

# Misconceptions about sexual intercourse during pregnancy: cognitive-behavioral counseling in prenatal care

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A – Study Design, B – Data Collection, C – Statistical Analysis, D – Data Interpretation, E – Manuscript Preparation, F – Literature Search, G – Funds Collection

**Summary Background.** The fears, concerns, and negative attitudes of pregnant women towards sex during pregnancy can have a negative impact on the sexual relationship and sexual performance of couples.

**Objectives.** We aimed to determine the effects of cognitive-behavioral counseling on misconceptions about sexual intercourse during pregnancy in pregnant women.

**Material and methods.** In this randomized educational study, five clinics were randomly selected in Arak, Iran. A total of 20 pregnant women who met the inclusion criteria were selected from each clinic. The Misconceptions about Sexual Intercourse during Pregnancy Questionnaire (MSIP-Q) was completed after written informed consent. Finally, twenty-two women with the lowest scores on the MSIP-Q were selected. Eleven subjects were allocated to the intervention group (cognitive-behavioral counseling), while eleven subjects were assigned to the control group. The questionnaire was also completed by the participants over a three-month interval. For statistical analysis, descriptive and inferential statistics (student's *t*-test, paired *t*-test and Fisher exact test) were calculated using SPSS software.

**Results.** The mean MSIP-Q score was  $77.81 \pm 10.03$  in the intervention group and  $71.27 \pm 8.29$  in the control group before the intervention; no significant difference was found between the groups. On the other hand, the mean MSIP-Q score was  $113.3 \pm 11.16$  in the intervention group and  $76.90 \pm 19.07$  in the control group following cognitive-behavioral counseling; a significant difference was found between the two groups ( $p < 0.001$ ). Based on the findings, no significant difference was reported in the intervention group in the three-month follow-up; in fact, the effects of training remained stable.

**Conclusions.** This study showed that there are misconceptions about vaginal intercourse during pregnancy in Iranian women. Therefore, providing sexual health services and training during pregnancy are necessary at health clinics.

**Key words:** counseling, pregnancy, women.

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## Background

Past studies show that most sexual problems during this period are rooted in the couple's wrong attitudes, misconceptions and misunderstandings about the physical and emotional changes during pregnancy [1, 2]. Sexual and marital relations are known to change during pregnancy due to numerous physiological and psychological transformations. Physiological and anatomical changes, such as breast tenderness or growth of the abdomen can decrease sexual desire. Psychological factors, such as changes in women's mental body image, loss of physical attraction to the partner and fear of adverse situations (e.g., abortion, fetal injury and premature labor) also effect of sexual intercourse. Negative feelings about sexual intercourse during pregnancy can either deepen the marital relationship or lead to a couple's separation [3, 4]. On the other hand, according to published studies, if couples have pleasurable sexual intercourse during pregnancy, their communication and behaviors will improve after the infant's birth [4–7]. Although pregnancy is an important stage in women's lives and women need more emotional support during this period, a couple's in adequate information about sexual intercourse during pregnancy and their negative attitude towards sexual issues in this period can cause some problems. These problems include reduced intimacy, sexual intercourse and libido between the couple, resulting in

extramarital relations during pregnancy or sexual deviation (e.g. masturbation, oral sex and anal sex) [1, 2, 8]. Sexual health education can play a positive role in preventing some of the negative consequences of sexual activity during pregnancy and can produce positive results, such as a stronger marital relationship, pleasurable sexual relations and improved confidence and conscious decision-making on both personal and interpersonal levels [9]. Since sexual desire and performance are part of pregnant women's health, efforts should be made to correct the negative attitudes towards sex during pregnancy. Therefore, further identification and elimination of dysfunctional attitudes in pregnant women seem necessary for improving their sexual health.

## Objectives

In this study, we aimed to analyze the effects of cognitive-behavioral counseling on pregnant women's misconceptions about sexual intercourse during pregnancy.

## Material and methods

### Design and settings

The present randomized interventional study was carried out in Arak, Iran, in the winter of 2014.



This study was approved under the ethical research number: 93-174-14.

## Participants and study design

The study population consisted of pregnant women referring to health clinics in Arak.

The inclusion criteria were as follows:

- 1) no or only one instance of intercourse within 8 weeks after pregnancy;
- 2) no history of untreated sexual problems;
- 3) no drug addiction;
- 4) no use of medications affecting the sexual response;
- 5) absence of sexual restrictions due to medical reasons;
- 6) no adverse events over the past 3 months;
- 7) living with a permanent partner;
- 8) intermediate-level education (minimum);
- 9) age range of 18–35 years;
- 10) first pregnancy;
- 11) gestational age of less than 12 weeks.

If the subject had a complicated pregnancy for any reason or was unwilling to continue intervention, she was excluded from the study.

Five health clinics in Arak were randomly selected via single-stage cluster sampling. In every clinic, 20 pregnant women (total: 100 pregnant women) who met the inclusion criteria were given a questionnaire, known as the Misconceptions about Sexual Intercourse during Pregnancy-Questionnaire (MSIP-Q; 36 questions).

The researcher in individual interviews with pregnant women obtained a written consent form from eligible subjects willing to participate in the study. After providing an explanation on how to complete the questionnaire, 22 participants who obtained the lowest scores on the questionnaires (score: 0-72) were selected; it should be noted that lower scores indicated misconceptions about intercourse during pregnancy. They were randomly assigned to 2 groups "A" (11) and "B" (11) by random blocks. The blocks were ordered and placed in a sealed packet. Cognitive-behavioral counseling sessions were held weekly in eight 90-min sessions. The intervention was implemented us-

ing verbal communication, Q&A sessions, photos, videos, PowerPoint presentations and pamphlets; additionally, a training manual was given to the participants. The content of the training sessions is described in Table 1.

The control group received no counseling except for routine prenatal care by health care workers. After the end of the counseling sessions, the post-test questionnaire on sexual attitude was completed by the intervention and control groups, and the MSIP-Q was completed again within a three-month interval by pregnant women in the control and intervention groups.

## Measure

The Misconceptions about Sexual Intercourse during Pregnancy-Questionnaire (MSIP-Q; 36 questions) was prepared by researchers. It contained two sections; one about demographic features and the second about misconceptions. A panel consisting of 10 experts in fields of psychology, psychiatry, midwifery and gynecology evaluated the content validity of the questionnaire. The content validity of the scale was evaluated using both qualitative and quantitative methods. The content validity ratio (CVR) and content validity index (CVI) were estimated at 0.62 and 0.79, respectively. To test the reliability of the questionnaire, Cronbach's alpha was also measured ( $\alpha = 0.86$ ).

## Statistical analysis

The normal distribution of the data related to the indicators was assessed, and when the parametric conditions were met, *t*-test and paired *t*-test were used. The Fisher exact test was also used for some demographic variables, using SPSS version 20. In this study, a *p*-value less than 0.05 was considered statistically significant.

## Results

In order to determine whether the two groups were homogenous in terms of demographic characteristics, the subjects' history of reproductive/sexual issues was reviewed (Table 2).

Table 1. Content of cognitive-behavioral sessions about women's misconceptions about sex during pregnancy	
Sessions	
1	<i>Introduction</i> Purposes: 1) introducing the participants to each other; 2) attracting the subjects' cooperation and gaining their confidence; 3) conveying the importance of education to the subjects; 4) specifying the goals of group training; and 5) describing the outlines of the meetings for the group members.
2	<i>Does sexual intercourse during pregnancy cause damage to the fetus?</i> Purposes: 1) being familiarized with the female anatomy; 2) being familiarized with the male anatomy; and 3) introduction to the female anatomy during pregnancy (e.g. how the fetus grows and what factors influence the safety of the fetus).
3	<i>Does sexual intercourse during pregnancy cause damage to the mother herself?</i> Purposes: 1) being familiarized with the physiological changes during pregnancy.
4	<i>Is sexual intercourse a sin during pregnancy?</i> Purposes: 1) overcoming the negative attitudes of pregnant women towards sexual intercourse during pregnancy.
5	<i>Does sexual intercourse during pregnancy improve the mental health of pregnant women?</i> Purposes: 1) defining mental health; 2) learning about common mental problems during pregnancy; 3) identifying the role of sexual intercourse in the maintenance and promotion of mental health; 4) introducing the role of sex during pregnancy in relieving anxiety and psychological perturbations; and 5) establishing the role of sex during pregnancy in improving mental health and muscle relaxation.
6	<i>Is sexual intercourse enjoyable during pregnancy?</i> Purposes: 1) learning about the sexual response cycle; 2) learning about sexual disorders and treatments; 3) definition of sexual pleasure; 4) learning about sensitive and erogenous zones in men and women; and 5) discussing pregnant women's mental image of their body.
7	<i>Is sexual intercourse difficult during pregnancy?</i> Purposes: 1) learning about the common problems during pregnancy and the available treatment options; and 2) providing training on all sexual positions during pregnancy.
8	<i>Investigating the progress of pregnant women and reassessing their attitudes.</i> Purposes: 1) reviewing and emphasizing the content of sessions and topics discussed in the past seven weeks.

Qualitative variables	Intervention group <i>n</i> (%)	Control group <i>n</i> (%)	* <i>p</i>
<b>Mother's education</b>			
secondary school	3 (27.3)	2 (18.2)	1.00
high school	5 (45.4)	6 (54.7)	
academic education	3 (27.3)	3 (27.3)	
<b>Spouse's education</b>			
secondary school	4 (36.4)	1 (9.1)	0.161
high school	4 (36.4)	9 (81.8)	
academic education	3 (27.2)	1 (9.1)	
<b>Mother's occupation</b>			
housewife	8 (72.7)	9 (81.8)	1.00
employee/student	3 (27.3)	2 (18.2)	
<b>Spouse's occupation</b>			
	3 (27.3)	5 (45.5)	0.659
employee/worker	8 (72.7)	6 (54.5)	
<b>Marriage type</b>			
	6 (54.5)	8 (9.1)	0.708
family acquaintance	3 (27.3)	2 (18.2)	
pre-marital relationship	2 (18.2)	1 (9.1)	
<b>History of sexual relationship training</b>			
yes	4 (36.4)	3(27.3)	1.00
no	7 (63.6)	8 (72.8)	
<b>Sexual information sources</b>			
books	8 (72.8)	6 (54.5)	0.161
family physician	1 (9.1)	2 (18.2)	
radio and tv	0	3 (27.3)	
others	2 (18.2)	0	
<b>Quantitative variables</b>			
	Intervention group Mean ± SD	Control group Mean ± SD	± <i>p</i>
<b>Mother's age</b>	22.72 ± 3.95	25.81 ± 3.48	0.135
<b>Duration of marriage (years)</b>	3.54 ± 3.23	5.36 ± 3.41	0.215
<b>Income status (1,000,000 R)</b>	8.68 ± 2.79	8.63 ± 1.28	0.961
<b>Gravid</b>	1.18 ± 0.40	1.27 ± 0.46	0.631
<b>Number of living children</b>	0.18 ± 0.40	0.27 ± 0.46	0.642

± *t*-test; \* Fisher exact test.

Groups domains	Intervention		Control		* <i>p</i>
	Mean	SD	Mean	SD	
1. Does sexual intercourse during pregnancy cause damage to the fetus?	21.96	2.28	13.59	5.46	0.001
2. Does sexual intercourse during pregnancy cause damage to the mother herself?	13.59	2.69	11.34	3.85	0.001
3. Is sexual intercourse a sin during pregnancy?	18.45	2.20	14.25	4.86	0.008
4. Does sexual intercourse during pregnancy increase the mental health of pregnant women?	18.81	2.99	16.96	3.84	0.230
5. Is sexual intercourse enjoyable during pregnancy?	14.16	2.89	12.43	3.64	0.232
6. Is sexual intercourse difficult during pregnancy?	16.34	3.72	8.15	2.75	0.001
Total MSIP-Q score (after the last session)	± 113.36	11.16	76.72	19.07	0.001
Total MSIP-Q score in the three-month follow-up	± 111.73	10.25	69.90	17.63	0.001
After education and three-month follow-up	± <i>p</i> = 0.480				

\* *t*-test; ± *t*<sup>2</sup> = 0.48.

Comparison of the two groups in terms of demographic information and reproductive/sexual history showed that they were similar to each other, and there was no significant difference between the groups ( $p > 0.05$ ).

In this study, the attitude of pregnant women was categorized into six domains. Each domain was compared between the intervention and control groups. Following counseling, all domains of sexual attitude were significantly different between

the two groups ( $p < 0.001$ ), except for two domains, i.e. "sexual intercourse during pregnancy increases the mental health of pregnant women" and "sexual intercourse is enjoyable during pregnancy" (Table 3). The total average MSIP-Q scores were also significant between the two groups after eight weekly sessions ( $p < 0.001$ ). In other words, pregnant women's misconceptions towards sexual intercourse were lower during pregnancy in the intervention group.

Three months later, sexual misconceptions were re-evaluated in both groups. The frequency of coitus was also assessed after three months. The results showed no significant difference in the intervention group after the three-month follow-up, and the effect of educational intervention was found to be stable ( $p = 0.480$ ) (Table 3). The mean coitus was also  $4.6 \pm 1.76$  and  $2.4 \pm 1.14$ , respectively, in the counseling and control groups ( $p = 0.03$ ).

## Discussion

The present study showed that counseling corrected misconceptions about intercourse during pregnancy, such as the fear of harm to the fetus, fear of harm to the mother, the sinful nature of sex during pregnancy and stress during sexual intercourse.

A study by Bayrami et al. showed that fear of harm to the fetus and infection was the most common problem, and sexual desire and activity was reduced to 1.61% from 6.58% during pregnancy in comparison with the pre-pregnancy period [10]. In addition, a study conducted by Naim and Bhutto pregnant women's sexual activity showed that 45.4% of the subjects believed that intercourse is harmful to the fetus, and 22.7% believed that sexual activity leads to abortion [11].

Undoubtedly, the pattern of changes in sexual activity during pregnancy is influenced by misbeliefs and misconceptions regarding physical and psychological changes during this period [8]. Fabamwo and Akinola showed that the most common reasons for abstaining from sex were fear of complications (35.3%), 17.6% did not appeal to them, and 8.8% said it is too painful [12].

On the other hand, the findings in this study showed a positive role of education in increasing the chance of intercourse after three months' education. Pauleta et al. reported that 13.9% of couples ceased coitus during pregnancy in Taiwan. In this article, variations in sexual activity, such as manual sex, anal intercourse and coital adjustments were made by couples [13].

The pattern of changes in sexual activity during pregnancy was found to be related to misconceptions about physical and psychological changes during this period. The results of the mentioned studies, as well as the present research, showed

that pregnant women's attitude towards sexual activity originates from misconceptions rooted in their misinformation [14]. Vakilian et al., in a randomized clinical study on 100 pregnant women, showed that sexual counseling during pregnancy, whereas the control group increased sexual function during pregnancy. They used a cognitive approach for improving the misbeliefs of pregnant women [4]. Contrary to this, Wannakosit and Phupong didn't report any improvement in sexual function during education compared to those of the control group [15]. A systematic review in 56 studies showed that couples postpone vaginal intercourse eight weeks after childbirth and increased their efforts in other sexual behaviors [16]. A qualitative study on Taiwanese women pointed towards a negative experience during vaginal sex, such as dyspareunia, uterine discomfort, dry vaginal mucosa, pain in the pelvis and fatigue [17]. Vakilian et al. pointed out that counseling during pregnancy plays an important role in decreasing the discomfort of sexual intercourse during pregnancy [4].

Today, social and cultural issues, together with inadequate sexual training by the healthcare system, are proposed as the main obstacles against the promotion of knowledge and positive attitudes towards sexual health.

## Conclusions

This study showed that there are misconceptions about vaginal intercourse during pregnancy in Iranian women. Therefore, providing sexual health services and training during pregnancy are necessary at health clinics. In addition, there is a major need for providing proper consultation for pregnant women in order to improve their physical and emotional compliance with changes during pregnancy and increase a couple's sexual knowledge when overcoming their negative attitudes.

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