



Changes in the Sexual Relationship During Pregnancy: Implications for Global Relationship Happiness

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Introduction

- Numerous studies have found a robust, positive association between sexual *frequency* in couples and relationship satisfaction (Byers, 2005; Muise, Schimmack, & Impett, 2015)
- Emerging research also suggests that sexual *satisfaction* is related to global satisfaction or happiness in intimate relationships (Sprecher, 2002)
- The extent to which individuals are globally satisfied with their intimate relationships has important implications for **early child socioemotional functioning** (Feldman, Wentzel, Weinberger, and Munson, 1990)
- Our own research also suggests that the quality of the sexual relationship during pregnancy is directly associated with the **quality of the bond that develops between father and infant** at 1 month postpartum (Ramsdell, 2017)
- The transition into parenthood is an important time to study qualities of the sexual relationship given that the meaning and frequency of sex can change substantially during this time (Cowan & Cowan, 1995)
- The goal of this study was to examine the differential effects of sexual **frequency** and **satisfaction** on global relationship satisfaction; we predicted that sexual **satisfaction** would emerge as a critical feature of the sexual relationship for explaining the global health of intimate relationships during pregnancy

Participants and Procedures

Participants. Sixty-one cohabiting couples were recruited during pregnancy. Participants ranged in age from 22-44 years old ($M=29.78$, $SD=3.97$). The majority of participants identified as White (86.5%). Median educational attainment was a bachelor's degree and the median combined household income was \$70,000-\$80,000. The majority of participants were married (81.7%) and 48.4% of participants were expecting their first child.

Relationship Quality Interview (RQI; Lawrence et al., 2012). Couples completed the RQI which is a 60-minute semi-structured interview assessing relationship quality. The present study was focused on the *Sexuality and Sensuality* domain of the RQI, which captures the frequency of sex, satisfaction with sex, presence/absence of negative emotions during sex, sexual dysfunction, and degree of sensual behaviors (e.g., hugging, massage) engaged in by couples. Interviewer ratings of sexual frequency were averaged from the mother and father interviews to obtain a reliable dyadic score of frequency, and scores ranged from 1 (*rare or not at all*) to 5 (*2-3x/week or more*). After completing this section of the interview, participants were asked to rate how satisfied they have been with the quality of sexuality and sensuality in the relationship over the past 6 months on a scale from 1 (*completely dissatisfying*) to 9 (*exceptionally satisfying*). Paternal and maternal sexual satisfaction ratings were examined separately.

Quality of Marriage Index (QMI; Norton 1983). Following the lab visit, couples completed (independently) a series of daily surveys—including the QMI—from home for 14 days. The QMI is a 6-item measure of relationship satisfaction. Participants answer the first five items on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). The sixth item is answered on a scale of 1 (*extremely low*) to 10 (*extremely high*). Items are summed to create a composite score of global relationship satisfaction. Cronbach's alpha was .96.

Analytic Approach

Data were analyzed with multilevel modeling, nesting 14 days of QMI scores within participants. An intercept-only model was tested to examine average relationship satisfaction across 2 weeks (π_{1j} and π_{2j}):

$$\begin{aligned} \text{Level 1: } Y_{ij} &= \pi_{1j} (\text{Dad Intercept}) + \pi_{2j} (\text{Mom Intercept}) + r_{ij} \\ \text{Level 2: } \pi_{1j} &= \beta_{10} + \beta_{11} (\text{Frequency of Sex}) + \beta_{12} (\text{Paternal Sexual Satisfaction}) \\ &\quad + \beta_{13} (\text{Maternal Sexual Satisfaction}) \\ \pi_{2j} &= \beta_{20} + \beta_{21} (\text{Frequency of Sex}) + \beta_{22} (\text{Paternal Sexual Satisfaction}) \\ &\quad + \beta_{23} (\text{Maternal Sexual Satisfaction}) \end{aligned}$$

We used a multivariate two-level model in which maternal and paternal parameters were modeled simultaneously (Raudenbush et al., 1995), and included both actor (e.g., paternal → paternal) and partner (e.g., maternal → paternal) effects.

Results

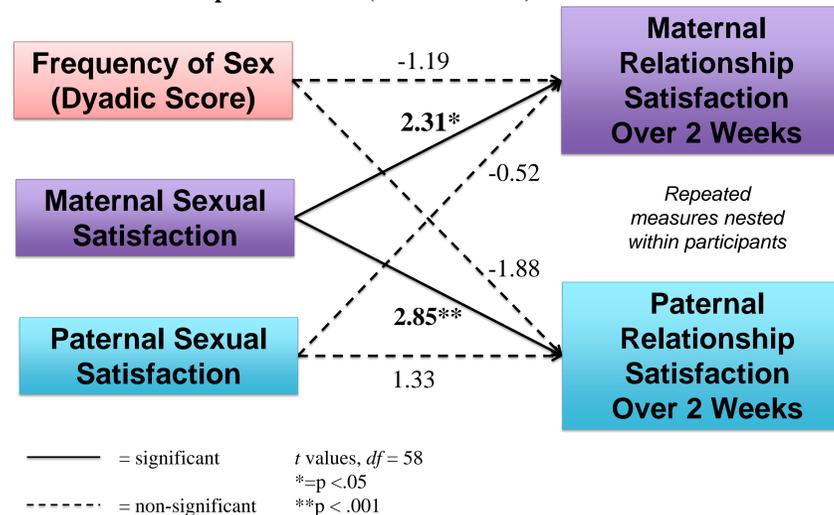
Table 1. Descriptive Statistics and Correlations

	1	2	3	4	5
1. Paternal Global Satisfaction	1				
2. Maternal Global Satisfaction	.29*	1			
3. Frequency of Sex	.07	.03	1		
4. Maternal Sexual Satisfaction	.28*	.05	.56**	1	
5. Paternal Sexual Satisfaction	.33**	.23+	.60**	.60**	1
M	41.81	41.23	3.75	6.84	7.02
SD	4.58	4.87	1.07	1.59	1.77
Change in Sexual Quality During Pregnancy	No change	Improved	Worsened		
Females	27%	17.5%	55.6%		
Males	27.4%	14.5%	58.1%		

* $p < 0.10$. * $p < 0.05$. ** $p < 0.05$.

- Bivariate correlations (Table 1) indicate that paternal relationship satisfaction (averaged across 2 weeks) is associated with higher levels of both maternal (partner) and paternal (self) sexual satisfaction; maternal relationship satisfaction was only associated with maternal (self) sexual satisfaction
- Notably, more frequent sex (as reported by both partners) was not significantly related to global relationship satisfaction for mothers or fathers
- When asked how the quality of the sexual relationship had changed since the start of pregnancy, over half of mothers and fathers reported it had *worsened*
- Results of MLM analyses testing the differential effects of sexual frequency and sexual satisfaction on average relationship satisfaction over 2 weeks are reported in Figure 1
- When examining frequency of sex, maternal sexual satisfaction, and paternal sexual satisfaction simultaneously within the same model, only maternal sexual satisfaction emerged as a unique predictor of both maternal (self) and paternal (partner) global relationship satisfaction across 2 weeks
- Of note, we also examined interactions between frequency of sex and sexual satisfaction, and those effects were not significant (ts ranged from $-.68$ to $.56$, ns)

Figure 1. Differential Effects of Sexual Frequency and Sexual Satisfaction on Global Relationship Satisfaction (Over 2 Weeks)



Discussion

- Although researchers typically focus on *frequency* of sex as a predictor of relationship outcomes, results of the present study suggest that, during pregnancy, frequency of sex is not significantly related to global relationship satisfaction
- In contrast, the degree to which each partner reports a high degree of sexual *satisfaction* over the past 6 months does have implications for one's overall happiness with the intimate relationship
- Notably, when examining frequency and sexual satisfaction simultaneously, and controlling for both actor (self) and partner effects, it appears that the extent to which expecting mothers are satisfied with sex is most essential for explaining both maternal and paternal global relationship satisfaction
- Perhaps when mothers are unhappy with sex during pregnancy, this spills over into other critical domains in the relationship that promote or hinder overall satisfaction with the relationship such as the degree of trust, closeness, and intimacy in the relationship
- Deterioration in multiple areas of the intimate relationship (e.g., impaired trust, poor conflict management)—resulting from maternal dissatisfaction with sex—might lead to lower levels of relationship satisfaction reported by *fathers*, representing a mechanism through which maternal sexual satisfaction ultimately impacts paternal relationship satisfaction
- During pregnancy, women experience changes in their bodies and may experience more complications during sex (e.g., excessive dryness, tightness, pain, discomfort) which might explain why *maternal* sexual satisfaction is so critical for both maternal and paternal relationship satisfaction during pregnancy

Limitations

- The sample size is relatively small and, with a larger sample, we may detect significant interactions between sexual frequency and sexual satisfaction (e.g., perhaps sexual frequency is related to global relationship satisfaction when sexual satisfaction is high)
- Although we obtained robust scores of intimate relationship satisfaction during the 14 days following the completion of the semi-structured interview, the results do not address the long-term implications of sexual satisfaction on relationship satisfaction

Implications and Future Directions

- Therapists and researchers alike should routinely consider sexual *satisfaction*, rather than focusing exclusively on sexual *frequency*
- Family therapists working with pregnant couples should pay particular attention to the *mother's sexual satisfaction* as that has the most notable impact on both mother's and father's **global relationship happiness which, in turn, has been linked to child socioemotional functioning** (Feldman, Wentzel, Weinberger, and Munson, 1990)
- OBGYN doctors can routinely talk to mothers about the quality of sex during pregnancy and promote communication with fathers about the sexual relationship
- More research is needed to understand the best methods for helping couples to navigate the various changes and adjustments that couples face with regard to the sexual relationship during the transition into parenthood
- We are currently collecting data at 1 month, 6 months, 1 year, and 2 years postpartum so that we can (a) examine the long-term implications of prenatal sexual satisfaction and frequency on child development, (b) examine multiple facets of the intimate relationship (e.g., trust, conflict) as mechanisms linking prenatal sexual satisfaction to global relationship satisfaction and child development, and (c) examine if and how sexual satisfaction and frequency change across the transition into parenthood