

HIV prevention perception among barbers according to health belief model

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Abstract

The risk of contracting HIV through hairdressing equipment when using a razor for doing tattoos is increasing. This study aimed to determine the perceptions of the male barbers about AIDS preventive behaviors based on the health belief model. In a cross-sectional study of 104 male barbers, 89 subjects were selected. For collecting data, a valid and reliable questionnaire was used, in which questions on the perceived benefits and barriers, the perceived severity and susceptibility to AIDS and the most important cues to actions were included. Data were analyzed through SPSS-15, descriptive statistics, ANOVA, chi-square and correlation coefficient. Means of perceived barriers and perceived severity scores of preventing AIDS were higher than other perceptions and the mean of perceived susceptibility score was reported as less than other constructs. There was a significant relationship between education and perceived susceptibility, as well as age and perceived susceptibility. Results indicate a necessity for the design and implementation of appropriate educational interventions to increase the perceived susceptibility and decrease the perceived barriers to HIV prevention among the hairdressers.

Keywords: Health Belief Model, HIV, Prevention

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Introduction

Human immunodeficiency virus / acquired immunodeficiency syndrome (HIV/AIDS) has been one of the greatest challenges throughout human history. As a result of the disease, the world is facing an epidemic that has no effective cure and constitutes the major threat to human health [1,2]. HIV/AIDS is now considered the world's fourth leading cause of death. More than 25 million people have died of AIDS worldwide since the epidemic broke out 30 years ago [3,4]. The HIV/AIDS prevalence is ruthlessly raging

worldwide and it is spreading across the globe at an incredible speed. After infecting large numbers young people and killing many more during the heyday of their lives, the disease not only is regarded as the root of a global health crisis but has also turned into a very complicated economic, social and political problem that seriously threatens human security [5,6]. According to a report by the World Health Organization (WHO), 8.3 million people were infected with HIV virus in Asia in 2005 [7]. The WHO also reports that 730 thousand more people were infected with

the virus and 600 thousand others died of AIDS by 2005 on the continent. Undoubtedly, HIV/AIDS has been the most significant new disease of the late 20th century. There was not a single case of AIDS until three decades ago, but in less than 20 years, the disease has infected more than 70 million people worldwide [8]. The new statistics related to HIV/AIDS are worrisome. The rapid pace at which people are contracting this plague of the century has rung the alarm and the issue must be taken seriously. According to the WHO, the AIDS epidemic is spreading in Iran among nations in the East Mediterranean region [7]. The latest figures released by Iran's Ministry of Health, Treatment and Medical Education show that by June 22nd, 2009, 19, 774 people were diagnosed HIV-positive in the country. From among them, 1, 975 people had HIV/AIDS and 3, 315 others died of the disease. 93.1 percent of Iranian the patients are men and the other 6.9 percent are women [9]. It is especially important to pay attention to special population like barbers who play an active role in the transmission of HIV/AIDS. One cannot ignore the possibility of the transmission of HIV through barber tools by means of razors and tattooing, which is increasingly used in the society. Most particularly in poor neighborhoods of cities, barbers are less educated and they can start their business or be employed at barber shops due to their work experience [10]. Previous Studies have been conducted on the knowledge and attitude of different people in the society such as students [11], healthcare workers [12], and prisoners [13]. However, much less research has been conducted on barbers. Health education is based on using theories and models of changing behavior for the purpose of making more effective plans and for more successful educational intervention. The Health Belief Model (HBM) is a model used to study health behavior and to improve health. The model is made of such factors as perceived susceptibility, severity, benefits, barriers and cues to action. The HBM is a psychological model that attempts to explain and predict health behaviors. Therefore, it is focused on the attitudes and beliefs of people (change in beliefs) and shows us the relationship between beliefs and behavior [9]. The model has been frequently used for the purpose

of preventing HIV/AIDS [15,17]. The present study aimed to explain the perceptions of the male barbers of the northwestern Iranian city of Marand about preventive behaviors with regards to HIV/AIDS.

Method

This cross-sectional study, based on Health Belief Model (HBM), was conducted on male barbers in Marand City regarding prevention of HIV/AIDS in 2011. The aim was determine the level of male barber's perception about preventing the transmission of HIV/AIDS. The statistical society of the research consisted of 104 barbers in the city of Marand. The whole target society was selected by census due to the limited number of samples. Fifteen barbers were excluded from the study because they did not consent to participation in the study, so 89 barbers were enrolled. All barbers who were older than 20 years old had equal chance of participating in the study. The exclusion criterion was their voluntary withdrawal from the study during the study and collecting data for any reason. The tool used for collecting data was a self-report questionnaire with two sections: A) demographic data (8 items) and B) constructs of the Health Belief Model including perceived susceptibility (4 items), perceived severity (7 items), perceived barriers (7 items) and cues to action (2 items). Since Rosen-stock Health Belief Model (1996) was considered, the self-efficacy construct was not studied [18]. Each item was scored on the basis of 5-point Likert scale. The perception score was calculated with regard to the total points gained by the barbers and was categorized as good, moderate and weak on the basis Mean \pm SD. The questionnaire was examined by a panel of 8 healthcare education and infectious disease specialists through using credible scientific references and papers, and necessary changes were made to the questionnaire. Then, it was completed by 30 barbers matched with the statistical population twice with a one-week interval. T-test coefficient ($r=0.84$) and Cronbach's Alpha (0.80) indicated suitable reliability of the items in the questionnaire. The data were analyzed using the SPSS-15 and

χ^2 tests. Informed consent forms were received from the participants. They were assured of the confidentiality of the information in that the data were analyzed by anonymous encoding of the questionnaires.

Results

The results showed that 22.5% of the subjects held high school diploma and higher degrees, 48.3% had middle school certificate, 24.7% held elementary school certificate, and the remaining 4.5 percent were illiterate. About half (49.54%) had work experience of 1 to 10 years, 32.6 % had 11- 20 years of work experience, and 18 percent

had more than 20 years of work experience. The mean age of the subjects was 35±10.4 years and 71.9% of them were married. Most barbers (56.2%) had learned their trade through experience, 4.5% at professional institutes, 14.6% as on-the-job training and 24.7% using the above three methods. The majority of the barbers (98.9%) had work licenses while only 39 (38.2%) attended the HIV/AIDS retraining classes. The mean of perceived susceptibility, severity, benefits and barriers are presented in Tables 1 and the categories of the perceptions are shown in Table 2. The most important cue to action was healthcare workers. (42.7 percent)

Table 1 Mean and standard deviation(SD) of barbers' perceptions of HIV/AIDS prevention

Perceptions of preventing transmission of AIDS	Mean±SD	Minimum points scored	Maximum points scored
Perceived susceptibility	12.88± 2.39	8	17
Perceived severity	26.57± 3.33	14	35
Perceived barriers	26.91± 4.53	16	32
Perceived benefits	21.13± 1.87	16	25

Table 2 Frequency distribution of categories of barbers' perceptions about HIV/AIDS prevention

Perceptions	Good	Moderate	Poor
Susceptibility	0	41.6	58.4
Severity	1.2	77.5	21.3
Barriers	12.3	69.7	18
Benefits	40.4	58.4	1.2

Table 3 Frequency distribution of Cues to Action of barbers in Marand

Cues to Action	N	%
Physician	4	4.5
Staff of healthcare centers and using educational materials	38	42.5
Radio and television	2	2.2
Scientific newspapers and magazines	1	1.1
Others (above mentioned sources and others)	44	49.50

Table 4 Frequency distribution of barbers' perceived susceptibility to HIV/AIDS based on age and education

Susceptibility perception	Good		Moderate		Poor		P-value
	N	%	N	%	N	%	
Elementary school	18	34.61	8	21.62	26	29.21	0.033
Middle school	28	53.4	15	40.54	43	48.32	
High school	5	9.62	8	21.62	13	14.61	
University degree	1	1.93	6	16.22	7	7.86	
Total	52	100	37	100	89	100	

* χ^2 test

Susceptibility perception	Good		Moderate		Poor		P-value
	N	%	N	%	N	%	
Age							
20-25	6	11.53	5	13.51	11	12.35	0.020
26-31	10	19.24	18	13.51	28	31.46	
32-40	14	26.92	6	16.22	20	22.48	
Over 40	14	26.92	6	16.22	20	22.48	
Total	52	100	37	100	89	100	

* χ^2 test

(Table 3) Using χ^2 test, a meaningful relationship was observed between perceived susceptibility and age and also between perceived susceptibility and education level of the barbers (Table 4).

Discussion

We observed a meaningful relationship between the perceived susceptibility and age of the barbers ($P=0.020$). This means that younger barbers had better perception of susceptibility. However, there was no relationship between the total score and age. Karimi conducted a study on the role of education in creating preventive behaviors for HIV/AIDS based on the HBM and found no meaningful relationship between age, the constructs of the model and the perception of the subjects under study [19]. Meanwhile, Ghorbani observed no meaningful relationship between the awareness and attitude of the subjects and their age in his research about the impact of education on the awareness and attitude of nurses toward HIV/AIDS [20]. Quite the contrary, Dargahi found a meaningful relationship between ages and the awareness as well as performance of study units [21]. The discrepancy probably originates from the lower age variance in previous studies, the higher mean age in the present research and the job sensitivity of the statistical population. The majority of the barbers were married. The Spearman test did not show any meaningful relationship between the marital status of the barbers, the constructs of the HBM and their total perception score. This is while Karimi's study found a meaningful relationship between awareness, attitude and marital status [22]. It means that in the present study, being married or single has no effects on the perception of preventing the transmission of HIV/AIDS

because the more significant factor was the subjects' jobs which had a deeper impact on the perception. Nevertheless, there was no meaningful difference between barbers and other people in terms of high risk sexual behavior. There was also a meaningful relationship between the level of education and the perceived susceptibility in the study ($P=0.033$). Naturally, the perceived susceptibility of people with higher education must be higher than that of the less educated people. Education is an important factor (variable) that significantly affects social class and healthy behavior. Dargahi showed that the awareness, attitude and performance of female hairdressers in the city of Kermanshah had a meaningful relationship with the level of education [21]. Studies conducted in the US show that education and awareness play a key role in maintaining health, and illiteracy can lead to irresponsibility toward healthcare issues [23]. Karimi conducted a research among barbers in Zarandieh which showed that there was a meaningful relationship between awareness, attitude and level of education. This study, however, found no meaningful relationship between education and performance [22]. Karimi also conducted a research on students in the city of Yazd. The study showed that the students enhanced their awareness about HIV/AIDS as they increased their level of education [24]. Ghorbani also showed in his study that there was no meaningful relationship between the level of education of nurses and HIV/AIDS [20]. Nor was there a meaningful relationship between holding a Health Ministry work permit and the barber's perception. No meaningful relationship existed either

between how barbers learned their trade and their perceived perception given the different constructs of the HBM. Meanwhile, Dargahi did not find any relationship between how female hairdressers in Kermanshah had learned their trade and their perception of HIV/AIDS [21]. His findings showed no meaningful relationship between work experience and the barbers' perception. Ghorbani also found that no meaningful relationship existed between the nurses' work experience and their perception of HIV/AIDS [20]. Another study by Dargahi showed no relationship between Kermanshah's female hairdressers' work experience and their perception of HIV/AIDS [21]. Similar to Dragahi's study [21], the present research found that much of the awareness about HIV/AIDS was brought through education by healthcare workers. This shows that healthcare workers play a significant role in preventing the transmission of HIV/AIDS. Therefore, offering regular and organized education by the healthcare workers in the form of training classes and on-the-job-training as well as frequently approaching the healthcare workers by clients can enhance barbers' perception of HIV/AIDS. Different studies aimed at boosting the awareness of people about HIV/AIDS highlight the key role of healthcare workers compared to other information sources. In the study, barbers had weaker perceived susceptibility to HIV/AIDS. In Karimi's study, the perceived susceptibility of vulnerable people was also weaker [22]. Quite the contrary, Rahmati Najarkolaei, et al. showed that most students were sensitive to HIV/AIDS and considered it as a serious disease [25]. It seems that the level of education and higher social and economic status in the study could lead to an increase in the perceived susceptibility. Having examined 46 studies using the Health Belief Model, Karmel concluded that perceived susceptibility had the highest role in predicting behavior [26]. If an individual is sensitive to a health issue and believes that he or she may have developed a certain disease without having its symptoms, this can result in avoiding risky behavior and contracting HIV/AIDS. Finally, the educational

program must emphasize the vulnerability of any person and the possibility of his or her contraction of the disease regardless of their job or gender. Most of the barbers had good and moderate benefits perceptions regarding HIV/AIDS prevention. Many of them had good and moderate severity perceptions about HIV/AIDS prevention. In Rahmati Najarkolaei's study on Tehran University's newly admitted students; they had high perceived severity regarding AIDS [25]. Karimi also found that vulnerable people had good perceived severity with regard to AIDS before educational intervention [22]. Therefore, proper emphasis must be put on this construct during training programs for barbers and efforts must be made to avoid exaggerating about the disease. In the present study, about eighty two percent of the barbers had moderate and good perceived barriers regarding HIV/AIDS. Hence, proper emphasis must be put on minimizing such barriers during interventions aimed at improving preventive behaviors on part of barbers. Rahmati Najarkolaei's study found that students had high perceived barriers in regard to HIV/AIDS. The high level of perceived benefits indicated that the students were aware of preventive measures for HIV/AIDS. It also showed that they understood the benefits of healthy behavior at workplace [25]. Some of the limitations of the present study were reliance on self-reporting questionnaire, periodic collection of data and the low number of samples.

Conclusion

The results of the present study indicated mean of susceptibility perception about HIV/AIDS prevention was lower than the other perceptions in the samples. Finally, this study suggests to emphasis more on promotion of perceived susceptibility in planning educational interventions for HIV/AIDS prevention in the barbers. Then proper emphasizes have to be taken on barriers, severity and at last on benefits perceptions in the barbers as to increase the chance of HIV/

AIDS prevention based on the Health Belief Model. The personnel of healthcare centers should be used as the best cues to action during the interventions.

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Contributions

Study design: MH,MS

Data collection and analysis: HA, AZ

Manuscript preparation: FRN

Conflict of interest

"The authors declare that they have no competing interests."

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