



The Relationship between Unwanted Pregnancy and Sexual Unsatisfaction among Iranian Pregnant Women

Malihe Nourollahpour Shiadeh ^{a,b}, Nourossadat Kariman ^a, Saeed Mehravar ^c

^a Midwifery and Reproductive Health Research Center, Department of Midwifery and Reproductive Health, Nursing and Midwifery School, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran.

^b Department of Midwifery and Reproductive Health, Nursing and Midwifery School, Mazandaran University of Medical Sciences, Sari, Iran

^c Department of epidemiology and biostatistics, School of Public Health, Tehran university of Medical Science, Tehran, Iran

ARTICLE HISTORY

Received: 18 January 2020

Revised: 12 April 2020

Accepted: 20 June 2020

Key words

Unwanted pregnancy,
Sexual unsatisfaction,
Larson questionnaire

Corresponding Author

Nourossadat Kariman

E-mail:

n_kariman@sbmu.ac.ir,

n_kariman@yahoo.com

Abstract

Background: Sexuality and its subsequent satisfaction play critical role in individuals' overall quality of life, especially in women. Moreover, Sexual unsatisfaction and unwanted pregnancy are important public health problems among pregnant women worldwide. The main objective of this study was to determine the relationship between unwanted pregnancy and sexual satisfaction during pregnancy.

Methods: In this study, we enrolled 120 women with unwanted pregnancy and 120 healthy controls. The Larson sexual satisfaction (ISS) questionnaire was used to evaluate sexual satisfaction scores in study participants. Demographic information was collected using a researcher-made questionnaire. Data analysis was performed by the program SPSS 18 and statistical differences were considered significant at P-values < 0.05.

Results: The frequency of unsatisfaction (OR = 5.08; 95 % CI = 0.24–107.02; P = 0.497), low satisfaction (OR = 30.62; 95 % CI = 7.20–130.2; P < 0.001), and moderate satisfaction (OR = 1.45; 95 % CI = 0.87–2.41; P = 0.155), were higher in case group compared to controls, while frequency of the high satisfaction (OR = 0.11; 95 % CI = 0.06–0.22; P < 0.001) was significantly higher in control groups. The total mean ISS scores for the women with wanted and unwanted pregnancies were 101.1 ± 11.1 and 80.6 ± 14.6, respectively (z = - 3.99, P < 0.001).

Conclusion: In conclusion, our findings demonstrated that unwanted pregnancy has negative effects on sexual satisfaction during the pregnancy. Further studies are needed to fully illustration of correlation between unwanted pregnancy and sexual dissatisfaction.

Introduction

Sexuality and its subsequent satisfaction play critical role in individuals' overall quality of life, especially in women.¹ According to definition by Lawrance and Byers, Sexual satisfaction is defined as "an affective response arising from one's subjective evaluation of the positive and negative dimensions associated with

one's sexual relationship".² It is reported that high sexual satisfaction is associated with quality of life, overall well-being, better state of physical and psychological health, high relationship, satisfaction communication with one's partner and sexual assertiveness.³ Deterioration in sexual health affects not only physical health but also psychological health, family health, and consequently, social health.⁴

Sexual unsatisfaction can lead to mental and spiritual disorders, such as depression, disappointment, insecurity, and also spiritual and personality imbalance. These disorders could be cause of reduced capability, serious contradictions, an also negative emotion to each other, competition to suppress each other, jealousy and being ignored.^{5, 6} Several studies have revealed that sexual dissatisfaction is responsible for nearly 80% of marital conflicts.^{7, 8} It is demonstrated that several factors (e.g. education, chronic diseases, pregnancy and parity) could be effective on sexual dysfunction.⁹ ¹⁰ Pregnancy is one of the leading factors to be effective in the sexual function and behavior of women.¹¹

Pregnancy is an important period in a woman's life and causes significant changes in behavior, sexual function and sexual satisfaction of women. During this period sexual activities and marital relationships might be affected by several factors such as physical and psychological changes and social, cultural, religious factors.¹² It is well documented that sexual satisfaction is lower during pregnancy than before pregnancy.¹² Unwanted pregnancy is one of the main public health problems worldwide. It is reported that in 2012, 40 percent of all pregnancies were unwanted, and also 30.6% of all pregnancies in Iran are unwanted.^{13, 14} Unwanted pregnancies can lead to a wide range of negative health, social, economic consequences and also psychological problems for both women and children.^{13, 14} To our knowledge, no prior study was conducted to evaluate on the association of pregnancy intentions and sexual satisfaction. In addition, knowing if there is a correlation between pregnancy intention and sexual satisfaction is useful, particularly in the current social context in which about 40% of pregnancies are unwanted.¹⁵ Therefore, the main aim of this study was to determine the relationship between unwanted pregnancy and sexual dissatisfaction among Iranian pregnant women.

Methods

Study design

A case-control study was undertaken in Shahid Beheshti University of Medical Science Tehran, Iran, between May 2014 and January 2015. Subjects for this study were married pregnant women who had referred to the health centers for receiving prenatal cares. In the present study, 120 cases (women with unwanted pregnancy), with a mean age of 28.3 ± 6.3

years and 120 controls (women with wanted pregnancy) with a mean age of 26.7 ± 5.5 years, were evaluated. The cases and controls were distinguished according to the women's expression. Based on physician examinations, medical records and interview, the age, residence region, socio-demographic, obstetric characteristics and trimesters of pregnancy in the control group were similar to the case group. The eligible subjects were selected by daily visiting of health centers.

Data collection

To measure sexual satisfaction, we used Iranian version of Larson sexual satisfaction (ISS) questionnaire.^{16, 17} The ISS questionnaire was devised by Larson et al in 1998 to evaluate the effects of premarital communication, relationship stability, and self-esteem on sexual satisfaction in the first year of marriage¹⁷, and has also been validated for use in women and men.¹⁸ The standard ISS questionnaire has 32 items with sixteen positive and sixteen negative items. Iranian version of ISS with good validity and reliability consists of 25 items and includes a 5-option Likert scale as follows: never, rarely, sometimes, often, and always.¹⁶ The content of ISS was evaluated and then confirmed by a number of midwifery and reproductive health faculty members in nursing and midwifery school of SBMU. Items have Likert scale response choices between 0 and 4 and higher scores indicate greater satisfaction.¹⁶ Based on the ISS scores obtained, we regarded pregnant women with a score between 101-128 as completely satisfied and those who had score between 76-100, 50-75 and <50 regarded as relatively satisfied, slightly satisfied and dissatisfied, respectively. Reliability of Larson sexual satisfaction for this study was evaluated using Chronbach's alpha coefficient (Alpha Chronbach) and Intraclass Correlation Coefficient (ICC). The result of the Chronbach's alpha coefficient was calculated as 0.9 whose reliability is good. Moreover, in this study the ICC of test-retest reliability ranged from 0.77 to 0.86.

Ethical statement

This study (No. 1393-1-86-13148) was approved by the Ethics Committee of Shahid Beheshti University of Medical Science Tehran, Iran. All enrolled participants were informed about the study and written informed consents were obtained from all of them before the beginning of the study objectives.

Statistical analysis

Mean scores of sexual satisfaction were compared between the type of pregnancy (unwanted and wanted) and the gestational trimesters using the Mann-Whitney non-parametric test; also categorical data were compared by Chi-square or Monte Carlo simulation method ($N=1,000,000$ simulations). Odds ratios and their corresponding confidence intervals (95% CI) were calculated for each level of satisfaction. Data analysis was performed by the program SPSS 18 and statistical differences were considered significant at P -values <0.05 .

Results

Table 1 summarized the demographic features of studied participants. Most of the subjects in both groups were housewives and had high school education. Further information is provided in our recently published article (14). There is no statistical significant in sexual satisfaction before the pregnancy, in both group ($P=0.06$).

As shown in Table 2, the frequency of unsatisfaction ($OR = 5.08$; 95 % CI = 0.24–107.02; $P = 0.497$), low satisfaction ($OR = 30.62$; 95 % CI = 7.20–130.2; $P < 0.001$), and moderate satisfaction ($OR = 1.45$; 95 % CI = 0.87–2.41; $P = 0.155$), were higher in case group compared with controls, while frequency of the high satisfaction ($OR = 0.11$; 95 % CI = 0.06–0.22; $P < 0.001$) was significantly higher in control groups, suggesting the existence of positive correlation between unwanted pregnancies and meeting criteria for lower sexual satisfaction during pregnancy.

As shown in Table 3, the total mean ISS scores for the women with wanted and unwanted pregnancies were 101.1 ± 11.1 and 80.6 ± 14.6 , respectively. Mann-Whitney U test of ISS scores showed a significant difference between case and control women ($z = -3.99$, $P < 0.001$). Moreover, the mean ISS scores for the women with unwanted pregnancy were significantly lower in all trimesters, compared to controls ($P < 0.001$) (Fig. 1).

Significant statistically differences were seen between case and control groups in the following items included in questionnaire: "I have an attractive and exciting sex life" ($P = 0.032$), "sex with my spouse is a repetitive task." ($P = 0.01$), "our sexual relationships have done hastily." ($P = 0.002$), "My spouse is a good partner for our sexual activities" ($P = 0.016$), "I feel that my spouse has excessive expectation in our sexual relationships." ($P = 0.039$),

Table 1. Descriptive characteristics of women with unwanted pregnancy and women with wanted pregnancy.

Variables	Groups	
	Women with unwanted pregnancy (n =120) N (%)	Women with wanted pregnancy (n =120) N (%)
Age		
≤20	10 (8.3)	16 (13.4)
21-30	70 (58.3)	68 (56.6)
31-40	36 (30)	33 (27.5)
≥41	4 (3.4)	3 (2.5)
Duration of marriage		
≤10	96 (80)	101 (84.1)
11-20	20 (16.6)	15 (12.5)
≥21	4 (3.4)	4 (3.4)
Occupation		
Employed	28 (23.3)	15 (12.5)
Housewife	92 (76.7)	105 (87.5)
Education level		
Illiterate	4 (3.4)	4 (3.4)
Primary school	28 (23.3)	16 (13.4)
Secondary school	26 (21.6)	19 (15.7)
High school	41 (34.1)	51 (42.5)
University	21 (17.5)	30 (25)
Education level of spouse		
Illiterate	5 (4.2)	1 (0.8)
Primary school	32 (26.6)	23 (19.1)
Secondary school	24 (20)	24 (20)
High school	34 (28.4)	41 (34.2)
University	25 (20.8)	31 (25.9)
Parity		
Nulliparous	37 (30.8)	47 (39.2)
1-2 deliveries	31 (25.8)	46 (38.3)
3-4 deliveries	34 (28.3)	12 (10)
5 and more deliveries	18 (15)	15 (12.5)
Sexual satisfaction before pregnancy		
Yes	100 (83.3)	94 (78.3)
No	20 (16.7)	26 (21.7)

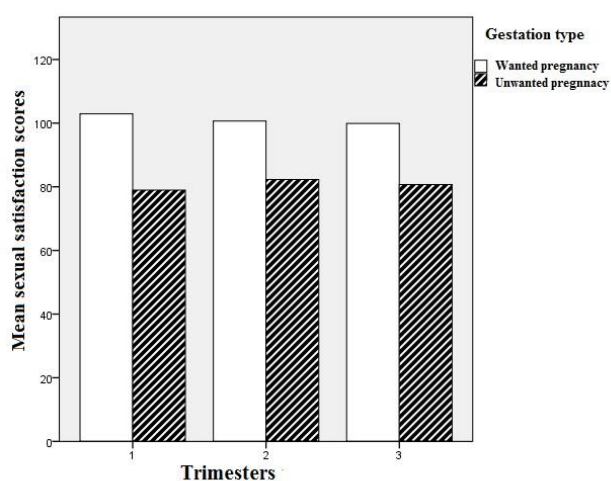
"Sexual activity with my spouse results in at least one orgasm for me" ($P = 0.012$), "I have not been interested in participating sexual activities with my spouse in the preceding months" ($P = 0.001$), "My spouse cannot make me feel sexually fulfilled after sex" $P = 0.031$, "My sex life is lacking in quality."

Table 2: Status of sexual satisfaction between women with wanted and unwanted pregnancies

Characteristics	Wanted pregnancy N (%)	Unwanted pregnancy N (%)	Odds Ratio (CI 95%)	P value
Un-satisfaction	0 (0.0)	2 (1.7)	5.08 (0.24, 107.02)	0.497
Low Satisfaction	2 (1.7)	41 (34.1)	30.62 (7.20, 130.2)	<0.001
Moderate Satisfaction	51 (42.5)	62 (51.7)	1.45 (0.87, 2.41)	0.155
High Satisfaction	67 (55.8)	15 (12.5)	0.11 (0.06, 0.22)	<0.001

Table 3: Mean scores of sexual satisfaction between women with wanted and unwanted pregnancies

Characteristics	Wanted pregnancy mean score (SD)	Unwanted pregnancy mean score (SD)	P value
First trimesters	102.9 (10.3)	78.9 (10.4)	<0.001
Second trimesters	99.4 (16.1)	84.7 (16.4)	<0.001
Third trimesters	99.9 (11.6)	79.7 (16.3)	<0.001
Total mean score	101.1 (11.1)	80.6 (14.6)	<0.001
Mean rank	163.9	77.1	<0.001

**Figure 1:** The mean ISS score differences between women with unwanted pregnancy and controls.

($p=0.042$), "When I feel like to have sex with my spouse, he is not willing." ($P=0.004$), "My spouse is very sentimental about my sexual needs and inclinations" ($P=0.025$), "I feel that my spouse enjoys having sex with me" ($P=0.01$), "I am satisfied with my sex life" ($P=0.023$), "I feel my wife avoids sex with me." ($P=0.000$), "I feel that our sex life is boring." ($P=0.019$), "I believe that sex in married life is very important." ($P=0.006$).

Discussion

To our knowledge, this is the first study to assess the correlation between unwanted pregnancy and sexual satisfaction of using a validated and structured questionnaire. Our data demonstrated that unwanted pregnancy is negatively associated with sexual satisfaction during the pregnancy. There was no statistical significant difference in sexual satisfaction before the pregnancy in our case and control subjects. In contrast with our study, Gibbs et al. indicated that pregnancy intention status was not a predictor of sexual satisfaction for married women, however, cohabiting women trying to get pregnant report higher levels of sexual satisfaction compared to cohabiting women who are sterile or avoiding pregnancy.¹⁹ However studies objective and participants are different in our study and study by Gibbs et al. The findings in Gibbs et al. study could be explained by this fact that in women who are trying not to conceive, anxiety about the risk of unplanned pregnancy could prevent sexual satisfaction, particularly for women who are not married.¹⁹ While in our study, all women were married and pregnancy was occurred in them.

Previous research indicates that unwanted pregnancy is associated with a wide range of negative health, social, and economic consequences, as well as psychological problems for women.¹³ It is well proven in several studies that unwanted pregnancy is one of the major predictors related with the development of depression and anxiety during pregnancy, and postpartum.^{20,21} These psychological disorders are closely associated with sexual dysfunction in pregnant women, because most antidepressant drugs have adverse effects on sexual function.^{22, 23} Moreover, these psychological problems are characterized by loss of interest, decrease in energy, dropped self-esteem and incapability to experience pleasure that these conditions could produce difficulties in sexual relationships, and sexual problems.²³ In addition, unwanted pregnancy is relevant with abortion, unhealthy behaviors, illicit

drug use, do not initiate early prenatal care and many other complications.^{14, 15} Previous studies have indicated that induced abortion have adverse effects on marital relationships or sexual function in up to 20% of women.^{24, 25} It may be due to both the worry of another unwanted pregnancy and psychological trauma.²⁵ Our results indicated that in unwanted pregnant women group, the majority of subjects we categorized with moderate and low satisfaction, respectively. While in wanted pregnant women, the most of subjects had overall score of sexual satisfaction in moderate and high level (Table 2). Previous studies suggest several factors that are relevant with sexual satisfaction could also be associated with unwanted pregnancy, and therefore could explain the apparent direct associations.¹⁹ Some of these factors are include relationship quality, longer relationships, level of well-being, number of parity, age, social status and work status and etc.²⁶⁻²⁹ Our study showed that it is a significant predictor for sexual unsatisfaction in all trimesters during the pregnancy. The overall score of sexual satisfaction in unwanted pregnant women was significantly lower than controls in all trimesters. The difference was higher particularly in first trimesters, suggesting this period as a critical period for women with unwanted pregnancy, considering to then sexual satisfaction. In conclusion, sexual satisfaction plays an important role in relationship outcomes and is sexual associated with higher wellbeing and higher relationship stability. Our study demonstrated that unwanted pregnancy has negative effects on sexual satisfaction during the pregnancy. Consulting and spouse behavior could be helpful. Further studies are needed to fully illustration of correlation between unwanted pregnancy and sexual dissatisfaction.

Acknowledgment

This article was extracted from a thesis for a master's degree in midwifery at Shahid Beheshti University of Medical Sciences (grant number: 1393-1-86-13148). We would like to express our appreciation to the health deputy of the university and directors of the school of nursing and midwifery. We would also like to extend our gratitude to the women participating in this study.

Conflicts of Interest

None of the above authors have any conflict of interest.

Authors' Contribution: Malihe Nourollahpour Shiadeh, Nourossadat Kariman, performed research, analyzed data, and collaborated in writing the manuscript; Saeed Mehravar performed the statistical analyses and interpretation of the data.

References

1. Litzinger S, Gordon KC. Exploring relationships among communication, sexual satisfaction, and marital satisfaction. *J Sex Marital Ther.* 2005;31(5):409-24.
2. Lawrance KA, Byers ES. Sexual satisfaction in long-term heterosexual relationships: The interpersonal exchange model of sexual satisfaction. *Pers Relatsh.* 1995;2(4):267-85.
3. del Mar Sánchez-Fuentes M, Santos-Iglesias P, Sierra JC. A systematic review of sexual satisfaction. *Int J Clin Health Psychol.* 2014;14(1):67.
4. Tosun Güleroglu F, Gördeles Beşer N. Evaluation of sexual functions of the pregnant women. *J Sex Med.* 2014;11(1):146-53.
5. Heidari A, Asskary P, Azarkish M. Relation of some demographic factors with marital commitment, sexual satisfaction and life satisfaction in women. *J Am Sci.* 2012;8(2):194-9.
6. Honarparvaran N, Tabrizy M, Navabinejad S, Navabinejad S, Shafiabady A. The efficacy of emotionally focused couple therapy (EFT-C) training with regard to reducing sexual dissatisfaction among couples. *Eur J Sci Res.* 2010;43(4):538-45.
7. Rahmani A, Khoei EM, Gholi LA. Sexual satisfaction and its relation to marital happiness in Iranians. *Iranian J Public Health.* 2009;38(4):77-82.
8. Nourani S, Jonaidey E, Shakeri MT, Mokhber N. Sexual satisfaction in fertile and infertile women attending state clinics in Mashad. *J Reprod Infertil.* 2010;10(4): 269 -77.
9. Basson R, Berman J, Burnett A, Derogatis L, Ferguson D, Fourcroy J, et al. Report of the international consensus development conference on female sexual dysfunction: definitions and classifications. *J Urol.* 2000;163(3):888-93.
10. Salonia A, Munarriz R, Naspro R, Nappi R, Briganti A, Chionna R, et al. Women's sexual dysfunction: a pathophysiological review. *BJU Int.* 2004;93(8):1156-64.

11. Leite APL, Campos AAS, Dias ARC, Amed AM, De Souza E, Camano L, et al. Prevalence of sexual dysfunction during pregnancy. *Rev Assoc Med Bras.* 2009;55(5):563-8.
12. Corbacioglu Esmer A, Akca A, Akbayir O, Goksedef BPC, Bakir VL. Female sexual function and associated factors during pregnancy. *J Obstetric Gynaecol Res.* 2013;39(6):1165-72.
13. Sedgh G, Singh S, Hussain R. Intended and unintended pregnancies worldwide in 2012 and recent trends. *Stud Fam Plann.* 2014;45(3):301-4.
14. Shiadeh MN, Kariman N, Bakhtiari M, Mansouri S, Mehravar S. Unwanted Pregnancy and Its Risk Factors Among Pregnant Women in Tehran, Iran. *Nurs Midwifery Stud.* 2016; 5(3):e29740.
15. Moosazadeh M, Nekoei moghadam M, Emrani Z, Amiresmaili M. Prevalence of unwanted pregnancy in Iran: a systematic review and meta analysis. *Int J Health Plan Manage.* 2014;29(3):277-90.
16. Gheshlaghi F, Dorvashi G, Aran F, Shafiei F, Najafabadi GM. The study of sexual satisfaction in Iranian women applying for divorce. *Int J Fertil Steril.* 2014;8(3):281.
17. Larson JH, Anderson SM, Holman TB, Niemann BK. A longitudinal study of the effects of premarital communication, relationship stability, and self-esteem on sexual satisfaction in the first year of marriage. *J Sex Marital Ther.* 1998;24(3):193-206.
18. Shams MZ, Shahsiah M, Mohebi S, Tabaraee Y. The effect of marital counseling on sexual satisfaction of couples in Shiraz city. *Health Sys Res.* 2010;6:417-24.
19. Larry Gibbs ST, Julia McQuillan, Arthur L. Greil, Karina S. Sexual Satisfaction and Pregnancy Intentions among Married and Cohabiting Women in the U.S.: Variations by Race and Ethnicity. 2015.
20. Bunevicius R, Kusminskas L, Bunevicius A, Nadisauskiene RJ, Jureniene K, Pop VJ. Psychosocial risk factors for depression during pregnancy. *Acta Obstet Gynecol Scand.* 2009;88(5):599-605.
21. Eastwood JG, Phung H, Barnett B. Postnatal depression and socio-demographic risk: factors associated with Edinburgh Depression Scale scores in a metropolitan area of New South Wales, Australia. *Aust N Z J Psychiatry.* 2011;45(12):1040-6.
22. Mathew RJ, Weinman ML. Sexual dysfunctions in depression. *Arch Sex Behav.* 1982;11(4):323-8.
23. Baldwin DS. Depression and sexual dysfunction. *British Med Bull.* 2001;57(1):81-99.
24. Bradshaw Z, Slade P. The effects of induced abortion on emotional experiences and relationships: a critical review of the literature. *Clin Psychol Rev.* 2003;23(3):929-58.
25. Fok WY, Siu S-SN, Lau TK. Sexual dysfunction after a first trimester induced abortion in a Chinese population. *Eur J Obstet Gynecol Reprod Biol.* 2006;126(2):255-8.
26. Byers ES. Relationship satisfaction and sexual satisfaction: A longitudinal study of individuals in long-term relationships. *J Sex Res.* 2005;42(2):113-8.
27. Rainer H, Smith I. Education, communication and wellbeing: An application to sexual satisfaction. *Kyklos* 2012;65(4):581-98.
28. Dundon CM, Rellini AH. More than sexual function: Predictors of sexual satisfaction in a sample of women age 40-70. *J Sex Med* 2010;7(2pt2):896-904.
29. Carpenter LM, Nathanson CA, Kim YJ. Physical women, emotional men: Gender and sexual satisfaction in midlife. *Arch Sex Behav* 2009;38(1):87-107.