

Nurses' and midwives' job satisfaction and stigmatizing attitudes towards HIV/AIDS in Yazd City, Iran, in 2020

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Abstract

Introduction: This was a cross-sectional study conducted to determine the relationship between stigmatizing attitudes towards HIV/AIDS patients in relation to job satisfaction of nurses and midwives in Yazd, Eastern Iran. Cases of HIV/AIDS have not been studied.

Material and methods: A total of 399 nurses and midwives were enrolled into the study using a multi-stage cluster method; all participants completed two standard questionnaires regarding health personnel attitudes towards HIV and job satisfaction on their own. Pearson's correlation coefficient and multiple regression analysis were applied to investigate the relationship between stigmatizing attitude and job satisfaction, and to control the effect of confounding variables. Analyzes were evaluated using STATA software, version 11.0.

Results: The mean (standard deviation) of stigmatizing attitude score was 17.34 (8.6), which was equal to the mean number (score, 34), and showed the average level of stigmatizing attitudes of midwives and nurses. In total, 24.5%, 52.9%, and 22.6% of the participants presented non-stigmatizing attitude ($n < 30$), somewhat stigmatizing ($n: 30-39$), and stigmatizing ($n > 39$) attitudes towards HIV, respectively. Additionally, the overall mean score of job satisfaction was 53.89, which indicated the average level (38 to 57) of job satisfaction of nurses and midwives. In addition, the overall job satisfaction score was significantly inversely related to the stigmatized attitude of individuals, so that in return for increasing the job satisfaction score in staff, their stigmatizing attitude score decreased ($\beta = 0.10$, $p = 0.001$).

Conclusions: The findings showed an inverse and indirect relationship between job satisfaction and attitude. Accordingly, since nurses and midwives play a key role in the care, diagnosis, and treatment of people living with HIV, it is necessary for health managers and policy-makers to highlight the factors affecting job satisfaction of nurses and midwives.

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Key words: attitude, stigma, HIV, job satisfaction.

Introduction

In the recent years, modeling studies have reported increasing trends in the number of human immunodeficiency

virus (HIV)-infected people in the Iranian population [1]. However, official statistics reported a declining trend, with new infections occurring at around 0.07 per 1,000 people in 2010, and by 2020, the figure had risen to 0.03 [2].

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Several experts indicated that there is no real information about people suffering from stigma and discrimination, and the actual number of people living with acquired immunodeficiency syndrome (AIDS) and other sexually transmitted diseases is actually higher than reported [3].

HIV infections can be transmitted through sexual contacts, use of contaminated syringes and other injecting equipment, mother-to-child transmission during pregnancy, labor, or breastfeeding, and through contaminated blood and its' products [4]. Healthcare personnel are considered a high-risk groups for blood-borne viruses, most of which are preventable, including HIV [5]. The estimated one-year global prevalence of syringe or other medical device injuries among healthcare personnel is 44.5%, with the highest rate (58.2%) occurring in Southeast Asian region [6]. Although HIV persistence outside the body is very low, there is a possibility of virus transmission through the instruments used for patients by healthcare workers, including doctors, dentists, nurses, midwives, health professionals, and even hospital service staff [7]. The risk of HIV transmission among healthcare personnel through accidental injuries from infected needles and other sharp objects is 0.3%, and through spraying of the infected blood into the eyes or nasal mucosa is 0.09% [8]. It appears that nurses and midwives are at the highest risk of contracting the virus, due to most frequent contact with patients' blood and body fluids, injections, and deliveries from HIV-infected mothers.

In Iran, in addition to the Behavioral Diseases Counselling Centre located in each city, hospitals also provide diagnostic, care, and treatment services to HIV-infected patients [9]. Most HIV patients treated in hospitals are either unaware of their illness or reluctant to disclose it for other reasons, such as stigma and discrimination related to this condition. Therefore, medical staff in hospitals are often unaware that they are treating HIV-infected patients. On the other hand, it also appears that they receive little training in dealing with such patients, and as a result, they may be unnecessarily exposed to HIV infection [10].

Previous studies have shown that many healthcare providers have a stigmatized attitude towards HIV/AIDS patients for a variety of reasons, including fear of infection, lack of interest in working with special patients, and specific populations, such as drug users or homosexuals [11]. Lack of awareness and a negative attitude towards HIV-positive patients may both lead to stress, anxiety, burnout, unwillingness to provide fair and non-discriminatory services, and even resigning from working for centers that provide services for HIV-positive patients [12]. However, it has been shown that improving nurses' and midwives' attitudes towards HIV also improves their performance, and better and higher quality services to HIV-positive patients [13]. There are various factors affecting nurses' stigmatizing attitudes towards people living with HIV/AIDS, including level of irrational fear of HIV transmission, level of education, gender, stage of the disease, type of high-risk behavior, being in contact with people with stigmatizing identity, source of HIV infection, type of hospital, ethnicity and race, and rural/urban location [14].

Furthermore, another effective factor in nurses' and midwives' attitudes is job satisfaction [15]. According to a study on nurses in Russia, an empathetic attitude towards HIV/AIDS patients was associated with high job satisfaction [16]. Job satisfaction is thought of as a response to stressors, and considered a predictor of occupational mental health; it is related to a set of people's feelings towards their work environment and various aspects of their employment [17]. Job satisfaction is one of the key factors related to the quality of nurses' performance in healthcare system, which has positive results in patients' recovery, and is also effective in improving nurses' mental health. According to a study conducted to assess job satisfaction among Iranian nurses, the level of job satisfaction was lower than desirable, and the level of job satisfaction in women was lower than in men [18]. In addition, results of another study from Iran showed that 35.6% of nurses expressed very little job satisfaction, while only 7.2% were completely satisfied with their job [19].

Although some studies have been conducted evaluating stigmatizing attitudes of healthcare providers towards HIV-positive/AIDS [20] patients, and on healthcare workers' job satisfaction [18] in Iran, there has not yet been a study examining the relationship between these two factors. Therefore, the present study was conducted with the goal of analyzing the relation between job satisfaction rate and stigmatizing attitudes among nurses and midwives providing services for HIV-positive/ AIDS patients in Yazd City, Iran.

Material and methods

Place and time of the study and sampling

The current cross-sectional study was conducted in 2020 among 340 nurses and 59 midwives working in hospitals in Yazd (public, private, charitable, and social security). Sample size was estimated using Cochran's formula, considering a 95% confidence level and 1% error as well as a stigmatizing attitude score of 50.29, based on a study by Nasirian *et al.* [21]. Design effect was estimated as 2%, and sample's loss probability as 10%. Sampling was done in a multi-stage cluster. A share of the sample was assigned to each level, first according to the type of hospital (public, private, charitable, and social security) and then as per the number of hospitals at each level. Next, in each level, a representative sample of the hospitals was determined, and appropriate number of the clinics was selected at each level by cluster sampling. Following the selection of hospitals with cluster sampling, a share of the sample was allocated to each hospital, in proportion to the number of nurses and midwives (in two separate groups). Finally, midwives were randomly selected from obstetrics and gynecology wards only, and nurses from all sections of a hospital (based on a personnel list) from different work shifts (morning, evening, and night).

Information gathering

For information gathering, two standard questionnaires for measuring health personnel attitude towards HIV and job satisfaction were applied. Both questionnaires were completed by the participants. The attitude questionnaire had 30 questions in three sections, including demographic (5 questions), concern (7 questions on a 4-point Likert scale), attitude (10 questions on a 5-point Likert scale), and (for midwives) care for pregnant women living with HIV (8 questions on a 5-point Likert scale). This questionnaire was designed and approved by the United States Agency for International Development (USAID) translated and standardized for Iran. The apparent validity and its' content were confirmed with qualitative methods. Additionally, Cronbach's and ICC α coefficients for all sectors were 0.73 and 0.67 on average, respectively [22].

In order to measure the level of job satisfaction of nurses, the Minnesota job satisfaction questionnaire (2009) was used, with 19 questions in 6 areas, including payment system (3 questions), type of job (4 questions), opportunity for progress (3 questions), organizational atmosphere (2 questions), leadership style (4 questions), and physical condition (3 questions). Scores between 19 and 38, 38 to 57, and 57 and above indicated poor, moderate, and very good job satisfaction, respectively. The apparent and content validity of the questionnaire was confirmed in a study by Bakhtiar Nasrabadi (2009) [23]. Cronbach's α coefficient was estimated to be 0.78 for the reliability of the questionnaire [24].

Ethical considerations

The present study was approved by the Ethics Committee of Isfahan University of Medical Sciences, with code No.: IR.MUI.RESEARCH.REC.1399.084. Before completing the questionnaire, study participants were first given a brief and comprehensive explanation of the objectives of the study, assuring independence of individuals to participate in the study and confidentiality of information. Informed written consent was then obtained from every participant.

Data analysis

In order to describe quantitative data, indicators of mean, median, and standard deviation, quartiles, mid-quartile, median amplitude, and percentage for qualitative data were used. Also, Pearson's correlation coefficient and multiple regression analysis were used to investigate the relationship between job satisfaction and attitude, and to control for the effects of confounding variables. Analyses were performed using STATA software, version 11, with a significance level of 5%.

Results

A total of 399 subjects (67.2% of females) were included in the study. The mean and standard deviation of the age of participants was 33.93 ± 8.31 years. The response rate

of females and males was 85% and 90%, respectively. Most of the nurses and midwives participating in the study were married (77.1%). Also, about 43% of people had more than 10 years of work experience. Except for education, men and women did not differ significantly in other demographic characteristics ($p > 0.05$) (Table 1).

Concerns about HIV and attitudes towards those infected

The results showed that nurses and midwives were mostly concerned about taking blood samples from HIV patients, and performing medical services, such as surgery and dentistry, with 36.6% and 33.3% of very concerned or concerned respectively. Moreover, about 13.7% of midwives were very concerned about participating in a delivery by an HIV-infected mother, and approximately 37.9% of midwives were slightly concerned about participating in a delivery by an HIV-infected mother. Approximately 29.3% of them had no concern about participating in a delivery by an HIV-infected mother (Table 2).

The mean (standard deviation) stigmatizing attitude score was 17.34 ($n = 8.6$), while the median number was equal to 34, indicating the average level of stigmatizing attitudes in midwives and nurses. In total, 24.5%, 52.9%, and

Table 1. Demographic characteristics of participants by gender

Factor	Male, n (%)	Female, n (%)	p-value
Age category (years)			
18-29	30 (33.70)	112 (36.12)	0.157
30-39	28 (31.46)	117 (37.74)	
40-49	27 (30.33)	71 (22.90)	
50-59	6 (6.74)	10 (3.22)	
Marital status			
Single	19 (34.21)	65 (22.25)	0.875
Married	69 (77.52)	239 (77.90)	
Previously married	1 (1.12)	6 (1.93)	
Education level			
Diploma and lower	1 (1.12)	0 (0)	0.039
Post-diploma/BA	62 (69.66)	200 (64.51)	
MA	25 (28.08)	110 (35.48)	
PhD	1 (1.12)	0 (0)	
Job			
Nurse	89 (100)	251 (80.96)	> 0.001
Midwife	0 (0)	59 (19.03)	
Work experience			
Less than 5 years	32 (35.95)	113 (36.45)	0.992
5 to 10 years	18 (20.22)	61 (19.67)	
Over 10 years	39 (43.82)	136 (43.87)	

Table 2. Nurses and midwives' concerns about HIV in the workplace

Concerns	Not concerned, n (%)	Slightly concerned, n (%)	Concerned, n (%)	Very concerned, n (%)
Getting HIV by touching clothes or bedding of an HIV-infected person	182 (49.0)	113 (30.4)	49 (13.2)	27 (7.2)
Getting HIV while wound-dressing a person with HIV	71 (18.3)	101 (26.0)	92 (23.7)	123 (31.7)
Getting HIV by taking blood sample from a HIV-infected person	58 (14.9)	101 (26.0)	86 (22.2)	142 (36.6)
Getting HIV while taking the temperature of a person with HIV	265 (69.3)	80 (20.9)	19 (4.9)	18 (4.7)
Getting HIV during medical services, such as dental fillings, surgeries, etc. of a HIV-infected person	45 (13.9)	81 (25.1)	89 (27.6)	107 (33.2)
Distancing from family and friends because of the importance of a person with HIV (in past year)	142 (59.9)	63 (26.5)	21 (8.8)	11 (4.6)
Avoiding colleagues because of the importance of a person with HIV (in past year)	146 (62.3)	49 (20.9)	31 (13.2)	8 (3.4)

Table 3. Stigmatizing attitudes of nurses and midwives regarding HIV infection

Question	Completely agree, n (%)	Agree, n (%)	Neither agree nor disagree, n (%)	Disagree, n (%)	Completely disagree, n (%)
HIV-positive patients do not care about infecting others	36 (8.8)	146 (35.9)	143 (35.1)	57 (14.0)	17 (4.2)
HIV-positive people should be ashamed of themselves	6 (1.5)	24 (5.9)	43 (10.6)	147 (36.1)	179 (44.0)
Most HIV-positive people have had multiple sexual partners	8 (2.0)	41 (10.1)	135 (33.2)	108 (26.5)	107 (26.3)
People with irresponsible behaviors are most likely to get HIV	11 (2.7)	59 (14.5)	120 (29.5)	125 (30.7)	84 (20.6)
HIV is a punishment for people's bad behavior	13 (3.2)	23 (5.7)	74 (18.2)	133 (32.7)	156 (38.3)
HIV-positive women should not be allowed to have children	50 (12.3)	110 (27.0)	120 (29.5)	85 (20.9)	34 (8.4)
If the choice is mine, I would not provide services to people who inject drugs	12 (2.9)	63 (15.5)	79 (19.4)	147 (36.1)	98 (24.1)
I prefer not to provide services to men who have sex with other men	58 (14.3)	77 (18.9)	103 (25.3)	98 (24.1)	62 (15.2)
I prefer not to provide services to male prostitutes	60 (14.7)	76 (18.7)	102 (25.1)	93 (22.9)	67 (16.5)
I prefer not to provide services to female prostitutes	50 (12.3)	73 (17.9)	93 (22.9)	104 (25.6)	78 (19.2)
Overall mean stigmatizing attitude score (standard deviation)	34/17 (0.34)				

22.6% of the participants had non-stigmatizing attitude ($n < 30$), somewhat stigmatizing ($n = 39-30$), and stigmatizing ($n > 39$) attitudes towards HIV, respectively. The mean stigmatizing attitude scores in men and women were 34.57 (confidence interval: 33.79-35.34) and 32.78 (confidence interval: 31.42-34.14), respectively, which showed a significant difference ($p = 0.030$) (Table 3).

Additionally, 18.5% ($n = 74$) of nurses and midwives disagreed that having enough facilities in the workplace could reduce the risk of HIV transmission. About 36.2% of midwives ($n = 21$) fully agreed that if a pregnant woman is infected with HIV, her family has the right to know. Also, about

35% ($n = 20$) of midwives agreed that women who refuse to get tested for HIV are irresponsible. About 44% of midwives were completely opposed to the sterilization of an HIV-infected woman without her knowledge.

The results showed that 37.5% ($n = 150$) of nurses and midwives were unaware of the existence of written instructions in the workplace in order to emphasize non-discrimination towards HIV patients, while only 27% of them were aware of the existence of such instructions. Also, 35.3% ($n = 141$) of nurses and midwives stated that there was no written instruction in their workplace to emphasize non-discrimination towards HIV patients.

Table 4. Average areas of job satisfaction

Job satisfaction area	Average score of job satisfaction (standard deviation)		p-value
	Male	Female	
Payment system	6.05 (2.60)	6.23 (2.46)	0.253
Job type	13.08 (3.49)	13.49 (3.20)	0.280
Opportunities for progression	7.73 (2.72)	7.80 (2.86)	0.773
Organizational atmosphere	6.20 (1.91)	6.30 (1.80)	0.641
Method of leadership	10.97 (3.09)	11.48 (2.81)	0.151
Physical conditions	8.68 (3.08)	8.89 (3.12)	0.873
Total	52.74 (11.29)	54.22 (11.50)	0.629

Job satisfaction

The overall mean score of job satisfaction was 53.89, which indicates the average level (38-57) of job satisfaction among nurses and midwives. Job satisfaction was 52.74 in men and 54.22 in women, which indicates that men had lower average job satisfaction, but this difference was not significant ($p = 0.62$). The lowest mean scores of job satisfaction were related to the areas of payment system and organizational atmosphere (Table 4).

Factors affecting the attitude of midwives and nurses towards people living with HIV

The results showed that there was a significant relationship between gender and attitude score ($\beta = 1.87, p = 0.03$), so that stigmatized attitude towards HIV-positive patients was higher in women than men, but this result was not significant after adjusting for the effects of other variables. Likewise, age, marital status, education level, occupation, and work experience of the participants had no significant relationship with attitudes towards HIV patients ($p > 0.05$) (Table 5).

The results demonstrated that the overall score of job satisfaction had a significant inverse relationship with stigmatizing attitudes, so that with increasing job satisfaction, staff stigmatizing attitudes score decreased ($\beta = 0.10, p = 0.001$). This relationship was still significant after adjusting for the effects of other variables ($\beta = 0.10, p = 0.001$). Moreover, sub-areas of job satisfaction, including job type satisfaction ($\beta = 0.45, p < 0.0001$), satisfaction with organizational atmosphere ($\beta = 0.56, p = 0.003$), and satisfaction with physical conditions of the workplace ($\beta = 0.21, p = 0.047$) had a significant inverse relationship with staff stigmatizing attitudes towards HIV patients (Table 5).

Discussion

The results of this cross-sectional study among the nurses and midwives in Yazd showed that more than half of the nurses and midwives had moderately stigmatizing attitudes towards people living with HIV/AIDS, and that over-

all job satisfaction was also at moderate level. In addition, the attitude score of individuals had a significant inverse relationship with their job satisfaction scores, which means that with increasing job satisfaction, their stigmatizing attitude scores decreased.

The moderate level of stigmatizing attitudes among the nurses and midwives indicated that, despite a declining trend in social stigma towards people living with HIV/AIDS worldwide [25], stigmatizing attitudes towards HIV still remain significant in Iran [26]. HIV-related stigmatizing attitudes in healthcare groups are a major obstacle to effective HIV control (compared to non-HIV individuals in society). This is because stigmatizing attitudes within this group of people causes patients to refrain from making appropriate use of HIV prevention, care, and treatment services [27]. Likewise, this kind of stigmatizing attitude may lead to discrimination in the provision of services to patients by healthcare personnel [20], which itself causes inequalities in healthcare.

The results indicated that about a third of the nurses and midwives are reluctant to provide services to people with high-risk behaviors, including homosexual men or prostitutes, despite these groups being the major groups at risk of HIV. This ratio was found to be 23% in a study among Chinese health workers [28]. Therefore, it is possible that one of the main reasons for the nurses and midwives' stigmatizing attitude towards HIV is that a majority of HIV-positive people who go to medical centers are from these high-risk groups. These stigmatizing judgments and attitudes towards high-risk behavior groups may be due to considering these acts as crimes according to national law, such as sex outside marriage and drug use. Also, cultural and religious traditions in Iran in relation to immoral behaviors must be considered, which may cause the nurses and midwives to exclude people living with or without the knowledge of their HIV status. In addition to their negative impact on the quality of services provided to patients, these stigmatizing attitudes reduce patients' self-esteem, which ultimately affects their quality of life [29].

Another result of this study was that the job satisfaction of the nurses and midwives was moderate. According to a survey of Iranian nurses, 55% of nurses described their job satisfaction as low, while only 15% of nurses were satisfied with their job [19]. Other studies have also reported mode-

Table 5. Effecting factors on stigmatizing attitude of midwives and nurses towards HIV-infected patients

Variable	B (95% CI)*	
	Crude	Adjusted
Work experience (years)	-0.24 (-0.11-0.06)	-0.05 (-0.25-0.15)
Age	-0.16 (-0.09-0.07)	0.02 (-0.17-0.21)
Gender		
Male	-	-
Female	1.87 (0.17-3.40)*	1.67 (-0.001-3.34)
Marital status		
Single	-	-
Married	0.09 (-1.57-1.75)	0.25 (-1.48-1.99)
Previously married	-2.85 (-8.18-2.45)	-2.69 (-7.49-2.03)
Education level		
Diploma and lower	-	-
Post-diploma and BA	-3.87 (-9.74-17.30)	-1.30 (-15.8-13.24)
MA	5.0 (-8.54-17.54)	-0.37 (-15.8-14.3)
PHD	-1.27(-19.9-19.9)	-4.03 (-27.7-15.7)
Job		
Nurse	-	-
Midwife	-0.10 (-2.01-1.80)	-0.73 (-2.66 to -1.20)
Job satisfaction score		
Total	0.10 (0.04-0.16)*	0.10 (0.04-0.15)*
Payroll satisfaction	0.25 (-0.01-0.52)	-
Job type satisfaction	0.45 (0.25-0.65)*	-
Satisfaction with progress opportunities	0.02 (-0.04-0.43)	-
Satisfaction with the organizational atmosphere (partners)	0.56 (0.19-0.93)*	-
Satisfaction with supervision	0.17 (0.05-0.41)	-
Satisfaction with physical condition of workplace	0.21 (0.002-0.43)*	-

Linear regression was used, and significance was considered at the 5% level.

rate job satisfaction among nurses in Ahvaz and Khorramabad [30]. This finding is consistent with other studies on nursing job satisfaction in Hong Kong [31], Nigeria [32], and Turkey [33].

In the present study, job satisfaction had the highest average scores in the areas of job type, workplace physical condition, and leadership style in the hospital, and the lowest average scores in the areas of payroll system, respectively. This finding has been similarly confirmed in Hamedan [34], Jiroft [35], and Turkey [36]. In contrast to the present study, nurses in Hong Kong study were most satisfied with additional rewards, while participants in the present study were most dissatisfied with the payment system. Various studies have shown that salaries are the major determinant of job satisfaction, especially when employees are fairly paid [37]. In fact, when people realize that they are not receiving a full salary, they benefits are not sufficient, they lack job security and proper supervision as well as that interpersonal relationships are not established. These all can cause job dissatisfaction. Since job

satisfaction is a complex and subjective phenomenon, an organization cannot expect to achieve significant impact with a single intervention, which is not part of a multi-level strategy. However, according to a review study, various solutions have been implemented to increase nurses' job satisfaction, including increasing communication and collective decisions, increasing appreciation for work done, national rewards, etc.

Other results of the study showed that job satisfaction had a significant inverse relationship with stigmatizing attitudes ($\beta = 0.10$, $p < 0.05$), and there was a direct relationship between all job satisfaction areas with these attitudes. This finding is similar to the results of a study on job satisfaction and nurses' attitudes towards people living with HIV and AIDS in Russia, which showed that job satisfaction is positively related to empathetic (non-discriminatory) attitudes [16]. In addition, a study from Turkey found that, when nurses are self-satisfied and have positive emotional feelings about the patient, they are likely to provide quality care to satisfy patients [38]. In fact, high level of stress and emotional burnout that result

from job dissatisfaction has a negative effect on nurses' attitudes, and therefore has a negative effect on patient care.

In general, the present study observed links between stigmatizing attitudes and job satisfaction that highlight the need for health system to design and implement stigma-reducing strategies, and increase awareness and non-stigmatizing attitude attitudes towards people living with HIV/AIDS. Stigma and discrimination are not only against human rights, but also involve moral principles. World health system is based on equality and justice in terms of accessing benefits from health services [39]. Accordingly, improving job satisfaction (as one of the factors affecting stigmatizing attitudes) can reduce the level of stigmatizing attitudes towards people living with HIV/AIDS, and therefore increase the quality of care services provided to patients. Therefore, the attention of healthcare managers in Yazd Province as well as senior managers of the Ministry of Health are essential to increase the job satisfaction of nurses and midwives; this attention will improve an important factor in ensuring adequate care for people living with HIV/AIDS. In addition, nurses, midwives, and other healthcare professionals working with HIV/AIDS patients should be encouraged to stay updated in changes in HIV/AIDS issues, and to understand the course of the disease and its' control process. Initiating social reconstruction and reforming attitudes towards HIV/AIDS as a chronic disease can be extremely helpful.

Limitations

One of the limitations of the current study was the self-administered data collection, which may lead to reporting bias since individuals may have different interpretations of the questions. However, this method was selected and used due to the sensitivity of the issue, and the questionnaires were completed in the workplace to ensure honesty of the individuals in answering questions, and to reduce the potential bias of social acceptance. Another limitation of the study was the lack of cooperation from private hospitals, in which hospital heads were reluctant to disclose the statistics of their staff satisfaction. In addition, one of the most important predictors of job satisfaction is the participants' background information about HIV, but we did not collect these information since according to the continuous training programs of midwife and nurses, we assumed that their information about HIV were the same.

However, the strength of the study is that, to our knowledge, no other study has been conducted evaluating the attitudes of nurses and midwives towards HIV/AIDS in Yazd, and the relationship between job satisfaction and attitudes towards HIV in Iran.

Conclusions

The findings showed an inverse and indirect relationship between job satisfaction and stigmatizing attitudes towards HIV/AIDS patients. This means that it is necessary for health managers and policy-makers to pay greater attention to

the factors affecting job satisfaction of nurses and midwives, since they play the key role in care, diagnosis, and treatment of people living with HIV. Despite the high importance of financial support in improving staff job satisfaction, managers can use some less costly factors, such as staff participation in organizational decisions, appreciation awards for increasing job satisfaction, etc.

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Conflict of interests

The authors declare no conflict of interest.

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