Quality of the intimate and sexual relationship in first-time parents

A longitudinal study

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SAMMANFATTNING

När ett par får sitt första barn påverkas relationen av att barnet är i fokus för uppmärksamheten, vanligen på bekostnad av parets samliv. Med hänsyn till den relativt höga separationsfrekvensen bland föräldrar till förskolebarn var det viktigt att följa par över tid eftersom sådan forskning saknas i Skandinavien.

Syfte: Beskriva förstagångsföräldrars relations kvalitet och särskilt sensualitet och sexualitet över tid när första barnet är sex månader (T1), fyra år (T2) och åtta år (T3) och beskriva vilka faktorer som kan påverka parrelationen.

Metod: Longitudinell studie i form av upprepade mätningar med självskattningsformuläret, Quality of Dyadic Relationship, QDR36, besvarat av 258 föräldrar vid alla tre tillfällena. Data analyserades huvudsakligen med Friedmans test och multipel regressionsanalys.

Resultat: Kvaliteten i parrelationen minskade signifikant vid T2 och ökade sedan signifikant vid T3 men inte till samma nivå som vid T1. Båda könen påvisade en liknande förändring av QDR index över tid. Dimensionen dyadisk sensualitet minskade signifikant vid alla tre mätt tillfällena och dyadisk sexualitet visade inga signifikanta skillnader över tid men förblev på låg nivå vid alla tre tillfällena. Sexuell frekvens och nöjdhet minskade vid T3 efter en liten uppgång vid T2. Fyra faktorer som signifikant påverkade parrelationens kvalitet vid T3 var; ansträngd relation till barnet, ansträngd hälsa, känsla av sammanhang (KASAM) och ansträngd ekonomi. Cronbach´s alpha visade en hög reliabilitet (0,95) vid T3 och indikerar en utveckling av QDR36.

Konklusion: Professionella kan genom hela vårdkedjan bidra till att i samhället förebygga separationer och stabilisera parrelationen och främja skyddsfaktorer under övergången till föräldraskap och småbarnsperioden.

ABSTRACT

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.

Objectives: Describe the experienced relationship quality, and especially sensuality and sexuality, in first-time parents over time from when the firstborn is six months (T1), four years (T2) and eight years (T3) and describe what factors that may affect the relationship quality.

Method: A longitudinal design with repeated measures using a self-report questionnaire, Quality of Dyadic Relationship, QDR36, answered by 258 parents at all three occasions. Data was analyzed mainly with Friedman's test and multiple regression analysis.

Results: The relationship quality significantly declined at T2 and then significantly increased again at T3 but not to the origin at T1. Both sexes showed a similar change over time in QDR-index. The dimension Dyadic sensuality significantly decreased at all three occasions 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 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 QDR 36.

Conclusion: Professionals can throughout the entire healthcare chain make a contribution to society by preventing separation and stabilize the couple's relationship and promote protective factors during the transition to parenthood and the period of small children.

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

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Abstract

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.

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 and to describe 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 significantly decreased at T2 and then significantly increased again at T3 but not back to the level of origin at T1. Both sexes showed a similar change over time in the QDR-index. The dimension Dyadic Sensuality significantly decreased at all three occasions 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 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: Professionals can throughout the entire healthcare chain make a contribution to society by helping prevent separation and stabilise the couple's relationship as well as by promoting protective factors during the transition into parenthood and the period of parenting small children.

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

Introduction

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 (McKeller 2009; Brotherson, 2007), and the success of this transition may depend on the individual's resources relating to Sense of Coherence (SOC) described by Antonovsky (1987). SOC is a global orientation to the world and concerns how an individual copes with situations in a comprehensible, manageable and meaningful way.

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 (Delmore-Ko et al 2000, Georgsson-Ohman et al 2003, Lorensen 2004, Gameiro et al 2010). Women also tend to take the primary responsibility for the infant. This can lead to feelings such as powerlessness, inadequacy, guilt, loss, exhaustion, ambivalence, rejection and anger (Nyström & Öhrling 2004). 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 (Bost 2002). 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 (Brotherson 2007). Olsson et al (2005) 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 (Lorensen, 2004).

The transition into parenthood can be interconnected with feelings of stress, increased fatigue, reduced self-esteem and a significant decline in relationship satisfaction (Cowen & Cowen 2000; Shapiro et al 2000; Perrel et al 2005; Lawrence et al 2007; Doss et al 2009; Medina et al 2009). Howard (2009) describes that the level of support the parent receives from the other parent tends to be highest at birth and thereafter declines. The level of support perceived when the first child is one year of age could be used to predict changes over time better than the level at birth. It could also be used to predict whether the couple would

separate before the child's fifth birthday (Howard 2009). 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 (Foux, 2008). 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 (Pacey, 2004).

In Sweden, the separation rate is high among parents with small children. In 2008, 17% of children who were four years of age and 30% of children who were eight years of age lived with separated parents (Statistics Sweden, 2008). Separation affects physical and mental health adversely both for parents and their children (Polomeno 2007, 2008).

Housework has been identified as a problem for parents. Ahlborg et al (2009) describe that parents, especially mothers, experienced housework as very tiring. In Sweden the relatively high level of equality between men and women and high employment rate among women could contribute to a stressful situation. Housework was found to be a significant predictor for relationship satisfaction in both mothers and fathers (Möller et al 2008).

In the American study of Doss et al (2009) 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. The lack of sudden changes seen in the "non-parent" group indicates that the sudden deterioration in the parent group may be due to the birth of a child and the stressors encountered by having a child (Doss et al, 2009). This result is reinforced by Lawrence (2008) and Kurdek (1999). In Schulz et al (2006) there was no decline found in marital satisfaction in the group of childless couples. Not all parents, however, show a decline in relationship quality during the transition into parenthood. In Shapiro et al (2000), approximately 33% of couples reported stability or an increase in their relationship quality. In White et al (1999) the family dynamics remained stable across the childbearing period. There are various reasons for diverse results in relationship satisfaction. One example from the American culture is that highly religious mothers experience greater marital satisfaction after the first child than mothers with a lower level of religiousness (Nock et al 2008). The covenant married couples see a marriage as a lifelong commitment and the community supports that thought (Baker et al 2009). 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 (Howard 2009).

The Swedish survey conducted by Ahlborg, Dahlöf and Hallberg (2005) of 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 (Wadsby & Sydsjö, 2001) that reports less sexual closeness at one year than during the pregnancy. In the follow-up study conducted by Ahlborg, Misvaer, Möller (2009) when the first child was four years of age, the couples stated an increase in tiredness as a reason for low sexual activity. The majority (76.4%) had had a second baby and they perceived greater strain in marital quality which they related to housework and child care (Ahlborg, Misvaer, Möller, 2009).

Physical sexual problems are common after childbirth. More than 50% of the mothers in Barrett et al (2000) experienced pain during intercourse up to six months after delivery. This pain can partially explain the imbalance between sexual desire and sexual activity, with desire being higher. In Olsson et al (2005) 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 et al. (2005) 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 (Ahlborg et al, 2005). The sexual contentment in the follow-up study at four years after the birth of the first child (Ahlborg, Rudeblad, Linner & Linton, 2009) 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 (Bitzer & Alder 2000).

Decline in marital satisfaction during transition into parenthood can be related to the cognitive consequences of sleep deprivation. If fatigue can be reduced then marital satisfaction can be improved (Meijer et al 2007; Brotherson 2007, Medina et al 2009).

In conclusion, Ahlborg, Misvaer, Möller (2009) showed that almost half (40.5%) of the respondents were satisfied with their relationship but the majority experienced a decrease in marital quality. Ahlborg, Misvaer, Möller (2009) 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.

Method

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 (Spanier, 1976). Modification of the instrument involved adding variables about communication, sensuality and sexuality. The modified version has been thoroughly described, tested and validated with its psychometric properties (Ahlborg, Persson & Hallberg, 2005). 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 (Ahlborg, Lilleengen, Lönnfjord & Petersen, 2009).

In T3 this validated QDR36 questionnaire was used. It consists of the following five dimensions: Dyadic Consensus (11 items), Dyadic Cohesion (4 items), Dyadic Satisfaction (11 items), Dyadic Sensuality (5 items), and Dyadic Sexuality (5 items), giving a total of 36

variables with six response alternatives from 1-6, in the form of a Likert scale. The quality of the relationship is measured by an index which is the sum of the mean values from the five different dimensions, giving a possible spread of 5-30. QDR36 is presented in Ahlborg, Lilleengen, Lönnfjord & Petersen (2009).

Psychosocial 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, Sense of Coherence, SOC-13-item (Antonovsky, 1987) was also included in the questionnaire. However, these findings will be presented elsewhere.

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) 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.

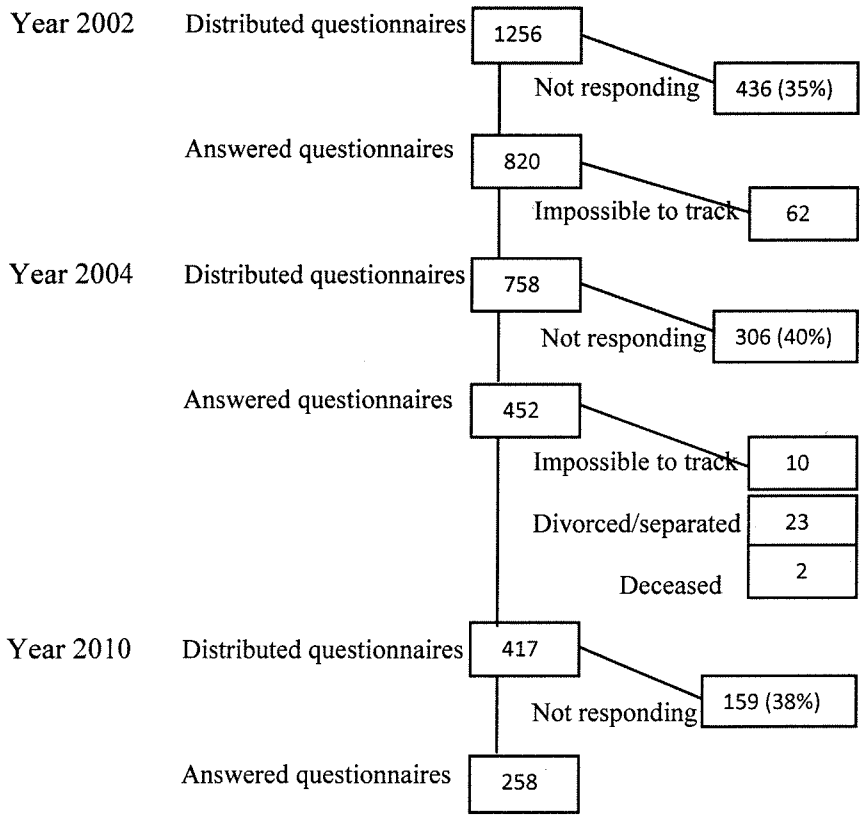

Figure 1. Flowchart of longitudinal study among parents when first child was six months (2002, T1), four years (2004, T2) and eight years of age (2010, T3).

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 (SCB 2009). 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 1 there is a description of the respondents at T1 – T3.

Table I. Description of the Study Sample (mothers and fathers) responding at 6 Months (T1=2002), 4 Years (T2=2006) and 8 Years (T3=2010) after Delivery of First Child.

Variables	2002 N=820 n (%)	2006 N=452 n (%)	2010 N=258 n (%)
Responding mothers	431 (52.6)	258 (57.1)	152 (58.9)
Responding fathers	389 (47.4)	194 (42.9)	106 (41.1)
Mothers and fathers as couples	768 (93.7)	368 (81.4)	188 (72.9)
Responding single mothers	47 (5.7)	74 (16.4)	57 (22.1)
Responding single fathers	5 (0.6)	10 (2.2)	13 (5.0)
Employed outside home	202 (44.8)	373 (82.7)	242 (93.8)
Number of weekly working hours as employed, means (SD)	36.5 (12.0)	33.2 (12.6)	36.6 (8.8)
Unemployed	30 (6.7)	22 (4.9)	9 (3.5)
Students	37 (8.3)	33 (7.3)	12 (4.7)
Children born after 2002		334 (79.3)	
Children born after 2006			64 (25)
Relationship:			
Married	212 (47.0)	291 (64.7)	184 (71.6)
Cohabiting	239 (52.9)	134 (29.6)	51 (19.8)
Separated	-	23 (5.1)	16 (6.0)

The procedure for data collection was the following: at T1, primary care nurses at health care centres in the Gothenburg region, Sweden, distributed the self-report questionnaires to the parents (Ahlborg, Dahlöf, Hallberg, 2005). 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.

Statistical analyses

SPSS (Statistical Package for the Social Sciences) version18 was used for the registration and analysis of the data. The 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 (Tabachnick & Fidell, 2007).

The results were illustrated in plots of the means with the non-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 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

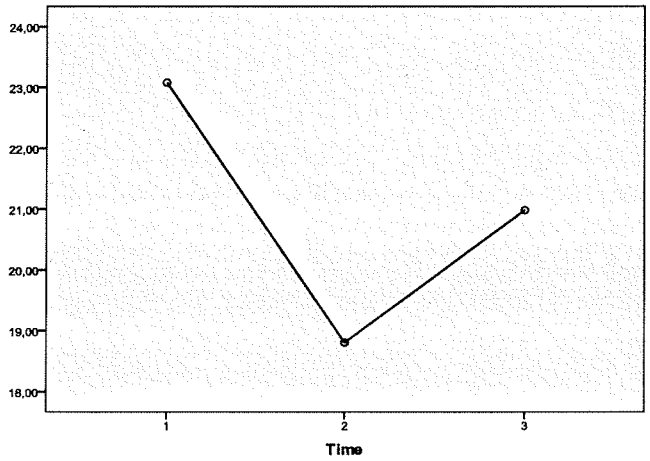

Figure 2. Variation over time in the QDR index of relationship quality at T1, T2 and T3.

$P<0.000$

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 three dimensions Dyadic Consensus, Cohesion and Satisfaction showed the same pattern. 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.

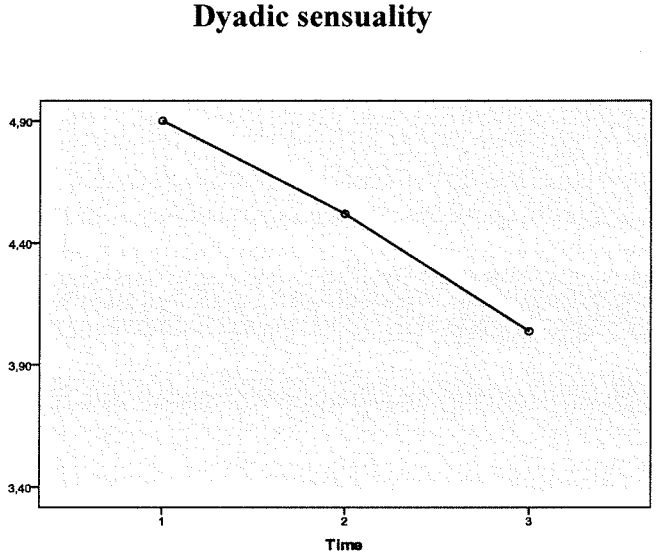

Figure 3 Variation over time in Dyadic Sensuality at T1, T2 and T3. $P<0.000$

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 and Table 2.

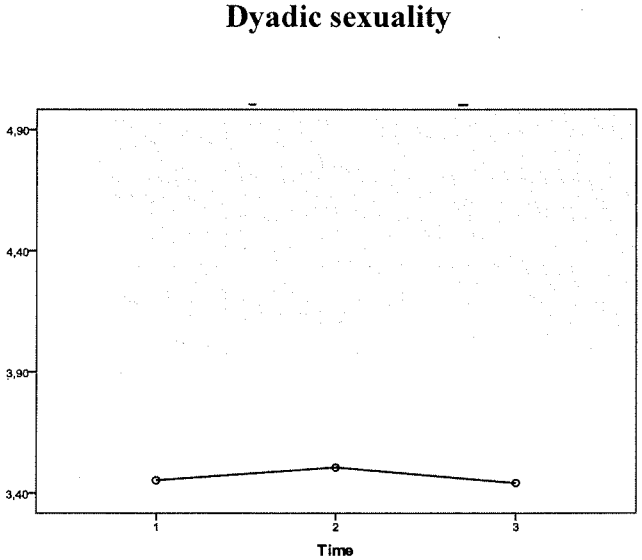

Figure 4 Variation over time in Dyadic Sexuality at T1, T2 and T3. NS

Table 2. QDR of 258 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		T2		T3	
	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

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).

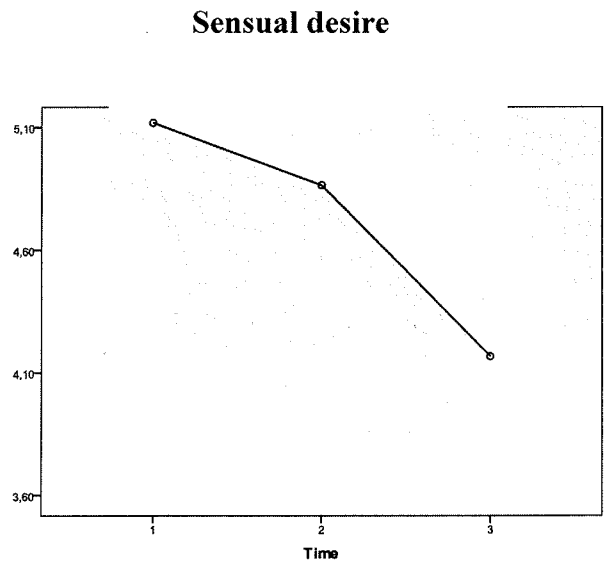

Figure 5a. Sensual desire at T1, T2 and T3. (p<0.000)

Sensual frequency

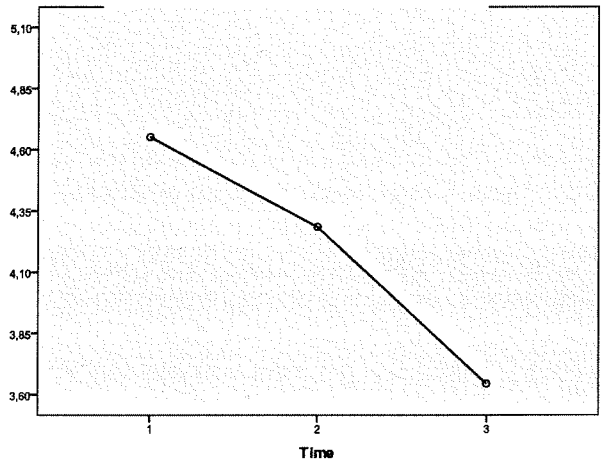

Figure 5b. Sensual frequency at T1, T2 and T3. (p<0.000)

Sensual contentment

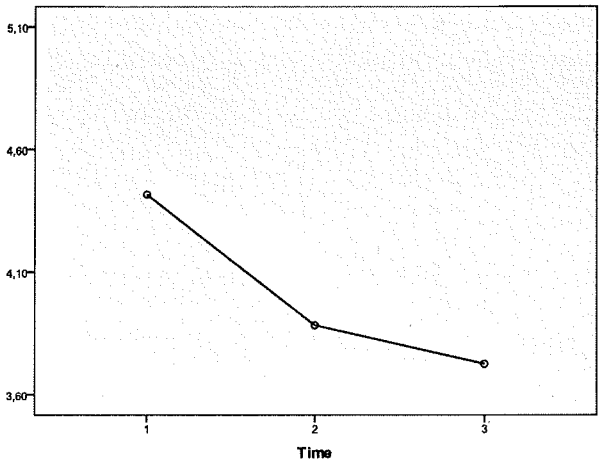

Figure 5c. Sensual contentment at T1, T2 and T3.

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.

Sexual desire

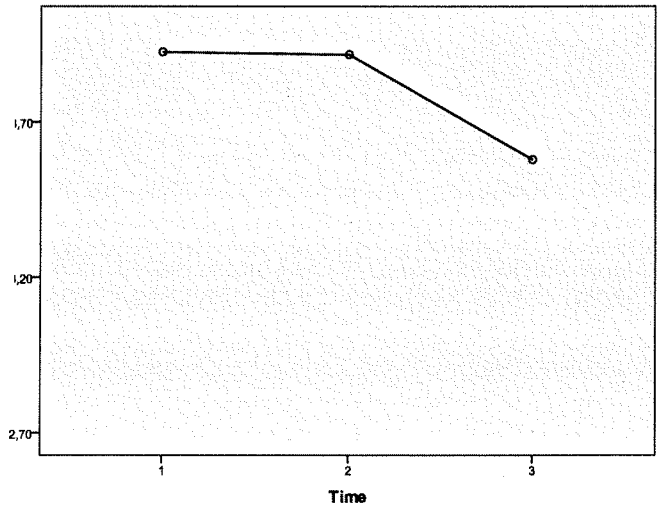

Figure 6a. Sexual desire at T1, T2 and T3.

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

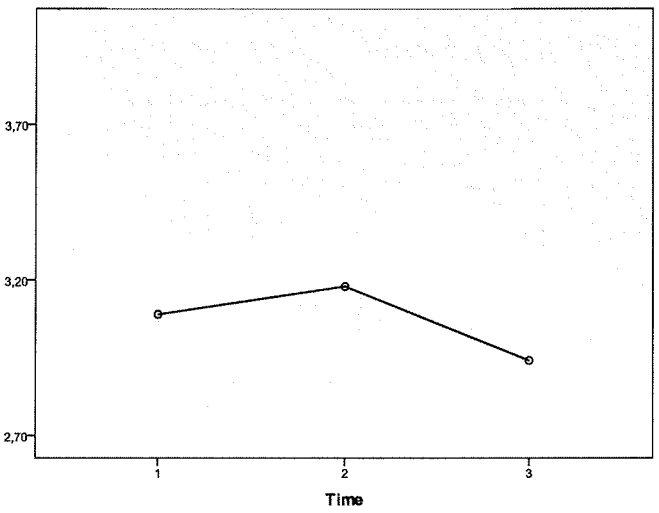

Figure 6b. Sexual frequency at T1, T2 and T3.

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

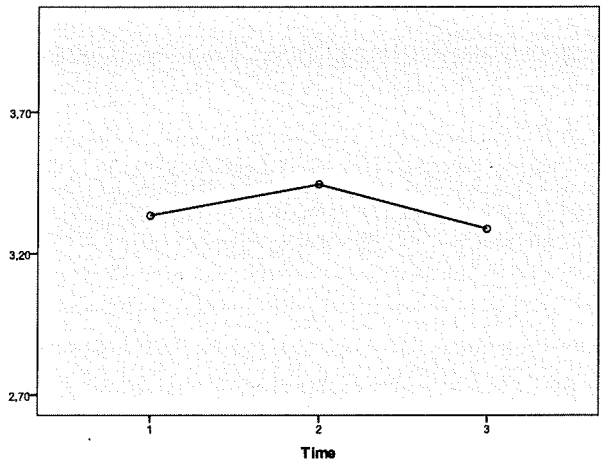

Figure 6c. Sexual contentment at T1, T2 and T2.

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), see Table 3.

Table 3. Gender differences in QDR in mothers (n=152) and fathers (n=106) responding when the firstborn was 6 months (T1), 4 years (T2) and 8 years of age (T3). Mann-Whitney U-test.

QDR	T1		T2		T3	
	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)
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)*

*$P<0.05$ **$P<0.01$ ***$P<0.001$

Multiple regression analysis with the QDR index at T3 as a dependent variable was 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 marital 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 marital quality when the first child is eight years of age (T3=2010) Multiple regression analysis.

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

Corresponding factors at T2 were strained relationship with the partner $p< 0.0005$, social support $p<0.0005$ and experience of parenthood $p= 0.005$, in conformity with the results from T2 among 452 parents.

An analysis was also made to examine if the same variables at T2 could predict the QDR index at T3, however the coefficient of determination of this model was very low, 17% (R^2= 0.17).

The reliability, measured with Cronbach's alpha coefficient, of the QDR-index on this sample (n=258) 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 marital quality between T2 and T3, expressed using the QDR-index, had significantly increased but not all the way up to the level of origin at T1. Kurdek (1999) stated that it would be interesting to determine whether marital quality stabilises or even increases when children become more autonomous (Kurdek, 1999). The result of this study is in contrast to what Kurdek (1999) reported, namely 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 et al (2009) 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 et al (2008). Could the increase in marital quality be due to parents developing healthy coping strategies over time (McKeller 2009, Brotherson, 2007) 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 (Ahlborg, Misvaer, Möller, 2009, Ahlborg et al., 2008). In the group without a new child, it was more of a problem that the partners did not show each other love and appreciation that is essential for the well-being of the relationship (Ahlborg, Misvaer, Möller 2009).

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 (Delmore-Ko et al 2000, Georgsson-Ohman et al 2003, Lorensen 2004, Gameiro et al 2010, , Nyström & Öhrling 2004). A recent Swedish study showed that mothers had lower self-related emotional health than fathers at one year after delivery (Schytt & Hildingsson, 2011).

Dyadic sensuality significantly decreased at all three occasions and dyadic sexuality increased at T2 and then decreased again at T3 but was low at all three occasions with no significant difference over time. This can be significant for the stability of the relationship. 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 (Ahlborg & Strandmark, 2001).

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 (Foux 2008). Parenting education can help partners become aware of their patterns of withdrawal and become more attentive to one another (Möller et al 2006). Worth noting is that responding fathers were significantly less content with the sexuality in their relationships than the mothers at 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 (2000).

Among the 258 parents there was not any gender difference, indicating fathers having lower sexual contentment at T1 and T2, as was described in Ahlborg et al. 2005 and Ahlborg Misvaer, Möller 2009. This is probably due to couples which separated after T1 and T2 not being included in the present analysis unit.

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 et al (2005) 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 et al (2010) 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 (Polomeno 2007; 2008). Could it be that the responding parents were willing to accept a low level of sensuality and sexuality in the relationship? 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, according to statistics, 17% when the first child is four years old, and 30% when the first child is 8 years old. An estimate based on results from T2 (Ahlborg, Misvaer, Möller, 2009) shows 12.5% (5% of the respondents + 20% of the dropouts divided by two), and at T3 our estimate could be 10.5% (6% + 15% divided by two). The cumulative rate can be assumed to be 23%, 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 which has a large university. Another factor could be them having a somewhat higher mean age at the birth of their first child, which indicates a more stable relationship according to Lorensen (2004). 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 et al. (2008)

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 the develop the skills and confidence required to be able to engage couples in matters of sexuality during pregnancy and parenthood (Foux 2008). Professionals should also give assistance to the couples in their transition into parenthood (Glade et al 2005) 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 (Jomeen et al 2004). Parental education needs more innovated strategies and pedagogical renewal so that both parents become engaged and therefore are better prepared for parenthood (McKeller 2009, Ahldén et al 2008).

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. This is in accordance with preliminary results of SOC over time in this sample of 258 parents, describing the same pattern, a U-curve turning up between four and eight years after the birth of the first child. According to Schytt and Hildingsson (2011), parenthood stress and financial worries affected emotional self-related health in parents one year after birth.

At T2, SOC was not included as a factor in the regression models in the study conducted by Ahlborg, Misvaer, Möller (2009). Social support and experience of parenthood were important for the relationship quality. 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 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

A limitation of the longitudinal study could be that data on these couples from before parenthood is not included. However, 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 (Huston & Holmes 2004). In this study the participants were included at six months after birth, therefore avoiding that effect.

The great amount of respondents who terminated participation 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 et al (1997) the mean response rate was approximately 60% in mail surveys published in medical journals and Hager et al (2003) 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. 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.

Conclusion

The relationship quality significantly declined at four years after the birth of the first child and then significantly increased again at eight years after the birth of the first child but not to the level of origin seen at six months. The dimension Dyadic Sensuality significantly decreased at all three occasions. Dyadic Sexuality showed no significant differences over time but remained at a low level at all three occasions which could be a risk factor for the stability

in the relationship. This result emphasises the need for supportive interventions for parents with small children. Throughout the entire healthcare chain professionals can make a contribution to society by helping prevent separation and stabilise the couple's relationship by promoting protective factors during the transition into parenthood and the period of parenting small children. To enable midwives and other professionals to do that further studies are required.

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