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Relationship between Sexual Attitude with Practice Regarding Sexually Transmitted Infections and their Demographic Predictors in Female Sex Workers: A Cross-Sectional Study

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Research Article

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Abstract

Background: The prevalence of high-risk behaviors among different parts of society has attracted attentions to prostitution as one of the most important current problems. There are limited numbers of studies on sexual attitude and practice regarding sexually transmitted infections (STIs) in Iranian female sex workers.

Objectives: This study was carried out to determine the relationship between sexual attitude and practice regarding STIs among Iranian female sex workers.

Methods: In 2015, a study was conducted on 173 sex workers. All eligible female sex workers who had a record in state welfare offices, health care centers and drug rehabilitation centers were selected by convenience sampling and street sex workers selected by snowball sampling method. Data were collected using socio-demographic, Brief Sexual Attitudes Scale (BSAS) and practice questionnaires. Data were analyzed by using Pearson correlation, independent t, one-way ANOVA tests and multivariate linear regression model.

Results: The mean (SD) scores of sexual attitude and practice were, respectively, 59.8 (4.3) and 61.2 (6.4). Based on Pearson correlation test, there was a significant relationship between practice regarding STIs and sexual attitude (p=0.001, r=0.25). Based on multivariate linear regression model, non-paying client, mothers' job, history of sexual abuse,

client type and families' economic variables were predictors of sexual attitude and father's education and occupation, families' income, history of sexual abuse, husband's education, places of supplying condoms, condom use, duration of staying at this job, accessing ways of client and usual working times were predictors of practice.

Conclusions: Due to the relationship between sexual attitude and practice regarding STIs, it is necessary to improve the attitude of these women with consideration of its predictors. Also, through public education to these individual and changing their attitudes, particularly their attitudes towards limiting sexual relationships and maintaining the health, their practice regarding STIs could be improved.

Keywords: Prostitute; Stis; Sexual Attitude; Practice; Iran; Sex Worker

Background

The disregard of the norms and values of society could have irreversible negative consequences that affect different groups in different ages [1]. One of the social problems that can be considered as a social harm is social deviance, which has a broad conceptual scope. In our culture, rape, juvenile delinquency, homosexuality, drug addiction, prostitution, etc. are among social deviances [2]. Prostitution, which can be observed in Iran as well, is an immorality which is generally attributed to females [3]. The prostitute word means harlot and whore female [4]. Prostitution is defined as the business or engaging in sexual relations to earn money [5]. Prostitution is usually associated with other psychosocial disorders such as addiction, committing crime, and alcoholism [3]. The highest rate of sexually transmitted infections (STIs) has been reported in individuals with multiple sexual partners, concurrent sexual partners, and those who are in the sexual networks, for example, sex workers [6,7]. People who start to have sex at early ages will end up with increasing genital infections [8].

Prostitutes are more at the risk of STIs, because of changes in their sexual partners and the high rate of unprotected sexual intercourses [9]. Infections are considered as the serious health problems in the world which affect the life of women, men, and their family and social relationships. Infections can be associated with many consequences including infertility, ectopic pregnancy, chronic pelvic pains, miscarriage and increased risk of HIV infection [10]. Sexually transmitted infections are a public health problem [11] in most countries, especially in developing countries; and the younger people are more likely to become infected with them [12], they are defined as a type of sexually transmitted infections from one person to another during sex [13]. The highest prevalence of STIs was observed in people with age range of 15 to 49 years that known as the sexual active group.

The best way to prevent infections is: to have only one single healthy sexual partner, correct and consistent use of condoms, delayed age of the onset of sexual activity and having regular examinations [14,15]. In developing countries, STIs causes many side effects; and it is rapidly spreading around the world especially in the least developed countries [15,16] but limited efforts have been done to control and reduce it.

Being an informed person is not only a sufficient condition to change people's attitude; but also social and cultural factors such as religion, attitudes towards illness, health and risky behaviors, particularly sexual behaviors could affect their attitudes [17]. Studies conducted in many countries have shown that nowadays, teenagers are experiencing premature puberty compared to the previous generations; as a result, they start sex at younger ages, and consequently experience unplanned early pregnancy, unwanted and unsafe abortions and STIs [18].

Objectives

Each plan to promote people's health requires knowing their level of awareness, attitude and practice. Therefore, this study was carried out to determine relationship between sexual attitude and practice regarding STIs in prostitute women in Kermanshah-Iran, 2015.

Patients and Methods

Participants and Setting

This cross-sectional study was conducted on 173 female sex workers after receiving permission from the Ethics Committee of Tabriz University of Medical Sciences (ethics code: 139430). Eligible women were chosen by convenience sampling method from records of the Social Welfare department, health care and addiction treatment centers, as well as street sex workers were selected through snowball method at Kermanshah-Iran, 2015. The inclusion criteria were: women with multi sexual partners, literate, willing to participate, aged between 15 to 49 years. The exclusion criteria included individual's withdrawal from the study.

This study was a part of a larger study in which the sample size has been calculated on the basis of knowledge and attitudes. In this case, by considering knowledge by error of 5% and accuracy of 0.1 around the mean (m=4.54) and SD=3.05, there were 173 samples [19] and based on the attitude by error 5% and accuracy of 0.1 around the mean (m=7.66) and SD=2.5, 41 people were assessed [20]. Because the estimated sample size based on knowledge was higher, the final sample size was considered 173 individuals.

Sampling

At first, a list of all women known with high-risk sexual behaviors with records in the Department of Social Welfare, Department of Public Places, health centers, and rehabilitation centers was provided as well as street sex workers by the snowball sampling method (a non-probable sampling method and identification of one sample of the statistical population and questioning them to identify more samples) along with their phone numbers was provided. Then, the researched called them and the objectives of the study were explained for them. They were also asked to refer to the mentioned centers. The goals and the method of implementation of the project were made clear to all participants and they were assessed in terms of basic information and inclusion criteria. Finally, the eligible women were enrolled in the study after the completion of an informed consent forms.

Data Collection

The data collection instruments were included 3 questionnaires: practice regarding STIs, Brief Sexual Attitudes Scale (BSAS) and socio- demographic characteristics. The items of socio-demographic questionnaire included age, education level, families' income, marital status, father's occupation and education, husband's occupation and education, mothers' occupation and education, number of marriages and children, age of the first illegal sexual intercourse, age of entry into sexual activity, duration of staying at this job, history of sexual abuse in childhood, smoking history, history of sexual violence, condoms use in client, client type, employment status, re-use of condom, places of supplying condoms, non-paying client, accessing ways of client and usual working times.

The questionnaire of practice was a researcher-designed instrument developed based on a review of the related literature [21-24]. This questionnaire examined the practice regarding STIs of sex workers including 13 four-choice items including never (score=1), sometimes (score=2), almost (score=3) and always (score=4). Total score range is from 0 to 100 that higher scores indicate better practice.

The questionnaire of BSAS included 23 questions five-choice items (strongly disagree, disagree, no opinion, agree, strongly) and summarized in four subdomain included permissiveness, birth control, communion, instrumental that scoring from 1 to 5. The range of attitude total score is 0 to 100 and higher scores indicate better attitude. After forward & backward translation, the content validity was determined.

The content validity of BSAS and practice questionnaires was determined based on the content validity index (CVI) including relevancy, clarity and the simplicity of each item and also the content validity ratio (CVR) included the necessity of each item. The amount of CVI was 0.86 and 1.00 for BSAS and practice questionnaires, respectively. Also, the amount of CVR was 0.82 and 0.96 for BSAS and practice questionnaires, respectively.

The reliability of the questionnaires was determined via pre-test and post-test administered to 20 individuals through intra-cluster correlation coefficient (ICC) with 95% confidence interval that was calculated 0.96 (0.96-1.0) for practice questionnaire and 0.99 (0.99-1.0) for BSAS.

The mentioned questionnaires were completed by each individual through researcher's guidance in case of problems in completion of the questionnaires by necessary explanations. To keep the data confidential, an anonymous coding method was used for the questionnaires.

Data Analysis

Data were analyzed using descriptive statistics (central and dispersion indexes) and normal distribution of quantitative data was evaluated. Pearson correlation test was used to determine the relationship between sexual practice and sexual attitude and its sub domains. Also, independent t-test and one-way ANOVA were used to determine the relationship between socio-demographic characteristics and sexual attitude and practice. Then, to estimate the impact of each of the independent variables (socio-demographic characteristics) on dependent variables (attitude and practice), the multivariate linear regression model with Backward strategy was used. All variables with P<0.2 were entered into multivariate linear regression model based on bivariate tests. Before multivariate analysis, regression assumptions including normality of residuals, homogeneity of variance of residuals, co linearity, outliers and independence of residuals were evaluated. All analyzes were done by using the SPSS software version 21.

Results

Totally, 173 female sex workers were recruited for this study. The mean (standard deviation) age of participants was 30.3 (7.5) years. About a quarter of women (26.6%) were divorced and a quarter of them (24.9%) were married. Less than half of participants (40.5%) had diploma and 27.2% had university education. One-third of the participants' fathers (33.5%) were as worker and the majority of their mothers' job (75.7%) was housewives. Father's education in more than one-third of participants (37.0%) was high school and diploma and the maternal education was primary school in more than one-third (38.7%). One-third of the married women (33.3%) mentioned their husbands' job as workers and one-third (33.3%) were unemployed. Husband's education in less than half of them (44.4%) was diploma. More than half of women (52.9%) reported insufficiency of their families' income. About half of women (51.7%) were once married. 61.9% of the married participants had no children. According to one-way ANOVA test results; there was a significant relationship between practice and marital status, father's education and families' economic status and also between sexual attitude and families' economic status variables (p<0.05) (Table 1).

Demographic characteristics	N	Attitude Mean (SD)	Practice Mean (SD)	Demographic characteristics	N	Attitude Mean (SD)	Practice Mean (SD)
Age group				**Father's education**			
20≥	20	61.2 (3.7)	60.7 (5.4)	Illiterate	18	60.0 (4.8)	63.6 (5.6)
21-30	77	59.9 (4.1)	60.8 (6.6)	Primary school	36	59.5 (3.7)	63.2 (6.6)
≤31	76	59.4 (4.7)	61.8 (6.5)	Secondary school	40	59.4 (4.6)	58.7 (7.3)
Marital status				High school & Diploma	64	60.0 (4.7)	61.3 (5.6)
Single	35	60.9 (4.3)	61.5 (5.7)	Academic	15	60.8 (3.3)	60.3 (5.6)
Married	43	59.3 (4.1)	63.5 (6.0)	**Education Level**			
Divorced	46	59.7 (4.5)	60.0 (5.7)	Primary & secondary school	33	61.1 (4.6)	62.1 (7.5)
Widow	34	59.3 (4.3)	59.7 (7.6)	High school	23	61.4 (4.9)	61.6 (4.9)
Concubine[a]	11	61.1 (2.8)	63.1 (6.8)	Diploma	70	59.8 (4.2)	62.0 (6.2)
Husband's education				Academic	47	59.0 (4.7)	59.3 (6.3)
Primary & secondary school	17	59.2 (4.3)	62.4 (7.3)	**Number of Children***			
High school and Diploma	24	59.4 (4.3)	64.5 (5.2)	0	83	59.5 (4.3)	60.4 (6.2)
Academic	13	60.8 (4.2)	62.4 (5.8)	2-Jan	42	59.3 (4.6)	62.0 (6.5)
Husband's Job				2 and more	9	60.9 (3.7)	64.7 (9.3)
Unemployed	18	59.6 (4.3)	62.6 (5.1)	**Father's job**			
Working	18	59.7 (4.5)	63.9 (7.0)	Unemployed	16	60.0 (4.8)	64.9 (3.5)
Employee	9	60.9 (4.8)	63.8 (3.9)	Working	58	59.9 (4.2)	61.3 (6.7)
Free	9	58.5 (3.1)	63.0 (8.2)	Employee	49	60.2 (4.3)	60.1 (5.6)

Occupation of mother				Free	50	59.5 (4.5)	61.3 (7.1)
Housewife	131	59.6 (4.4)	61.1 (6.6)	**Number of marriages ***			
Employee	42	60.6 (4.0)	61.7 (5.8)	1	89	60.9 (4.5)	61.5 (5.7)
Maternal education				2 or more	48	59.2 (4.4)	61.0 (6.6)
Illiterate	29	59.4 (4.5)	61.9 (6.8)	**Families' income**			
Primary school	67	59.8 (4.3)	60.9 (7.1)	Inadequate	91	58.5 (4.6)	59.6 (6.6)
Secondary school	22	58.6 (5.5)	61.7 (6.3)	Less than adequate	43	61.9 (3.5)	64.2 (5.1)
High school and Diploma	43	60.4 (4.0)	61.2 (5.4)	Adequate	38	60.6 (3.5)	62.0 (5.8)
Academic	12	61.4 (3.2)	61.3 (5.7)				

Table 1: Association of demographic characteristics with sexual attitude and practice in female sex workers in Kermanshah-Iran (n = 173).

*does not include single people.

[a]Represents of association demographic characteristics with attitude score

[b]Represents of association demographic characteristics with practice score with significant level p<0.05

The mean (SD) age of the first illegal sexual intercourse was 19.1 (2.8) years and 44.2% with range of 18-20 years. The mean (SD) onset age of prostitution was 24.3 (4.2) years and 85.5% with range of 20-30 years. More than half of individuals (54.7%) were involved in this high risk behavior for more than four years. More than two-thirds of women (67.3%) reported a history of sexual abuse in childhood and the majority of individuals (83.4%) mentioned sexual violence in duration of their relationship. More than two-thirds of women (67.3%) had both fix and variable client. Most of them (90.0%) were using condoms during all their relations with their clients. Less than half of participants (43.7%) mentioned pharmacies as provision sites of condom. More than third-quarters of them (80.0%) hadn't non-paying client. Most people did not report the use of condoms repetitively and more than once. More than half of individuals (59.1%) hadn't have history of smoking. The majority of women (82.4%) were working independently and 86.6% their clients found them through the introduction of a friend, in street and etc. 42.1% of participants had the maximum working times in the morning. According to one-way ANOVA and independent-t tests results; there was a significant relationship between practice and history of sexual abuse in childhood, condom use in client, client type, sexual violence, places of supplying condoms, re-use of condom, usual working time and also between attitude and history of sexual abuse in childhood, condoms use in client, client type, places of supplying condoms and non-paying client (p<0.05) (Table 2).

Characteristics	N	Attitude	Practice	Characteristics	N	Attitude	Practice
		Mean (SD)	Mean (SD)			Mean (SD)	Mean (SD)
Age at first sexual activity (year)				**Age of entry into sexual activity (year)**			
<15	3	58.8 (1.0)	60.8 (11.1)	<20	19	61.6 (3.5)	61.9 (4.7)
15-17	50	60.2 (3.9)	62.7 (5.1)	20-30	147	59.7 (4.3)	61.2 (6.6)
18-20	76	59.8 (4.2)	60.8 (6.6)	31-40	6	58.2 (6.2)	61.2 (4.1)
21-23	33	59.1 (5.3)	60.9 (7.0)	**Usual working time [b]**			
>23	10	61.0 (4.9)	59.4 (7.5)	Morning	72	60.4 (4.0)	63.2 (5.3)
Duration of staying at this job (year)				Afternoon	22	59.3 (5.2)	60.7 (8.8)
<1	21	59.8 (5.3)	58.4 (4.6)	Evening	10	60.2 (6.2)	62.1 (5.5)
2	26	60.0 (3.9)	60.4 (7.0)	Morning & evening	42	59.5 (3.5)	58.5 (5.5)
3	19	60.6 (4.4)	63.9 (4.8)	During the day	25	58.6 (5.1)	60.1 (7.2)

4	12	60.1 (5.5)	59.9 (6.4)	**History of sexual abuse in childhood[a] [b]**			
>4	94	59.6 (4.2)	61.8 (6.6)	Yes	115	59.3 (4.2)	60.4 (6.2)
Re-use of condoms [b]				No	56	60.9 (4.5)	62.9 (6.5)
Yes	4	60.8 (3.6)	54.8 (10.4)	**Sexual violence in relationship duration [b]**			
No	154	60.0 (4.3)	62.2 (5.7)	Yes	143	59.8 (4.5)	60.6 (6.5)
History of smoking				No	28	60.0 (3.7)	64.3 (5.0)
Yes	70	59.5 (4.4)	60.3 (6.8)	**Condom use in client[a] [b]**			
No	101	60.1 (4.3)	61.9 (6.1)	All times	153	60.1 (4.3)	61.9 (6.)
Accessing ways of client				Occasionally	17	57.7 (4.3)	54.9 (7.1)
Tel and internet	23	59.8 (3.9)	59.2 (6.9)	**Places of supplying condoms[a] [b]**			
Street, friends, …	148	59.8 (4.4)	61.5 (6.3)	Customers	50	60.0 (4.3)	63.3 (5.1)
Employment Status				Pharmacies	69	60.9 (4.2)	62.7 (4.9)
Group	30	60.8 (4.1)	62.5 (7.0)	Health care centers	33	58.4 (4.3)	59.3 (8.0)
Individual	140	59.6 (4.4)	60.9 (6.3)	All cases	6	59.1 (2.2)	58.6 (6.2)
Client type[a] [b]				**non-paying client[a]**			
Permanent	56	58.5 (5.0)	58.8 (5.9)	Yes	34	61.5 (3.7)	60.8 (4.5)
Permanent and temporary	115	60.5 (3.9)	62.4 (6.4)	No	136	59.5 (4.4)	61.3 (6.8)

Table 2: Association of some variables with sexual attitude and practice in female sex workers in Kermanshah-Iran (n = 173).

[a]Represents of association demographic characteristics with attitude score
[b]Represents of association demographic characteristics with practice score with significant level p<0.05

The mean (SD) scores of attitude and practice were, respectively, 59.8 (4.3) and 61.2 (6.4) from the obtainable range of zero to 100. Among sub domains of attitude, the highest mean score was related to the birth control aspect with the score of 92.9 (8.0) and the lowest mean score was related to the permissiveness aspect with the score of 44.6 (9.4). Based on Pearson correlation test, there was a significant relationship between practice and attitude (p=0.005, r=0.25). Also, there was a significant and positive relationship between the practice and instrumental sub domain of attitude (p<0.001, r=0.29) (Table 3).

Variable	Minimum score	Maximum score	Mean (SD)	Relation with practicer (p)
Attitude	47.8	70.4	59.8 (4.3)	0.25 (0.001)
Permissiveness	20	72	44.6 (9.4)	0.12 (0.112)
Birth Control	53.3	100	92.9 (8.0)	0.04 (0.591)
Communion	52	76	63.4 (4.1)	-0.06 (0.410)
Instrumental	44	88	66.8 (9.7)	0.29 (p<0.001)
Practice	43.3	75	61.2 (6.4)	

Table 3: Attitude scores and association of attitude and its sub-domains with practice in female sex workers in Kermanshah-Iran.

Scores obtainable range in attitude and its sub-domains and practice was zero to 100.

The analysis of items of practice questionnaire showed that about half of women (53.2%) in all self-sexual relationships had oral and anal sex. 42.8% of women had sexual relationship during menstrual period. About two-thirds of women (73.4%) used condom in all sexual relationships and 71.1% of women were using condom throughout sexual relationship.

Based on multivariate linear regression, non-paying client, mothers' job, history of sexual abuse in childhood, client type and families' economic status variables were predictors of attitude by adjusting other variables and explained 17.8% of the variance in overall score of the attitude of sex workers. In individuals with a history of sexual abuse in childhood and women have permanent clients compared to having both permanent and temporary, the attitude was significantly lower. In women who had non-paying client, the attitude score was significantly higher. In house wife mother and inadequate income of families, attitude score were lower but the difference wasn't significant (Table 4).

Variable	B (CI 95%)*	P-value
History of sexual abuse in childhood		
No	Ref	
Yes	-1.5 (-2.9 to -0.2)	0.022
Non-paying client		
No	Ref	
Yes	2.0 (0.4 to 3.6)	0.010
Occupation of mother		
Employee	Ref	
Housewife	-0.9 (-2.5 to 0.7)	0.263
Families' income		
Adequate	Ref	
Inadequate	-1.3 (-3.1 to 0.5)	0.158
Less than adequate	1.3 (-0.6 to 3.3)	0.178
Client type		
Permanent and temporary	Ref	
Permanent	-2.2 (-3.6 to -0.8)	0.001

Table 4: Demographic Predictors of sexual attitude in female sex workers.

Adjusted R2 = 17.8% *CI 95% = 95% Confidence Interval

Also based on multivariate linear regression, father's occupation and education, family income, history of sexual abuse in childhood, husband's education, places of supplying condoms, condoms use, history of staying in this job, client access ways and the maximum working times were predictors of practice by adjusting other variables and explained 40.5% of the variance in overall score of the practice of sex workers (Table 5).

Variable	B (CI 95%)*	P-value
Father's education		
Academic	Ref	
Illiterate	0.3 (-12.6 to 13.2)	0.961
Primary school	0.0 (-11.5 to 11.5)	1.00
Secondary school	-7.0 (-18.9 to 4.8)	0.233
High school & Diploma	-2.5 (-12.2 to 7.2)	0.603
Families' income		
Adequate	Ref	
Inadequate	-0.5 (-8.3 to 7.1)	0.879
Less than adequate	2.6 (-4.0 to 9.3)	0.429
Condom use in client		
Occasionally	Ref	
All times	-9.1 (-22.8 to 4.6)	0.184
Places of supplying condoms		
All below cases	Ref	
Customers	6.1 (-1.7 to 14.0)	0.124
Pharmacies	5.0 (-2.0 to 12.1)	0.155
Health care centers	2.6 (-4.5 to 9.8)	0.458
Usual working time		
During the day	Ref	
Morning	2.2 (-3.4 to 8.0)	0.428
Afternoon	6.0 (-1.0 to 13.1)	0.093
Evening	8.0 (-0.4 to 16.4)	0.062
Morning & evening	1.8 (-5.3 to 9.1)	0.602
Husband's education		
Academic	Ref	
Primary & secondary school	-0.5 (-7.1 to 5.9)	0.858
High school and Diploma	3.8 (-1.0 to 8.7)	0.122
Father's job		
Non-governmental	Ref	

Unemployed	-0.8 (-9.4 to 7.7)	0.849
Worker	0.7 (-5.0 to 6.5)	0.799
Employee	-6.5 (-11.6 to -1.5)	0.013
History of sexual abuse in childhood		
No	Ref	
Yes	-4.6 (-9.2 to -0.03)	0.048
Duration of staying in this job (year)		
>4	Ref	
<1	6.3 (-2.3 to 15.1)	0.147
2	3.7 (-2.3 to 9.9)	0.218
3	2.5 (-2.6 to 7.6)	0.323
4	0.1 (-7.1 to 7.4)	0.976
Accessing ways of client		
Street, friends, …	Ref	
Tel and internet	2.6 (-4.4 to 9.8)	0.458

Table 5: Demographic Predictors of sexual practice in female sex workers.

Adjusted R^2 = 40.5%
*CI 95% = 95% Confidence Interval

Discussion

This study showed that the scores of sexual practice and attitude of sex workers were in the average range; and with increased attitude, the score of practice was increased as well. With sex workers' increased instrumental attitude towards sexual intercourse, their practice was also increased and they experienced better practice. Sex workers had a good attitude towards birth control (more than 90%) and poor attitude towards Permissiveness (less than 50%). Non-paying client, mothers' job, history of sexual abuse in childhood, client type and families' economic status variables were predictors of attitude by adjusting other variables and father's occupation and education, family income, history of sexual abuse in childhood, husband's education, places of supplying condoms, condoms use, history of staying in this job, client access ways and the maximum working times were predictors of practice by adjusting other variables. About half of women had sexual relationship during menstrual period and often individuals used condom in all sexual relationships and throughout sexual relationship.

The results of present study showed that by increasing the attitudes, practice of individuals was improved in terms of prevention of STIs. In the study conducted by Lotfipour et al. in Rafsanjan-Iran on 384 non-medical students, entitled "assessment of the awareness of, as well as practice and attitude of non-medical students towards the ways of HIV transmission", results showed that with improved attitude, the practice is also enhanced and those who had a more positive attitude towards this disease were observed to safer behaviors [25]. The study of Mazloumi et al. in Yazd-Iran showed that with increased proper attitudes towards skin cancer, the preventive behavior towards this disease was also increased [26]. In the cross-sectional study of Purushottam et al. on 103 prostitutes in Mumbai entitled "Sexual behavior, knowledge and attitude of prostitutes towards AIDS (HIV)" showed that misconceptions about HIV were very high. Only a third of the prostitutes used condom in their sexual intercourse with their steady customers [21]. In the study of Enkhbold et al. on 342 Mongolian prostitutes, it was observed that although most of them were using condom in their intercourse with their customers, but only half of them were using condom in their non-paying intercourse with their acquaintances [23]. The results of above study are consistent with the results of the present research; so the practice was decreased with low attitude; and on the contrary, the practice was increased with high attitude.

Our research showed that having an instrumental attitude towards sex in sex workers leads towards their enhanced practice. The study of Vuylsteke (2012) and Nguyen (2005) showed that development of an intimate relationship and emotional dependence leads to the lack of attention to the threatening risk factors and use of condoms [27,28]. The results of above study are consistent with the results of the present study, so that by increasing intimacy and empathy and decreased instrumental aspect of attitude, the practice is reduced as well.

According to the results of this study, most women use condom in all sexual relations and in the full-length of their intercourse. 42.8% of them have sex during their menstrual period. The study of Barrientos in Chile (2007) showed that prostitutes living in Santiago with a great rate of them using condom, any of them weren't infected with AIDS [29]. The studies of Ye et al. in China and Chatham et al. in Brazil showed that the percentage of condom use by prostitutes during sexual intercourse was 63.8 and 100.0, respectively [30,31]. The study of Fornasa et al. in Eastern Europe showed that a third of 98 street prostitutes from Eastern Europe who were working in Italy did not use condom; and irresponsible behavior of their Italian clients by suggesting higher amounts to prostitutes for having a condom-free sex was effective in the condoms non-using [32]. The cross-sectional study of Purushottam in Mumbai (2012) showed that most prostitutes (71.8%) have sex with their clients even

during the menstrual period [21]. The results of the present study were consistent with the findings of Purushottam's study. Having sex during menstruation could be due to the lack of awareness of its side-effects or demand of clients; therefore, it is required to provide necessary training on prevention of having sex during this period by focusing its side effects.

This study showed that the average score of practice (61.8 (6.5)) in the age group of 31 and above was higher. In the study of Bharat et al. (2013) conducted in India, women older than 31 years had better sexual practice in terms of the safe sex and condom use [33]. The results of the present study were consistent with the above study which could be due to the increased experience and knowledge of women in this age group.

In this study, factors associated with attitude, based on multiple linear regressions, included monthly income sufficient for living expenses, mothers' occupation, and history of sexual abuse in childhood, client's type and non-paying clients. The study of Alizadeh et al. in Rasht-Iran showed that attitudes towards career prospects were higher in midwifery students with average socio-economic status [34]. The results of the above study were consistent with the results of the present study; and it is needed to change attitudes of people with lower economic status.

In recent study, factors associated with practice, based on multiple linear regression, included father's education and employee occupation, families' income, history of sexual abuse in childhood, husband's education, places of supplying condoms, condoms use, duration of staying at this job, accessing ways of client and the usual working times. The study of Farshbaf et al. on women referring to Tabriz-Iran health centers showed that the scores of preventive behavior were increased with the increased level of education and income [22]. The study of Ghezelsaflou et al. in Eslamshahr showed that adolescents with a childhood history of sexual abuse develop more high-risk behaviors [35]. The results of above study were consistent with the results of the present study; and parents and spouses should be aware of the positive effects of having higher education in promoting safe sexual practices. For reduced child abuse and healthy child rearing, it is required to provide training on parenting skills and courses and other trainings required for rearing a healthy and prosperous human resource.

In this study, as sampling was conducted only on sex workers working in Kermanshah-Iran, therefore, it cannot be generalized to other cities. This was a limitation of this study. However, there were other limitations too. For example, samples might not have entered accurate data due to the items' nature. However, this limitation was regulated to some extent by not mentioning the respondents' names and by emphasizing the fact that the responses would be remain confidential. This study used convenience sampling method, which could reduce the generalizability of results. On the other hand, the subject of this study was not a repetitious, one which can be observed as its worth. It is recommended that simultaneous studies be conducted on large populations and also among sex workers of prison at different societies. However, it is also suggested that similar studies be conducted on other age groups, in order to prevent of high-risk behaviors, especially during youth.

This study shows an increase in attitude score can also improve practice. Therefore, it is required to identify the causes of promiscuity of people in the society and efforts should be made to raise the awareness and attitudes of high risk individuals. Due to the relationship between sexual attitude and practice regarding STIs, it is necessary to improve the attitude of these women with consideration of its predictors. Also, through public education and by changing their attitudes, particularly their attitudes towards limited sexual relationships and maintaining the women's health, their practice regarding STIs could be improved.

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