economically independent and that they live in a secularized society. Nock [27] described that religious mothers in America were more satisfied in their relationships than non-religious mothers. Another reason for Sweden's high rate of separation could be a poor sensual and sexual life between parents.

Healthcare providers need to develop the skills and confidence required to be able to engage couples in matters of sexuality during pregnancy and parenthood [17]. Professionals should also give assistance to the couples in their transition into parenthood [43] and be able to recognize and acknowledge normal and abnormal psychological and physical distress and offer interventions as well as support to prevent any abnormal changes [44]. Parental education needs more innovative strategies and pedagogical renewal so that both parents become engaged and therefore are better prepared for parenthood [1, 45]. Topics covered could include the importance of communication and the role of sensuality for the well-being of the relationship. Many Swedish midwives are educated in Sexology so their professional role could include being attentive to sexual matters, thus supporting the parents of young children.

There were four covariates of perceived relationship quality at T3 that were significant; strained relationship with the child, strained health, Sense of Coherence and strained economy. According to Schytt and Hildingsson [42] parenthood stress and financial worries affected emotional self-related health in parents one year after birth.

To be noted was that work outside home was not a factor affecting relationship quality in this study sample. Could this be due to mothers working in average 35 hours/week and fathers 39?

Mothers in general had more parental leave time and less working hours than fathers at T3. This leads to mothers taking a traditional role with greater responsibility for housework and children although they are employed outside home to a high degree. On the other hand the significant gender differences in the dimensions at T1 disappeared at T2 and T3 in parallel with increasing degree of employment for both sexes.

Because the child is more autonomous at T3, it can be concluded that parents are not as dependent on social support and experience of parenthood as in T2 to have good relationship quality. It seems to be more important that the relationships with the child and partner, good health and economy function well.

Methodological considerations

Huston and Holmes identified one source of error in other studies where the respondents are included during the pregnancy in what can be called a "honeymoon period". Due to this, the deterioration in the relationship after birth is greater [46]. In this study the participants were included at six months after birth, therefore avoiding that effect.

The great dropout rate is a weakness of the study, but this is a very common factor in longitudinal studies, and especially when the questionnaire is of an intimate character as in this case. According to Asch [47] the mean response rate was approximately 60% in mail surveys published in medical journals and Hager [48] reported a general mean response rate in mail surveys of 52%. The response rate in this study was at T1 65%, at T2 60% and at T3 62% which is above the reported mean response rate.

The risk of selection bias, however, is not great in regard to the outcome variable Quality of Dyadic relationship, as neither the index nor the dimensions differed between respondents and non-respondents at T2 and T3. When looking at the non-respondents and the respondents at T2, the educational level differed and at T3 the only variable differing was economical issues, and the separated couples were not included. This indicates that the results, if there was a higher response rate and other inclusion criteria, could have been different. They would probably have shown lower values of experienced quality of the relationship, as the separated couples no longer were included in the analysis unit. This means that the results can be generalized to parents, mainly in Scandinavia, with similar circumstances, i.e. rather well-educated parents without serious economical problems living together as cohabiting partners.

Conclusion

The conclusion is that parents of small children on a group level experience an impaired quality of their relationship, especially in regard to their sensual and sexual life. The gender differences at T3 indicated as low sexual contentment in fathers as in T1. This could threaten the stability of the relationship and wellbeing of the parents.

The results emphasize the need for supportive interventions for parents with small children. Professionals can make a contribution to society by helping prevent separation and stabilise the couple's relationship. This could be done by enhancing communication skills and emphasizing the role of sensuality and sexuality during the transition into parenthood and the period of small children. To enable midwives and other professionals to do that in an optimal way further studies are required.

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