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Unintended Pregnancy Causing Nascent Violence Against Women: A Case Study from Iran

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Abstract

Domestic violence and unintended pregnancy are serious personal, social and global public health concerns. The present study aims to explore the relationship between domestic violence against Iranian housewives and their unwanted pregnancy. Study was conducted on 530 pregnant women aged between 16–40 years. The research was implemented using a two-part questionnaire which addressed demographic characteristic and domestic violence. The various forms of partner violence-emotional abuse, physical violence and sexual violence-were assessed with a validated questionnaire. Logistic regression was used to estimate multivariable-adjusted odds ratios and 95% confidence intervals. The results showed, 226 (42.8%) of the study population were having an unintended pregnancy and 42.8%, 53%, and 48% had been, respectively, physically, sexually and emotionally abused by their partners. Compared to non-abused women, abused women were 4.03 times more likely to have an unintended pregnancy. The regression analyses showed significantly ($p < 0.05$) increased risks of unwanted pregnancy associated with physical violence, sexual violence, and emotional violence. Age, education, and the number of living children were also found to be important risk factors in unwanted pregnancy. According to the study the rates of unwanted pregnancy and violence against women were high, and violence had an important impact on unwanted pregnancy.

Introduction:

Unwanted pregnancies are indeed not been desired at any time. Such pregnancies are among the most serious public health concerns all over the world and bring a lot of stress to the mother, husband, and other family members (Rahman *et al.*, 2012). It was estimated that 49% of pregnancies in the U.S. are unwanted (Ventura *et al.*, 2012). As per a systematic review and meta-analysis study, in Iran, 30.6% of births were the result of unwanted pregnancies (Moosazadeh *et al.*, 2013).

Women with unwanted pregnancies usually undertake various risk factors: postponing, reducing, or cancelling their visits to healthcare centers to receive prenatal care, experiencing physical and psychological tension (e.g. prenatal and postnatal depression), suicidal tendencies, an inclination to smoke during and after pregnancy, unsafe abortion (Moosazadeh *et al.*, 2012; Levandowski *et al.*, 2012), use of various abortion

medications, prenatal anxiety, insufficient social support, and an increase in physical and sexual violence against them and all of such factors could increase the rate of maternal death (Karaçam *et al.*, 2011). In addition, unwanted pregnancies can also expect the consequences like low birth weight, preterm birth (Shah *et al.*, 2011), infant mortality, late initiation of and sustained breastfeeding, increased rate of child and maternal violence, and a high risk of post-partum and maternal depression (Nelson & Lepore, 2013) related to the future baby. Not using proper contraceptive methods, incorrect use of contraceptive methods, untimely cessation of the use of contraceptive methods, and false beliefs about contraception are some of the reasons resulting unwanted pregnancies in women (Karaçam *et al.*, 2011).

Black *et al.* (2010) reported that the failure of contraceptive methods are associated with individual parameters, among them being young, drug abuse,

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alcohol abuse, insufficient experience in using contraceptives and incomplete knowledge about sexual health and relationship parameters such as intimate partnerviolence.

Studies regarding the prevalence of violence against women in different countries revealed that 15-71% of women aged 14-49 years suffer from one aspect of violence from their partners and the prevalence of violence was 60% (Finnbogadóttir *et al.*, 2014). Further, various studies in Iran have revealed that the rate of intimate partner violence (IPV) was 10-60% (Jamshidimanesh *et al.*, 2013). Violence can affect women's reproductive health and increase the rate of mortality and morbidity of mothers, stillbirth, unsafe abortion, infertility, sexually transmitted diseases, AIDS and unwanted pregnancy (Rico *et al.*, 2011).

Studies show that there is a correlation between violence against women and unwanted pregnancy; there is also evidence that corroborates the relationship between unwanted pregnancy, domestic violence and abortion (Mostafa Kamal *et al.*, 2013; Nelson & Lepore, 2013; Rahman *et al.*, 2012). The incidence of domestic violence against women was reported to be in between 4 & 28 percent in developing countries and between 2.5 & 33 percent in women with unwanted pregnancies (James *et al.*, 2010). Studies showed that 40 percent of women who decide to abort their pregnancies had a positive history of sexual and physical violence (Öberg *et al.*, 2014). Another study reported that unwanted pregnancies correlate with women's having experienced violence in childhood or adulthood (Uscher-Pines & Nelson, 2010). Some studies referred the unwanted pregnancy as a risk factor in violence against women and mentioned that women who do not have a positive feeling about their pregnancies are at a greater risk of experiencing violence during their pregnancy (Miller *et al.*, 2010).

Numerous studies in Iran and other countries have addressed the rate of violence against women and the related factors in relation to pregnancy; yet, there are not any studies on the relationship between violence and unwanted pregnancy in Iran. This is the first study to explore the correlation between violence and unwanted pregnancy in Iran. The purpose of the study was to determine the prevalence of unintended pregnancy and the responsive factors for unwanted pregnancy among currently married pregnant women in Iran. Also, the present study aimed to investigate the association between emotional, physical, and sexual violence with unwanted pregnancy among pregnant women in Iran.

Methodology:

The present cross-sectional study was conducted on 530 pregnant women referred to the prenatal care clinics of Jahrom from in between the year August 2016 to December 2017. The study subjects were the pregnant women referred to the prenatal clinics through convenience

sampling. Objectives were explained to the subjects, written consents were also obtained from all of them. The researchers tried to win the participants' trust by creating a good relationship, performing the interviews at appropriate times and places, and providing the necessary information about the research objectives.

The inclusion criteria of the study were being pregnant, being Iranian, being in a permanent marriage, and living with own husband. The exclusion criteria of the study were being a widow, being divorced and unwillingness to participate in the research. The study consisted of two parts; the first part dealt with the demographic characteristics of the participants and their husbands, such as age, marital age, the age difference between the couples, place of residence, education, employment status, and the number of children.

The second part was the regarding the violence questionnaire which included questions related to the definition of violence from different aspects, such as physical, sexual, and psychological. The set of questionnaires was derived from other studies conducted in Iran and was appropriate for the Iranian culture. The content validity of the questionnaire was approved by some experts in the field. The questionnaire was based on the one used by Kargar *et al.* (2009) with the reliability of 0.81 by Cronbach's alpha method. The reliability of the questionnaire in the present study was $r = 0.86$ (Mardini Homule & Heidari, 2009). In the present study, domestic violence of a woman has been designated as the violence done by her husband. In addition, an abused woman has been defined as one who provided at least one positive answer to the items of the physical, sexual, or emotional violence questionnaire. In the questionnaire, physical, sexual, and emotional violence were evaluated by question numbers 12, 9, and 15 respectively. The physical domain of the questionnaire included; slapping, kicking, boxing, pulling the hair, pinching the ear, stretching on the floor, throwing sharp objects at the body, throwing dull objects at the body, pushing, tying hands and feet, trying to strangle, biting, and burning a body part. The sexual domain of the questionnaire included; sexual intercourse without consent of woman, initiation of sexual intercourse after verbal threats, physical abuse to continue sexual activity, sexual intercourse after having been threatened by a tool, interrupting sexual intercourse without the female's satisfaction, physical abuse during sexual activities, continuing sexual intercourse without the female's consent, and applying force to continue sexual intercourse. The emotional domain included; vilification, mocking and derision, lying, shouting, huffing, threatening to beat, rejecting, preventing the woman from visiting her family, financial restriction, preventing the woman from wearing her favorite clothes, depriving the woman of affection and attention, irresponsibility towards children, putting a ban

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on watching television, threatening to kill the woman, and threatening to imprison the woman at home. Additionally, violence was measured using a 7-point Likert scale (never, once, twice, 3-5 times, 6-10 times, 11-20 times, and more than 20 times). In order to determine the rate of domestic violence, the number of abused women, i.e., those who provided at least one positive response to the questions related to physical, sexual, and psychological screening, was divided by the number of the whole study population. Women who gained the score of zero from the questionnaire were considered non-abused and women who gained a score of above zero were considered as abused women (Salazar & San Sebastian, 2014). The questionnaire was a self-report scale completed by women referred to clinics to receive prenatal care in the three trimesters of pregnancy.

All analyses were done by using the Statistical Package for the Social Sciences Software (SPSS) version 18 (SPSS Inc, Chicago, IL). The data were analyzed using descriptive statistics, including frequency, percentage, mean, and standard deviation. The researchers initially examined the frequency distribution of physical, sexual and emotional violence. Logistic regression was used to calculate ORs and 95% CI was established for the association between unwanted pregnancy and the different types of violence: emotional, sexual and physical.

To assess the impact of Socio-demographics and other variables (age, education, employment status, etc.) on unintended pregnancy, multivariate binary logistic regression models were constructed using odds ratios (ORs) with 95% confidence interval (CI).

Results:

Table-1: Characteristics of the subjects (participants) as per their Pregnancy status (Mean $\pm$ SD or n (%))

Characteristics	Planned preg. n=304	Unintended preg. n=226
Age	26.10 $\pm$ 4.85	26.62 $\pm$ 4.36
Marital age	20.80 $\pm$ 4.41	20.76 $\pm$ 3.33
Duration of marriage	5.29 $\pm$ 4.08	6.00 $\pm$ 4.37
Different age	5.74 $\pm$ 4.60	5.29 $\pm$ 3.86
Husband age	30.99 $\pm$ 6.92	31.38 $\pm$ 5.76
Location		
Rural	91(30.1)	60(26.5)
Urban	211(69.9)	166(73.5)
Educational level		
Uneducated	6(2)	6(2.7)
Primary school	72(23.8)	44(19.5)
Secondary school	115(38.1)	94(41.6)
College or University	109(36.1)	82(36.3)
Employment status		
Housewife	264(87.4)	192(85)
Employed	38(12.6)	34(15)
Gestational Age		
First trimester	51(16.9)	34(15)
Second trimester	112(37.1)	77(34.1)
Third trimester	139(46)	115(50.0)

Table-2: The relationship between unintended pregnancy and the associated types of violence

Violence	Planned preg. N	%	Unplanned Preg. N	%	OR	CI 95%	p value
Emotional violence							
No	173	61.8	107	38.2	1.491	1.055-2.109	>0.02
Yes	129	52	119	48			
Sexual violence							
No	216	62.6	129	37.4	1.88	1.314-2.715	>0.001
Yes	86	47	67	53			
Physical violence							
No	273	57.1	205	42.9	0.904	0.53-1.74	$\leq$ 0.51
Yes	29	58	21	42.8			
Violence Total							
No	196	64.9	71	26.6	4.03	5.82-2.79	>0.02
Yes	106	40.6	155	59.4			

N-number, OR: odds ratio; 95%. CI: 95% confidence interval
*p-value: logistic regression test: between pregnancy status and Types of Violence

Table-3: Unintended pregnancy related to socio-demographic and other characteristics of participants

Variables	Planned pre. N	%	Unplanned Pre. N	%	Crude OR	CI 95%
Age						
<20	16	7.1	34	11.3	2.08	1.01-4.26
20-30	163	72.1	220	72.8		
>30	47	20.8	48	20.8		
Location						
Rural	60	26.5	91	30.1	1.25	0.75-1.97
Urban	166	73.5	211	69.9		
Educational level						
Uneducated	6	2.7	6	2		
Primary school	44	19.5	72	23.8	1.30	0.688-2.48
Second. school	94	41.6	115	38.1		
College/ Univ.	82	36.3	109	36.1		
Partner's Educational level						
Uneducated	9	4	10	3.3		
Primary school	71	31.4	95	31.5		
Second. school	86	38.1	124	41.1	1.43	0.84-2.44
College/Univ.	60	26.5	73	24.2		
Employment status						
Housewife	192	85	264	87.4	1.12	0.63-1.97
Employed	34	15	38	12.6		
Partner's employment status						
Unemployed	183	81	234	77.5	0.64	0.387-1.086
Employed	43	19	68	22.5		
Number of living children to women						
One	111	49.1	178	58.9	5.37	1.22-23.53
Two	106	46.9	121	40.1		
Three or more	9	4	3	1		
Number of pregnancy						
1st pregnancy	92	40.7	158	52.3		0.60-2.52
2nd pregnancy	96	42.5	98	32.5	1.23	
3rd pregnancy	38	16.8	46	15.2		
History of abortion						
Yes	50	22.1	60	19.9	1.14	0.751-1.74
No	176	77.9	247	80.1		

A total of 226 (42.8%) women, in the present study,

were found to have unwanted pregnancies. In the case of the subjects with unwanted pregnancies, the majority (46%) were in their third trimester, 106 (46.9%) had two children already, 96 (42.5%) were pregnant for the second time, 16 (7.1%) were under 20 years old, apart from it total 192 (85%) were homemakers (Table-1).

The prevalence of violence against the women in our study was found to be 49.4%, 47% of which was emotional violence, 34.7% was sexual violence, and 9.5% was physical violence.

Compared with non-abused women, those who experienced abuse were 4.03 times (95% CI=2.79-5.82) more likely to be at the risk of unintended pregnancies. All the three types of violence- emotional (OR 1.49; 95% CI= 1.055-2.109), sexual (OR 1.88; 95% CI=1.314-2.715) and physical (OR 0.90; 95% CI= 0.53-1.74) abuse were associated with increased unintended pregnancies risk. However, the association between physical abuse and unintended pregnancy was not statistically significant (Table-2).

Table-3 shows the relationships between the characteristics and unintended pregnancy. Overall, 42.8% of the most recent pregnancies were unwanted. A regression-based analysis of the relationship between unintended pregnancy and the factors studied showed that there are significant relationships between violence and age (OR=2.08; 95% CI=1.01-4.26), place of residence (OR=1.25; 95% CI=0.75-1.97), women's education (OR=1.30; 95% CI=0.68-2.48), and number of living children a women has (OR=5.37; 95% CI=1.22-23.53).

Discussion:

The present study is the first attempt to evaluate the relationship between unwanted pregnancy and the rate of domestic violence in Iran. The results of the study showed that the incidence of unwanted pregnancies and the incidence of violence were 42.8% and 49.4% respectively. A total of 49.4% of the subjects had experienced violence at least once in order of frequency; emotional violence, sexual violence, and physical violence accounted for 47%, 34.7% and 9.5% as the cases of violence. Sanchez *et al.* (2013) reported the prevalence of intimate partner violence during pregnancy was 52.2 %. James *et al.* (2013)'s study evidenced for emotional violence-28.4%, physical violence- 13.8%, and sexual violence- 8.0% which was based on 92 independent studies. Mahenge *et al.* (2013) reported on the basis of 1180 women who were interviewed, 27% suffered from both the physical and sexual intimate partner violence during pregnancy, 18% reported physical violence and 20% reported sexual violence.

Victim to intimate partner violence during pregnancy exhibited different forms in different countries. It is difficult to arrive at definite conclusions because of the lack of a standard definition, variation in methodologies of the study including the parameters considered, and the

unwillingness of women to disclose their experiences of physical abuse because of the cultural barriers. Considering the high rate of pregnancy in the developing countries, violence during pregnancy is a public health concern that needs special attention.

The lower frequency of physical violence compared to other forms of violence in the present study can be attributed to a variety of factors; i) it is easier to provide evidence for physical violence in law courts and counseling centers, ii) physical violence during pregnancy can lead to miscarriage, preterm birth, and bleeding (Stockl *et al.*, 2012), all of such could be used as hard evidence in law courts. Second, Iranian women are not usually willing to talk about the physical violence. Lastly, the penal laws for physical violence are often more severe. All the above factors could be enough to explain the change in domestic violence from physical violence toward verbal-psychological violence (Jamali & Javadpour, 2016).

The results of our study showed that the domestic violence increased the risk of unwanted pregnancy by 4.03 times (OR 4.03; 95% CI=5.82-2.79 $p=0.02$). Moreover, emotional violence and sexual violence increased the risk of unwanted pregnancy by 1.4 and 1.8 times respectively. Raihana *et al.* (2012) reported that women who experienced at least one form of violence at least once are 1.35 times more likely to have unintended pregnancy than others. Further, according to the study of Pallitto *et al.* (2013), the number of unwanted pregnancies in abused women was 1.6 times more than non- abused women. Moreover, Azevêdo *et al.* (2013) reported that violence against women increased the probability of unwanted pregnancy by 1.57 times.

Researchers cite a variety of reasons for the correlation between unwanted pregnancies and domestic violence. Akyuz *et al.* (2008) study evidenced that the sexual relationships and pregnancies at very young ages lead to a greater number and lengths of pregnancies and related problems, among them unwanted pregnancies. Our study showed that 53% of women who were sexually abused were more likely to have an unintended pregnancy than those who were not abused, indicating that they became pregnant unintentionally as a result of sexual violence (OR 1.88; 95% CI=1.314 -2.715, $p<0.001$). Also, women who experienced severe emotional violence were 48% more likely to classify their pregnancy as unintended (OR 1.491; 95% CI=1.05- 2.10, $p<0.02$). The results of Salazar & Sebastian (2014), study based on Nicaragua showed that women who reported unintended pregnancy had significantly higher exposures to physical/sexual intimate partner violence, sexual abuse, and oppressive behavior by a partner than those who didn't report unintended pregnancy.

Some studies suggested that abused women cannot control the time of their sexual intercourse or cannot

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prevent intercourse that is imposed by force, and were less likely to adopt contraception, thereby increasing the rate of unwanted pregnancy. Another important issue is the fact that women who suffer violence by an intimate partner may have less decision-making power about interrupting an intercourse when the contraceptive method fails or is removed by their husbands and are unable to exercise control over their fertility (Gee *et al.*, 2009). One reason is the dominance of patriarchy in the Iranian culture and men's belief that birth control is the duty of women.

On the other hand, studies of the relationship between age and unwanted pregnancy showed that the highest rate of unwanted pregnancies is for the women who are in the age group of 20 and 30 years (OR=2.08; CI=1.01-4.26). This is the time when women are most sexually active and are most fertile; therefore, the likelihood of having an unwanted pregnancy is highest in this age range and women need to use more reliable contraceptive methods. The study of Martin-de-las-Heras *et al.* (2015) reported that there is a correlation between age and unintended pregnancy.

The results in our study evidenced that the risk of unwanted pregnancy may also increase due to the low educational level of women and their husbands by 1.3 and 1.4 times respectively (OR=1.30; 95% CI=0.68-2.48), (OR=1.43; 95% CI=0.84-2.44). Total 69.5% of the women with unwanted pregnancies were only elementary school and junior high school level educated. The lower rate of unwanted pregnancies among better-educated couples can be explained as such couples are well aware of contraceptive methods and demographic matters and generally belong to higher socioeconomic classes. These findings emphasize the importance of education for girls and the key role of men in birth control. The study of Raihana *et al.* (2012) revealed that women with higher education had the lower unintended pregnancy rates. Similarly, the study of Martin-de-las-Heras *et al.* (2015) suggested a relationship between unintended pregnancy and education. More highly educated women tend to report domestic violence and unintended pregnancy more in comparison to the uneducated or less educated women.

The results of our study also showed that women's occupational status can increase the risk of unwanted pregnancy by 1.1 times, total 85% of the women with unwanted pregnancies were homemakers and the husbands of 81% of them were unemployed (OR=1.12; 95% CI=0.63-1.97). The study of Raihana *et al.* (2012) showed that unintended pregnancy was not related to working women's being employed. It may be that for employed women in USA, career becomes the first priority and they are reluctant to allow the pregnancy to interfere with their career. In the study of Martin-de-las-Heras *et al.* (2015) unintended pregnancy was related to working women's being employed.

In our study, 49.1% of the women with unwanted pregnancies had a living child and 42.5% were got pregnant for the second time. Generally, most first pregnancies are intended in all families; however, most second and later pregnancies are generally unwanted. In our study, having a history of abortion was found to increase the risk of unwanted pregnancies by 1.4 times. 22.1% of the women with unwanted pregnancies reported an abortion history in the past. Intentional and illegal abortions were often tried by women in a last-ditch attempt to abort their unintended pregnancies by risking their lives. Having a history of abortion and unintended pregnancies increases the risk of unwanted pregnancies in the future. Illegal abortions can have a variety of negative clinical, social and economic consequences for families and countries. Intended abortion of unwanted pregnancies is an important health concern in Iran and has been addressed in several studies (Bennett *et al.*, 2006). It is recommended that more emphasis must be given to educating the women regarding proper prevention for unintended pregnancy rather than on treatments and proper clinical and social reactions. There were some limitations in the present study, even though the researchers interviewed the subjects only after considering their situation and earning their trust, it could be possible that some subjects may shared false experiencing on domestic violence as it was their personal matter.

The unwanted pregnancy and domestic violence statistics gathered in the present study are related to the pregnant women who visited the state clinics of Jahrom, Iran, and transferability of the results to the entire population may not be possible. Another limitation of the study is that the participants were not asked about their financial status because answers could be inaccurate.

The strength of the present study is its use of a proper nationalized domestic violence questionnaire based on the culture of Iran. Questionnaires developed in other countries and translated into Persian might not be suitable for research in Iran's circumstances.

Conclusion:

The results of our study shows that the rates of unwanted pregnancy and domestic violence are relatively high among pregnant women and that there is a significant correlation between violence and unwanted pregnancy. Besides violence, other factors such as age, job, education, number of pregnancies and number of living children correlate with an unintended pregnancy. Accordingly, it could be recommended that clinical centers that provide prenatal care should screen women for domestic violence not only during but also before pregnancy, and by identifying potential victims they must help prevent unwanted pregnancies.

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