

# Prevalence and predictor factor of lifetime abortion in female sex workers in Iran: results of the national rapid assessment and response in 2017

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## ABSTRACT

Female sex workers are at a high risk of abortion. This cross-sectional study included 855 female sex workers to determine the prevalence of lifetime abortion and its related factors. Logistic regression models were used to identify the factors related to lifetime abortion. The prevalence of lifetime abortion was reported at 40.8%. The chance of having a lifetime abortion was 7.8 times higher in women aged >35 years and 2.4 times higher in financially dependent women. The high prevalence of lifetime abortion indicates that these women's health and fertility needs are not met.

**Keywords:** cross sectional, FSWs, Iran, lifetime abortion, predictor, pregnancy, prevalence, risk factor.

## Introduction

Female sex workers (FSWs) have high rates of morbidity, mortality,<sup>1,2</sup> and unintended pregnancy.<sup>3</sup> Condomless sex, limited access to family planning services, and having multiple sex partners are factors that increase the risk of unintended pregnancy in FSW.<sup>4,5</sup> One of the unfavourable results of unintended pregnancy is abortion.<sup>6</sup> There are no reliable data on the rate of abortions among Iranian sex workers.<sup>7</sup> This study examines the prevalence of lifetime abortion and its related factors in FSW in Iran.

## Materials and methods

This is a cross-sectional study that included 855 street-based FSWs from October 2016 to March 2017 in 21 provinces in Iran. Inclusion criteria included women aged >15 years who had commercial sex within 12 months prior to the interview. Informed verbal consent was obtained from all participants. The questionnaire for this study included questions about demographic characteristics, history of sex work, and related risks of sex. Trained female interviewers met with FSW participants privately and individually. The prevalence of lifetime abortion was calculated by 95% confidence interval (CI). Simple and multiple logistic regression models were conducted to identify the factors affecting lifetime abortion in FSWs. Stata version 12 was used for all analyses, and the significance statistically level was considered less than 0.05.

## Ethical considerations

Participants were informed about the purpose of the survey, the voluntary nature of their participation, incentives, and anonymity of all collected data. The study protocol and procedures were reviewed and approved by the Ethics Committee (IR.UEWR.REC.1394.392) and the Research Review Board at University of social welfare and rehabilitation Sciences (USWRS).

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**Table 1.** Lifetime self-reported abortion in female sex workers in Iran (2017).

Variable	N	Lifetime abortion			Simple logistic regression		Multiple logistic regression		
		Prevalence	(95% CI)	P-value	OR (95% CI)	P-value	OR <sub>adj</sub> (95% CI)	P-value	
Ever abortion									
Yes	349	40.8	56.1	62.3	–	–	–	–	–
Age (years)									
18–24	107	23.4	15.7	32.5	0.0001	1	–	–	–
25–34	374	38.6	33.5	43.8		2.05 (1.25–3.37)	0.0001	5.80 (1.25–26.89)	0.02
>35	364	48.1	42.8	53.5		3.04 (1.85–4.99)	0.0001	7.81 (1.60–38.08)	0.01
Educational level									
Illiterate	62	56.7	43.2	69.4	0.0001	1	–	–	–
Primary school	221	48.6	41.7	55.5		0.72 (0.40–1.28)	0.1	–	–
Guidance school	241	47.6	41.0	54.3		0.69 (0.39–1.23)	0.21	–	–
High school	356	29.0	24.3	34.2		0.31 (0.17–0.54)	0.00	–	–
Age at first marriage (years)									
≤18	449	48.3	43.5	53.1	0.03	1	–	1	–
>18	206	39.1	32.3	46.2		0.68 (0.49–0.96)	0.03	1.16 (0.38–2.54)	0.78
Dependency burden									
No	323	35.8	30.6	41.4	0.01	1	–	–	–
Yes	377	45.5	40.2	50.7		1.49 (1.09–2.03)	0.01	2.42 (1.2–4.48)	0.01
Length of sex work (years)									
≤5	164	34.4	27.1	42.3	0.007	1	–	1	–
>5	534	46.5	42.1	50.8		1.65 (1.14–2.39)	0.0001	0.89 (0.35–2.27)	0.82
HIV test result									
Negative	417	45.8	40.8	50.8	0.17	1	–	1	–
Positive	48	37.0	23.2	52.5		0.69 (0.36–1.30)	0.25	0.15 (0.02–0.98)	0.04
Age at first sex (years)									
≤18	575	45.4	41.2	49.7	0.01	1	–	1	–
>18	244	36.0	29.9	42.4		0.67 (0.49–0.92)	0.01	1.42 (0.61–3.27)	0.4
Age at sex work debut (years)									
≤18	224	38.4	31.9	45.3	0.05	1	–	1	–
>18	502	46.2	41.8	50.8		1.37 (0.99–1.91)	0.05	0.66 (0.20–2.17)	0.50
Ever worked in brothels									
No	316	34.3	29.0	40.0	0.001	1	–	1	–
Yes	539	45.7	41.4	50.1		1.61 (1.20–2.15)	0.0001	2.08 (0.99–4.38)	0.05
Group sex (ever)									
No	581	35.6	31.7	39.7	0.001	1	–	1	–
Yes	278	50.7	44.6	56.8		1.86 (1.38–2.49)	0.0001	1.77 (0.79–3.95)	0.16
Sexual violence									
No	661	37.2	33.4	41.1	0.001	1	–	1	–
Yes	237	50.7	44.0	57.3		1.73 (1.27–2.35)	0.0001	–	–
STIs (last year)									
No	661	36.0	31.7	40.4	0.001	1	–	1	–
Yes	237	47.3	42.1	52.5		1.59 (1.20–2.10)	0.0001	0.86 (0.43–1.70)	0.67

(Continued on next page)

**Table 1.** (Continued).

Variable	N	Lifetime abortion			P-value	Simple logistic regression		Multiple logistic regression	
		Prevalence	(95% CI)			OR (95% CI)	P-value	OR <sub>adj</sub> (95% CI)	P-value
Self-perceived risk of HIV									
No	388	35.7	28.2	43.7	0.001		–		–
Yes	185	44.9	39.9	49.9		1.46 (1.00–2.15)	0.04	0.63 (0.26–1.53)	0.31
Ever consumed alcohol									
No	400	34.8	29.9	39.9	0.002		–		–
Yes	498	45.5	41.0	50.0		1.59 (1.18–2.06)	0.0001	1.49 (0.73–3.04)	0.26
Ever used drugs									
No	356	31.9	26.9	37.3	0.001		–		–
Yes	542	46.4	42.1	50.8		1.84 (1.38–2.46)	0.0001	1.81 (0.79–4.11)	0.15
Ever injected drugs									
No	820	38.9	35.5	42.4	0.007		–		–
Yes	78	60.5	48.6	71.6		2.40 (1.48–3.90)	0.0001	1.18 (0.38–3.69)	0.76

## Results

The prevalence of lifetime abortion in FSWs was 40.8% (95% CI 37.7–43.9). The mean (s.d.) of age was 33.07 (7.94) years.

The results of multiple regression analysis showed that the chance of having a lifetime abortion was significantly 5.8 times higher in women aged 24 to 35 years and 7.8 times higher in women aged >35 years compared to women aged <24 years. This chance was 2.42 times higher in women with dependency burden compared to women without dependency burden, and 2.08 times higher in women who worked in brothels compared to those who never worked in a brothel. In addition, the chance of having a lifetime abortion was significantly 85% lower in women who had a positive HIV test result compared to those who had a negative HIV test result (Table 1).

The dependency burden means the number of people from the household whose living expenses are covered by sex workers.

## Discussion

Our study, in accordance with the findings of previous studies,<sup>8,9</sup> showed that the prevalence of lifetime abortion among FSW is high, especially in women aged >35 years, women who worked in brothels, and women with high financial dependence which causes more work pressure, such as long working hours and increased demand from customers. In Iran, the relationship between having worked in a brothel and the risk of abortion in FSW may be influenced by the cultural, legal, and socio-economic context of the country.

Despite the high prevalence of abortion in these women, we should note that in Iran, there are many obstacles that reduce access to healthcare, and there is limited access to safe

and legal abortion services for FSW. These obstacles include traditional norms and laws regarding sex work, stigma and discrimination, financial inability to care for their babies, and the sexual partner's refusal to accept responsibility for the care of the baby, and unfair treatment of health care providers to these women.<sup>3,8,10,11</sup> One of the essential points recommended by the World Health Organization is the integration of health and fertility centres in HIV and sexually transmitted diseases programs to reduce unwanted pregnancies. For this reason, health policymakers should take the necessary measures to develop these centres and create safe abortion centres.

## Limitations

Our study is a cross-sectional study that, cannot properly estimate the causal relationship in terms of time. Under-reporting of sensitive information may have led to biased results. Self-reported data may have caused recall bias.

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