

Quit Smoking Experts' Opinions toward Quality and Results of Quit Smoking Methods Provided in Tobacco Cessation Services Centers in Iran

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ABSTRACT

Background: One of the core responsibilities of health system is to treat tobacco dependence. This treatment includes different methods such as simple medical consultation, medication, and telephone counseling. To assess physicians' opinions towards quality and result of different quit smoking methods provided in tobacco cessation services centers in Iran.

Methods: In this cross-sectional and descriptive study, random sampling of all quit centers at country level was used to obtain a representative sample size of 100 physicians. Physicians completed a self-administered questionnaire which contained 10 questions regarding the quality, cost, effect, side effects, and the results of quitting methods using a 5-point Likert-type scale. Percentages, frequencies, mean, T-test, and variance analyses were computed for all study variables.

Results: Most experts preferred to use combination quit smoking methods and then Nicotine Replacement Therapy (NRT) with 26 and 23, respectively. The least used methods were quit line and some methods without medication with 3 cases. The method which gained the maximum scores were telephone consultation, acupuncture, Willpower, Champix, combined method, and Interactive Voice Response (IVR) with the mean of 23.3, 23, 22.5, 22, 21.7 and 21.3, respectively. The minimum scores were related to e-cigarette, some methods without medication, and non-NRT medication with the mean of 12.3, 15.8 and 16.2, respectively. There were no significant differences in the mean of scores based on different cities ($P = 0.256$). Analysis of variance in mean scores showed significant differences in the means scores of different methods ($P < 0.000$).

Conclusions: According to physicians acupuncture, personal methods and Champix are the most effective methods and these methods could be much more feasible and cost effective than other methods.

Keywords: Attitude, cigarette, experts, physicians, quitting

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INTRODUCTION

Without effective tobacco control measures, it is estimated that by the year 2030 the annual global death toll will reach 8 million.^[1,2] With current smoking patterns, approximately 500 million people alive today will eventually be killed by tobacco use.^[3] Currently, there are an estimated 1.3 billion smokers in the world.^[4] Most smokers are ready to quit, three out of four smokers say they want to quit.^[5] A wide range of treatment options include behavioral and pharmacological therapies that have been proven to be effective for quitting smoking. There is no single approach that rejects the other therapies.^[6] The cost of these methods is different and would not have the same effect on different smokers. It should be mentioned that treatments need to be tailored and delivered appropriately for individuals according to their age, gender, interest, needs and also cultural and local conditions.^[7]

Repeated consultation at each clinical visit would reinforce the necessity for quitting.^[8,9] Furthermore, consultation of health care providers can increase the quit rates to a great extent.^[10] This intervention is relatively cost-effective because it is a part of available services, which people rarely use. Such interventions are very effective because they are provided by health care providers who are respected by most people, and smoker have good interaction with them.^[11,12] Pharmaceutical therapies need less human resources and are more effective than behavioral therapies but more costly. However, for certain population groups (e.g., pregnant women and people with heart disease) the cost is very affordable. Minimal intervention by health professionals is not only an important and cost-effective approach, but also such interventions can help to change the culture.^[13] Besides medical advice and telephone consultation for quitting, an effective method can include medication. Medication includes nicotine replacement Therapy (NRT) like patches, gum, nasal spray, mouth spray, lozenge and inhalator, as well as nonnicotine medications such as bupropion and varenicline.^[14] Public health approaches such as mass media, quit and win efforts, telephone helplines play important roles in changing community norms for developing quit smoking programs.^[15] Work with smokers to change their smoking behavior is an important goal, but the effect is limited if the environmental factors, that promote and support smoking, are not identified. Therefore, population interventions should be considered as a complementary approach in pharmacological and behavioral interventions.^[16]

The ideal goal is to maximize options and opportunities for quit smoking interventions, according to people inside and outside of the boundary.^[17]

Recently, after 10 years of the first educational intervention for quitting smoking and one or two complementary programs in Iran's health system network, and in some attached centers (including group therapy and free 15 mg nicotine patch) not an appropriate condition is observed whether in terms of human resources, consultation of medication services and the same old interventions are implemented and there are little documentation in this regard.^[13-15,18-21] Therefore, the situation of different treatments needs to be studied and assessed and the most appropriate one to be selected and developed at country health system. Therefore, physicians who are conducting tobacco control, as experienced experts have been addressed. Our aim was to study and assess physicians' opinions towards quality and result of different quit smoking methods provided in tobacco cessation services centers in Iran in order to identify those that could be as one of the most appropriate for Iran health system.

METHODS

This study is a cross-sectional and descriptive study conducted at Iran smoking cessation services centers in 2012–2013. In each Iran's province, there is a University under the supervision of Ministry of Health and Medical Education. Therefore, primary health care services are provided by universities of medical sciences and national tobacco control programs provided by these universities, and there is a person to coordinate these activities in the affiliated centers all across the provinces. There were approximately 50–60 smoking quit centers, which are working under supervision of health centers in primary health care system, but many of these were not active in presenting tobacco cessation services. For maximum coverage, 13 active centers in seven cities such as Tehran, Isfahan, Shiraz, Mashhad, Tabriz, Hamedan, and Sari were selected (whether public or private). After necessary coordination with the concerned authorities in deputy for health and curative affairs of the universities at each province, a random sampling of about 100 physicians with some expertise in tobacco treatment were asked to complete a survey on tobacco treatment approaches that they use, considering that for those who used different approaches more than one completed questionnaire received. The contents of the primarily structured questionnaire were designed by the first author based on the review of similar articles and the authors' preliminary research. Its psychometric properties were evaluated in terms of face and content validity through a panel discussion with seven tobacco control experts in Iran who had experience in tobacco cessation programs until a convergence of opinions was reached. The reliability coefficient (Cronbach alpha) for the questionnaire was assessed through test-retest on a group of 15 physicians ($\alpha = 0.88$). The questionnaire also was piloted before distribution.

In tobacco control expert panels, 30 scores were included for assessment. The questionnaire contained 10 questions (3 scores each) regarding the quality, cost, effect, side-effects and its consequences. The results of quitting methods using a 5-point Liker-type scale from 1 to 3 to have maximum 30 for each. Prior to the distribution of the questionnaire, the purpose and nature of this study were explained to the concerned authorities in each center and also to the randomly selected physicians and informed consent was obtained.

All survey responses were entered into a data set and doubled keyed to ensure accurate data entry. Percentages, frequencies, mean, *t*-test, and variance analyses were computed for all study variables. Analyses were conducted using SPSS 16.00 statistical software (SPSS Inc., Chicago, IL, USA).

RESULTS

In this study, a total of 182 completed survey questionnaire based on different used quit smoking approaches were received from 100 random selected physician. Most completed questionnaire were from Tehran (82 cases), using all methods that are while in other cities some methods were not accessible or the physicians have not used them. For example in Sari city, only nine completed questionnaire received. The most used methods were combination method (NRT and counseling) with 26 cases and NRT with 26 cases, respectively. The least used methods were quit line and some methods without medications ($n = 3$) [Table 1]. The mean of all methods was 19.7 ± 4 (minimum 11–maximum 30). The score 30 was given to Champix, combination method and education methods. The maximum scores were related to telephone consultation, acupuncture, willpower, Champix, combination methods and interactive voice response with the mean of 23.3, 23, 22.5, 22, 21.7, 21.3 and the minimum score were given to e-cigarette and some methods without medication and non-NRT medications with the mean of 12.3, 15.8 and 16.2, respectively [Table 2]. There was no significant difference in the mean of scores based on different cities ($P = 0.256$) [Table 3]. In an analysis of variance in mean score according to different methods there was a significant difference ($P < 0.000$) [Table 4].

DISCUSSION

In this study, the attitudes of the physician toward different quitting methods revealed that telephone counseling, acupuncture, willpower, Champix, combination therapy, and quitline were known as the most effective methods in the country. The results of this study are important because few studies have assessed quality and result of different quit smoking methods

and it is important to know the physicians' opinions in order to update our services at the country level for enhancing success. In general, physicians usually consider the low-cost treatment as feasible and effective factor in selecting methods.

For example, most methods are reachable in public centers and mainly free and even expensive Champix pills once have been presented free in a governmental research for a while.^[22] Acupuncture is offered in private clinics and with ordinary cost. Less price of treatment method or free of charge methods have been mentioned as a factor for better and more use in some studies.^[23-25] Currently, the old quit smoking interventions are applied in Iran health system. Tobacco cessation counseling program and medication are still far from the ideal situation due to insufficient resources and there is considerable room for improvement. The study indicated that seventeen treatment methods for quit smoking can be divided in three groups with following items:

- Group with high priority: Telephone-consultation, acupuncture, personal treatment, Champix, combination therapy, quit line
- Group with medium priority: Several medications, hypnosis, behavior therapy, nicotine replacement therapy, Zyban, self-learning material
- Group with low priority: Education, quit and win, nonnicotine medication, some methods without medication, e-cigarette.

If NRT and Zyban, which are located in medium priority, would be transferred to high priority and if we don't consider acupuncture, almost standard and advised methods are the same as other reported studies.^[26,27] According to authors' idea to explain these cases, these probabilities may be considered that the use of NRT made in the country has no proper quality. Zyban is very expensive despite availability. About acupuncture, perhaps it is reported more than it a reality that all these probabilities may be considered as commence of a new and supplemental study.

It has been observed that there is no significant difference in mean scores in quitting methods among seven cities and our survey shows that there are no significant differences on presented methods and services in cities and also in their result. We assumed the score of these methods will be more in Tehran with respect to other cities, but the highest rate has been reported in Sari city.

This point shows that quit-smoking methods services are uniform in different areas of the country that is mentioned in studies by Orleans *et al.*^[28] Cokkinides *et al.*^[29] and Fiore *et al.*^[30]

According to conducted variance analysis to compare methods, despite the fact that there were significant

Table 1: Frequency distribution of tobacco control experts' opinion by smoking quit methods and cities in Iran in 2012-2013

Quit methods	Mashhad	Isfahan	Shiraz	Tabriz	Tehran	Hamedan	Sari	Total
NRT	3	3	3	3	8	21	1	23
Champix	-	3	3	1	5	1	1	14
Zyban	-	5	3	4	7	1	-	20
Combination	4	3	2	1	14	1	1	26
Education	-	1	1	1	8	1	1	13
Self-learning material	-	1	1	1	5	1	-	9
Behavioral intervention	-	2	2	1	4	1	1	11
Quit and win	-	1	1	1	5	1	1	10
Telephone consultation	1	1	1	1	3	1	1	9
Hypnotism	1	-	-	-	4	-	-	5
Quit line	-	1	1	-	1	-	-	3
Acupuncture	1	-	1	1	2	1	1	7
Some medication	1	1	-	-	3	-	-	5
Some methods without medication	1	-	-	-	2	-	-	3
Willpower	1	1	1	1	3	1	1	9
Nonnicotine medication	-	1	1	-	3	-	-	5
E-cigarette	1	1	1	1	5	1	-	10

NRT=Nicotine replacement therapy

Table 2: Prevalence and score obtained for each quit smoking method based on physicians' opinion and according to their priority

Priority	Method	Number	Minimum-maximum	Mean
1	Telephone consultation	9	21-26	23.3±1.3
2	Acupuncture	7	20-25	23±2.5
3	Will power	9	20-24	22.5±1.8
4	Champix	14	17-30	22±3.4
5	Combination therapy	26	14-30	21.7±4.4
6	Quit line	3	18-26	21.3±4.1
7	Some medication	5	17-25	20.8±3.5
8	Hypnotism	5	11-24	20.5±5.5
9	Behavioral intervention	11	17-24	20.3±2.4
10	NRT	23	14-22.5	19.4±2.2
11	Zyban	20	15-24	20.3±2.4
12	Self-learning material	9	11-22	18.8±3.6
13	Education	13	14-30	17.7±3.9
14	Quit and win	10	13-20	17.3±3.1
15	Nonnicotine medication	5	11.5-20	16.2±4.1
16	Some methods without medication	3	13.5-20	15.8±3.6
17	E-cigarette	10	11.5-14	12.3±1
Total		182		

NRT=Nicotine replacement therapy

differences, no significant differences were observed in existed quit methods in five groups in Table 4. It showed that one appropriate method might be selected among the methods in each group based on present conditions including its cost and feasibility.

Table 3: Analysis of variance of mean scores for physicians' opinions on quit smoking methods in different cities of Iran, 2012

Cities	Number	Subset for Alpha=0.05 1
Shiraz	22	18.75
Tehran	82	19.29
Tabriz	17	19.88
Isfahan	25	20.12
Mashhad	14	20.75
Hamedan	13	20.80
Sari	9	21.94
Significant		0.265

It should be mentioned here that according to World Health Organization (WHO) report (MPOWER in 2011), presenting support for quit-smoking is one of the main six WHO recommendations, according to WHO Framework Convention on Tobacco Control (FCTC), and governments have responsibility to implement these conditions in best type. Hence in order to implement article-14 of the FCTC that is concerned with quit-smoking services, a WHO working group was formed during past 3 years, and its instruction and guidelines were prepared. Iran is also a member of this working group and also through implementation of Tobacco Control Programs (by Ministry of Health and Medical Education, nongovernmental organizations and Tobacco Control Research Centers) encouraged smokers to quit, to the extent that Iran has been mentioned in 47th page as one of the 19 countries that has proper success and also in 103rd page Iran is mentioned

Table 4: Analysis of variance of mean score provided through physicians' opinion toward different methods of quit smoking in Iran, 2012-2013 $P < 0.000$

Quit smoking method	Number	Subset for alpha=0.05				
		1	2	3	4	5
E-cigarette	10	12.30				
Some methods without medication	3	15.83	15.83			
Nicotine medication	5	16.20	16.20	16.20		
Quit and win	10	17.30	17.30	17.30	17.30	
Education	13	17.76	17.76	17.76	17.76	17.76
Self-learning material	9		18.88	18.88	18.88	18.88
Zyban	20		18.90	18.90	18.90	18.90
NRT	23		19.47	19.47	19.47	19.47
Behavioral treatment	11		20.36	20.36	20.36	20.36
Hypnotism	5		20.50	20.50	20.50	20.50
Some medication	5		20.80	20.80	20.80	20.80
Quit line	5		21.33	21.33	21.33	21.33
Combination treatment	26		21.76	21.76	21.76	21.76
Champix	14			22.07	22.07	22.07
Will power	9				22.50	22.50
Acupuncture	7				23	23
Telephone consultation	9					23.33
Significant		0.109	0.050	0.056	0.075	0.094

NRT=Nicotine replacement therapy

as one of the four countries that has national quit line and free services for quit-smoking and NRT services. However, authors examined conditions of quit-smoking in different cities, and it should be acknowledged that, unfortunately, this ideal situation is not observed.

CONCLUSIONS

This study revealed that more credit is allocated by physician to quit-smoking methods such as telephone-consultation, acupuncture, personal treatment, and Champix, respectively. Treatment costs are important for presenters of quit smoking services for smokers. There is no single miraculous method for quit smoking and some other methods are recommendable in some conditions.

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