

# Sexuality and sexual activity in pregnancy

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**Objectives** To evaluate women's sexual experience in pregnancy, and to describe their sources of information regarding sexuality during this period.

**Design** Cross-sectional study.

**Setting** The offices of obstetricians providing obstetric care in a tertiary care university hospital in St. John's, Newfoundland, Canada.

**Population** One hundred and forty-one pregnant women.

**Methods** Pregnant women anonymously completed self-administered questionnaires regarding sexuality and sexual activity during pregnancy. Responses were summarised using descriptive statistics, and comparisons were made between the trimesters of pregnancy. Multiple logistic regression was performed to assess the influences of a variety of factors on sexual activity.

**Results** Vaginal intercourse and sexual activity overall decreased throughout pregnancy ( $P = 0.004$  and  $0.05$ , respectively) with the trimester of pregnancy being the only independent predictor. Most women reported a decrease in sexual desire (58%). Overall, 49% of women worried that sexual intercourse may harm the pregnancy. Concerns regarding sexual activity leading to preterm labour or premature rupture of membranes increased as the pregnancy progressed ( $P < 0.001$  and  $P = 0.001$ , respectively). Only 29% of women discussed sexual activity in pregnancy with their doctor and 49% of these women raised the issue first, with 34% feeling uncomfortable in bringing up the topic themselves. Most women (76%) who had not discussed these issues with their doctor felt they should be discussed.

**Conclusions** A reduction in sexual activity, vaginal intercourse and sexual desire occurs in many women as pregnancy progresses. Both the woman and her partner have concerns regarding complications in the pregnancy as a result of sexual intercourse. The majority of women wish to discuss these issues with their doctor, but are not always comfortable raising the topic themselves.

## INTRODUCTION

Pregnancy is a time of physical and psychological change, and in conjunction with cultural, social, religious and emotional influences, may affect sexuality and sexual activity during pregnancy. Doctors and midwives are often faced with giving advice to pregnant women and their partners regarding these potential changes in pregnancy.

Many studies evaluating sexual activity during pregnancy were performed more than two decades ago<sup>1–13</sup>. Changes in attitudes towards sexuality in pregnancy since that time may limit the relevance of earlier research. In addition, many of these studies have limitations and methodological flaws including small sample sizes<sup>1–6,14</sup>, samples not representative of the general

population<sup>1,2,7,15</sup>, retrospective data<sup>2,4,8,9,14,16</sup>, potential interviewer bias<sup>1,3,5,8,10,11,14–16</sup>, and limited baseline and demographic data<sup>2,7</sup>. In addition, there are inconsistencies in the results of published research<sup>1–18</sup>. Changing patterns of sexual behaviour and awareness in conjunction with changing advice from physicians and midwives may make generalisation from these early studies to the present day inappropriate. The primary objective of this study was to evaluate women's sexual experiences in pregnancy during all three trimesters, comparing each trimester, in order to examine their beliefs regarding sexual activity in pregnancy, and to describe their sources of information regarding sexuality in pregnancy.

## METHODS

This cross-sectional study was performed between September 1995 and December 1997 with women recruited from the prenatal clinics of four obstetricians

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of the Grace General Hospital, a tertiary care university hospital in St. John's, Newfoundland, Canada. The study was approved by the Human Investigation Committee of the hospital and Memorial University of Newfoundland. Inclusion criteria were a current pregnancy and that the woman had a partner. Exclusion criteria included any woman who was advised by her attending physician not to have sexual intercourse for medical reasons (e.g. spontaneous rupture of membranes, threatened preterm labour or antepartum bleeding). Once verbal consent was obtained the woman was given a self-administered written questionnaire to complete anonymously and return in a box provided in the clinic. The questionnaire was a modified version of the Pregnancy and Sexuality Questionnaire<sup>19</sup> which was developed as an objective self-reporting instrument designed to identify the domain of sexual behaviour during pregnancy. Questions in this questionnaire included sociodemographic details, gravidity, parity, the practice and frequency of specific sexual behaviours, sexual interest, arousal, and orgasm during pregnancy compared with pre-pregnancy. Its validity and reliability have been previously described<sup>19</sup>. Modifications to the questionnaire in the current study included the addition of questions regarding complications of breast fondling, concerns regarding complications of sexual intercourse, and the source of the information regarding sexual activity in pregnancy, including information provided by the woman's physician.

### Statistical analysis

Data were analysed using the computer programme Statistics (Statistix Analytical Software, Tallahassee, Florida, USA). Categorical data were expressed by percentage, and comparisons were made by the  $\chi^2$  test, the  $\chi^2$  test for trend or Fisher's exact test, where appropriate. Continuous variables were expressed as mean and standard deviation if normally distributed and compared by Student's *t* test or analysis of variance. For non-normal continuous data, comparison was with the Wilcoxon rank sum test and descriptive statistics were the median and quartiles. Multiple logistic regression was performed to assess the association of a variety of factors with a number of outcomes relating to sexual activity in pregnancy.

### RESULTS

During the study 150 women were invited to participate and 141 completed their questionnaires (25 first trimester, 71 second trimester, and 45 third trimester), a response rate of 94%. Table 1 summarises the demographic data of the women in the study. There were no

**Table 1.** Demographic characteristics. Values are given as *n* (%), median [quartiles] or mean {SD}, unless otherwise indicated.

		<i>P</i> (among trimesters)
Maternal age (years)	27.8 {5.1}	0.96*
Gravidity	2.0 [1.0, 3.0]	0.42†
Parity	0.0 [0.0, 1.0]	0.20†
Gestational age (weeks)	22.0 [16.0, 31.0]	0.001†
Ethnicity		
White	140 (99)	0.34‡
Black	1 (1)	
Education		
< Grade 8	5 (4)	0.18§
< High school	11 (8)	
High school	34 (24)	
Post secondary	91 (65)	
Religion		
Roman Catholic	80 (57)	0.34§
Anglican	13 (9)	
United	22 (16)	
Other Christian	8 (6)	
Hindu	1 (1)	
No religion	17 (12)	

\*Analysis of variance.

†Wilcoxon rank sum test.

‡Fisher's exact test.

§ $\chi^2$  test.

differences in the demographic factors between the three trimesters, with the exception of gestational age at the time of enrolment.

The sexual activities practised during the pregnancy are summarised in Table 2. When compared by trimester, there were no differences in the frequency of individual types of sexual behaviour, with the exception of vaginal intercourse, where a progressive decline through pregnancy was noted (24/25 (96%) first trimester, 63/71 (89%) second trimester, and 30/45 (67%) third trimester;  $P < 0.001$ :  $\chi^2$  test for trend). Multiple logistic regression was used to determine if multiple factors influenced vaginal intercourse, such as parity, maternal age, level of education, religion, and trimester of pregnancy, and found that the trimester of pregnancy was the only factor significantly associated with this outcome.

When compared with pre-pregnancy frequency, overall 99/139 of women (71%) reported a reduction in sexual activity during pregnancy, 8/139 (6%) an increase, and 32/139 (23%) no change. A reduction in the frequency of sexual activity as a whole was noted in the second and third trimesters with 48% reporting a reduction in the first trimester, 75% in the second trimester, and 76% in the third trimester;  $P = 0.05$ . Multiple logistic regression confirmed that the trimester of pregnancy was the only variable independently associated with reduction of sexual activity.

**Table 2.** Sexual activities practised during the pregnancy.

	<i>n/n<sub>total</sub></i>	%
Fantasy	52/118	44
Kissing	134/138	97
Masturbation	36/115	31
Foreplay	103/131	79
Breast fondling	114/131	87
Vaginal intercourse	117/136	86
Anal intercourse	7/107	7
Oral sex	67/121	55

Table 3 summarises women's perceived changes in sexuality during pregnancy and their perception of their partner's sexual desire. These responses did not change significantly by trimester of pregnancy. Twenty-six of 139 women responding (19%) felt pressure from their partner to have sexual intercourse while they were pregnant. Thirty-nine of 136 (29%) reported changing their position for sexual intercourse during pregnancy.

The concerns that women have regarding sexual intercourse and obstetric complications are summarised in Table 4. The concern regarding premature labour was more frequent in each progressive trimester (9% first trimester, 21% second trimester, 49% third trimester;  $P = 0.0008$ ), as was concern of premature rupture of membranes (5% first trimester, 11% second trimester, 37% third trimester;  $P = 0.001$ ). Again multiple logistic regression confirmed that the trimester of pregnancy was the only variable independently associated with these concerns. Overall, 69/140 women (49%) worried at some point that sexual intercourse may harm the pregnancy, and 75/136 women (55%) believed that their partner worried about this. The concerns of the partner, as perceived by the women, were more prevalent in the second and third trimesters (first trimester 28%, second trimester 60%, third trimester 64%;  $P = 0.009$ ); whereas, there was no significant difference in women's concerns about harming the baby by trimester.

The problems that women noted during the pregnancy relating to sexual intercourse are summarised in Table 5. These did not change significantly by trimester of pregnancy. Breast discomfort with breast fondling was noted by 40% of women (53/133) and occurred more frequently earlier in pregnancy (first trimester 14/25 (56%), second trimester 31/67 (46%), third trimester 8/41 (20%);  $P = 0.001$ ;  $\chi^2$  test for trend). Other side effects noted with breast fondling during pregnancy included discharge from the breast (9%) and abdominal cramping (5%).

Table 6 reviews the sources of information regarding sexual activity in pregnancy. Of women who have discussed this with their doctor, 49% brought up the topic first. Only 66% of these women felt comfortable in bringing up the topic. Finally, 76% of women who had not discussed sexual activity in pregnancy with their doctor felt it should be discussed.

## DISCUSSION

It is important that doctors, along with other health care workers in the obstetric field, are able to provide advice regarding the emotional and sexual aspects of pregnancy, including changes that may be expected during this time. This study identified numerous changes and concerns, both on the part of women and of their partners (as perceived by the women). Vaginal intercourse and sexual activity progressively declined through pregnancy. This has been noted by some earlier

**Table 4.** Concerns that sexual intercourse may cause obstetric complications.

Complication	<i>n/n<sub>total</sub></i>	%
Bleeding	75/132	57
Onset of labour	35/125	28
Infection	42/127	33
Rupture of membranes	22/122	18
Injury to the fetus	39/126	31

**Table 3.** Changes in sexuality during pregnancy. Values are given as *n/n<sub>total</sub>* (%).

	Increased	Decreased	Same
<b>Women</b>			
Sexual desire	19/140 (14)	81/140 (58)	40/140 (29)
Pleasure during lovemaking	19/139 (14)	61/139 (44)	59/139 (42)
Frequency of orgasm during lovemaking	20/131 (15)	44/131 (34)	67/131 (51)
Contribution in initiating lovemaking	13/139 (9)	71/139 (51)	55/139 (40)
<b>Partner</b>			
Sexual desire	27/139 (19)	28/139 (20)	84/139 (60)
Contribution in initiating lovemaking	30/139 (22)	33/139 (24)	76/139 (55)
Attractiveness of the woman during pregnancy	33/136 (24)	14/136 (10)	89/136 (65)

**Table 5.** Problems noted with sexual intercourse during pregnancy (not present pre-pregnancy).

Problem	n/n <sub>total</sub>	%
Bleeding	16/127	13
Change in vaginal lubrication	48/131	37
Pain/soreness in vagina	29/129	22
Abdominal cramping	23/130	18
Vaginal infections	12/127	9
Loss of urine	11/123	9

investigators<sup>2,4,6-10,12,14</sup>, but contradicts the findings of others<sup>1,11</sup>. A reduction in sexual desire, sexual enjoyment, frequency of orgasm, and contribution to initiation of lovemaking were noted by women, but did not change by trimester. Although women noted a reduction in these aspects of sexual desire, they did not perceive similar reductions in their partners. Approximately one in five women felt pressured to have sexual intercourse during pregnancy. Therefore, in counselling couples it is important that the woman and her partner understand that a reduction in sexual desire by the woman commonly occurs. Changes in position for sexual intercourse can be anticipated in pregnancy; in our study almost one-third of the women made such changes.

Of note is the concern a large number of women have regarding sexual intercourse leading to obstetric complications. In addition, many women felt that their partners were concerned that intercourse may harm the fetus. It is therefore very important that physicians and midwives dispel such myths and reassure the women and their partners that sexual intercourse in the majority of couples will not lead to any adverse effects on the pregnancy.

Physical problems may occur during pregnancy, including change in vaginal lubrication and discomfort in the vagina with intercourse, and advice may alleviate worries about these changes. Side effects from breast fondling were also noted, most commonly breast discomfort and most frequently in the first half of pregnancy.

**Table 6.** Sources of information regarding sexual activity during pregnancy.

Source	n/n <sub>total</sub>	%
Physician	41/140	29
Other than physician (n = 88)		
Other health care worker	2/88	2
Friend	11/88	13
Book	50/88	57
Other	4/88	5
More than one (other than physician)	21/88	24

Finally, it is important to understand the sources of information regarding sexual activity in pregnancy, in order to correct misunderstandings. Less than a third of the women obtained information from their doctor. Frequently the woman was the first person to broach the subject and felt uncomfortable raising the subject. Three-quarters of the women whose doctors did not discuss the sexual issues with them felt they should be discussed.

The limitations of this study should be considered. Firstly, the sample size was relatively small, but was as large or larger than many studies previously published<sup>1-3,5-7,9-11,13,14</sup>. Despite the small sample size, significant differences between trimesters and changes from pre-pregnancy to pregnancy were found in many variables evaluated. Secondly, this was a cross-sectional study and not a prospective one, and so comparisons of trimesters are between different women and not the same women over time. Despite this, the demographic characteristics are similar in each trimester, suggesting the groups can be compared. Finally, the partners were not questioned directly, but instead women indicated their opinions of their partner's feelings and concerns.

## CONCLUSION

Doctors can provide invaluable advice to couples regarding psychosexual changes that may occur in pregnancy. It is important that couples understand the normal fluctuations in sexual interest and that a progressive decline in sexual desire is more common in women than in men. Changes in coital positions can also be anticipated. Understanding these changes may help to minimise anxiety on behalf of the woman or her partner. It is important that couples be reassured that sexual intercourse will not normally cause complications in the pregnancy.

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