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ORIGINAL ARTICLE / ORİJİNAL MAKALE

Accessibility of smoking cessation clinics in Turkey: a descriptive study among a population of smokers in İstanbul

Türkiye'de sigara bırakma polikliniklerinin erişilebilirliği: İstanbul'da sigara içen bir popülasyon arasında tanımlayıcı bir çalışma

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Abstract

Objective: In 2011, Turkey started the nationwide "Smoking Cessation Treatment Support Program" via Smoking Cessation Clinics (SCC). This study examined the accessibility of these clinics using Levesque's framework of access to healthcare services. From the (potential) users' perspectives, it was aimed to find the challenges they face in accessing these clinics, and it proposed solutions for better implementation.

Methods: This study was conducted among 304 smokers who visited four Family Health Centers in a geographically defined area in Istanbul, Turkey, in 2018.

Result: In this study, it was found that 74% of smokers wished to quit smoking. Within them, 21% didn't know of SCCs, and half of them didn't know what services were provided there. Among those who knew of SCCs, 30% used them to quit smoking. The majority (75.7%) of the SCC users found the medications expensive; 41% didn't use them, and 64% didn't re-visit the clinics for follow-ups. Eventually, 4.3% of smokers quit smoking through SCCs. Utilization of these clinics were significantly higher among women (35%) than men (18.6%) (p=0.024). T; and there was no other differences in terms of age, marital status, income, and education level.

Conclusion: Smoking cessation programs in Turkey and other countries can be implemented more efficiently if the sufficient number of clinics are opened and are accessible at the local level; more health professionals are trained to practice; the clinics are made more visible; smoking cessation medications are made available constantly; and closer monitoring of service users is ensured.

Keywords: Smoking Cessation, Access To Health Care, Health Plan Implementations, Turkey

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Öz

Amaç: Türkiye'de, 2011 yılında Sigara Bırakma Poliklinikleri (SBP) ile birlikte ülke çapında "Sigara Bırakma Tedavisi Destek Programı" hayata geçirilmiştir. Bu çalışmada Levesque'in sağlık hizmetlerine erişimi tanımlayan kavramsal çerçevesini kullanarak SBP'nin erişilebilirliğini inceledik. SBP'ye başvuru potansiyeli olan kişilerin açısından polikliniklere erişimdeki zorlukları tespit etmeyi ve daha iyi bir uygulama için çözümler önermeyi amaçladık.

Yöntem: Araştırma 2018 yılında, İstanbul'da dört Aile Sağlığı Merkezini ziyaret eden 304 sigara içicisinin katılımıyla yapılan tanımlayıcı bir çalışmadır.

Bulgular: Katılımcıların %74'ü sigarayı bırakmak istediğini belirtmiştir. Sigarayı bırakmak isteyenlerin ise %21'i SBP'lerin varlığını, yarısı ise SBP'de hangi hizmetlerin verildiğini bilmemektedir. SBP'yi bilenlerin %30'u sigarayı bırakmak için SBP'ye başvurduğunu belirtirmiştir. SBP başvuranların çoğunluğu (%75.7) ilaçları pahalı bulmuş; %41'i kullanmamış ve %64'ü takip için tekrar başvurmamıştır. Sonuç olarak, sigara içenlerin %4.3'ü SBP aracılığıyla sigarayı bıraktığını bildirmiştir. Bu polikliniklerden yararlanma kadınlarda (%35) erkeklerden (%18.6) anlamlı olarak daha yüksek bulunmuştur (p = 0,024). Yaş, medeni durum, gelir ve eğitim düzeyi açısından istatistiksel olarak farklılık saptanmamıştır.

Sonuç: Sigara bırakma programları hem ülkemizde hem dünyada yeterli sayıda poliklinik varlığında, yerel düzeyde erişilebilir olduğunda, daha fazla sağlık profesyoneli bu hizmet özelinde eğitildiğinde, poliklinikler daha görünür olduğunda, sigara bırakmayı destekleyen ilaçların temini devamlı olduğunda ve başvuranlar yakından takip edildiğinde daha verimli bir şekilde uygulanabilir.

Anahtar Kelimeler: Sigara Bırakma, Sağlık Hizmetlerine Erişim, Sağlık Planı Uygulamaları, Türkiye

INTRODUCTION

Turkey signed the Framework Convention on Tobacco Control (FCTC) in 2004; which requires the health system(s) to provide treatment services for tobacco dependent people. For this purpose, the Turkish Ministry of Health (MoH) started a program in 2011 called the "Smoking Cessation Treatment Support Program (SCTSP)". With the initiation of this program, the MoH started to provide smoking cessation medications free of charge to smokers applying to outpatient Smoking Cessation Clinics (SCC).[1]

SCCs were first established in the 1990s[2], however, before the SCTSP, there were few clinics throughout the country (n=45), and they were practicing independently.[1,2] With the initiation of SCTSP, the number of SCCs were increased rapidly to more than 400 clinics throughout the country and were centralized at the national level.[1-3] With the centralization of SCCs, these clinics started to utilize a standard service guideline for smoking cessation[1] which is consisting of cognitive-behavioral and pharmaco-therapy.[4,5] These clinics are run by physicians who are trained in providing smoking cessation treatments.[1] Admission to these clinics is covered by the Social Security Institution (SSI).[1,6] However, the smoking cessation medications are not covered by the SSI and are given

out for free by the government in periodic SCTSP campaigns.[1,6]

After the introduction of the SCTSP, several studies have been conducted to evaluate the effectiveness of the program.[1-15] However, most of these studies are mainly about the quit rates among the SCC users. According to the literature, no study has been conducted so far to evaluate the functionality of these clinics and how accessible they are. Therefore, this study aimed to evaluate the accessibility of SCCs and find out the barriers in accessing these services and the opportunities for a better implementation. To evaluate the accessibility of these clinics Levesque et al.'s[16] framework of access to healthcare services was used.

Levesque et al. define access to healthcare as "the opportunity to identify healthcare needs, to seek healthcare services, to reach, to obtain or use health care services, and to actually have a need for services fulfilled".[16] Levesque et al. divide access into five stages: *healthcare needs and desire for care; healthcare seeking; healthcare reaching; healthcare utilization; and healthcare consequences*. They also integrate the individual and structural dimensions of access to cover demand-side and supply-side factors. They conceptualize five dimensions of accessibility of services (supply-side) as: *approachability, acceptability, availability, affordability, and appropriateness;* and five corresponding abilities of individuals (demand-side) as: *ability to perceive; ability to seek; ability to reach; ability to pay; and ability to engage*.[16] In this study, from the (potential) users' perspectives, it was strived to take all these stages and dimensions into account to evaluate the accessibility of SCCs.

METHODS

This descriptive study was conducted among 304 smokers who visited four Family Health Centers (FHC) in a defined area (a district) in Istanbul, Turkey, between January and May 2018. Istanbul is a metropolitan city with a diverse population of around 15 million people from all around Turkey.[17] In the sampling method, the district was first divided into two sub-regions. One of the regions was below the E5 highway, which is the seaside, and mainly accommodating people from higher socio-economic status (SES) and the other one was above the highway which was mainly accommodating people from lower SES. After this stratification two FHCs were randomly selected from each side of the highway. The data were collected on the five days of the week, and during the mornings and afternoons, to cover a more diverse profile of the participants. The sample size was calculated based on the literature showing that around 70% of smokers in Turkey wish to quit smoking.[6,12] This percentage was chosen because it is the first stage to quit smoking according to Levesque et al.'s framework. The sample size was calculated as 323 with 5% alpha error and 95% confidence interval, and 94% (N=304) was reached.

The data were collected with a questionnaire consisting of the socio-demographic characteristics of the participants and the questions investigating access to healthcare services based on Levesque et. al.'s framework of access.[16] The main dependent variables were measured using the dichotomous (yes/no) answers to the following questions:

Healthcare needs and desire for care: "Have you ever thought of quitting smoking?".

Healthcare seeking: "Have you ever heard of SCCs?",

Healthcare reaching and utilization: "Have you ever been to a SCC?".

Healthcare consequences: "Have you ever quitted smoking through a SCC" and "have you ever quitted smoking for more than six months through a SCC".

Chi-square and Fisher's exact tests were used to compare categorical variables; and the Student's t-test or Mann-Whitney U tests for the numerical variables. A p value of <0.05 was accepted statistically significant.

Ethics Committee approval was received from Marmara University Faculty of Medicine Clinical Research Ethics Committee (approval number: 09.2017.730, date: 08.12.2017). Institutional permission was obtained from the provincial directorate of health.

RESULTS

The population of this study consisted of 304 smokers. Of the total population, 64.8% (n=197) were men; 62.5% (n=190) were married; 70.4% (n=214) were graduates of high school or above; and 65% (n=197) were working or students. The median age of the participants was 36 (minimum: 18; maximum: 80); and the median age they began smoking was 18 years (minimum: 7; maximum: 51). The main reason cited as to why they began to smoke was peer pressure (54.5%). The median number of cigarettes smoked in a day was 20 (25-75 percentile: 10-20); and the median monthly expenditure on smoking was 300 Turkish Liras (25-75 percentile: 200-400). (More details are given in Table 1)

Table 1. Sociodemographic characteristics of the study population

Variables	Categories	n	%
Gender	Women	107	35.2
	Men	197	64.8
Marital status	Never married	95	31.3
	Married	190	62.5
	Divorced/separated/ widow	19	6.3
Education level	Illiterate	1	0.3
	Primary school	46	15.1
	Junior high school	43	14.1
	High school	117	38.5
	University and higher	97	31.9
Income level	Income>expenses	58	19.1
	Income=expenses	153	50.5
	Income<expenses	92	30.4
Work status	Not working	91	30.0
	Retired	15	5.0
	Government work	42	13.9
	Private sector	58	19.1
	Self-employed	83	27.4
	Student	14	4.6
Reason to start smoking	Peer pressure	165	54.5
	Psychological stress	115	38.0
	Curiosity	71	23.4
	Emulation	69	22.8
	Proving himself/ herself	9	3.0
	Others	27	8.9
Fagerström test for nicotine dependence	Very low	101	33.6
	Low	83	27.6
	Moderate	31	10.3
	High	60	19.9
	Very high	26	8.6
		Median	**25-75 percentile**
Age (years)		36	28-45
Age at starting smoking (years)		18	15-20
Total duration of smoking (years)		16	7-24
Number of cigarettes smoked in a day		20	10-20
Monthly expenditure on smoking (Turkish Liras)		300	200-400

Access to Smoking Cessation Clinics

A step-by-step analysis of the accessibility of SCCs was conducted based on the stages of access in Levesque et al.'s framework.[16] After the individual evaluation of each stage, all stages were combined and presented in Figure 1.

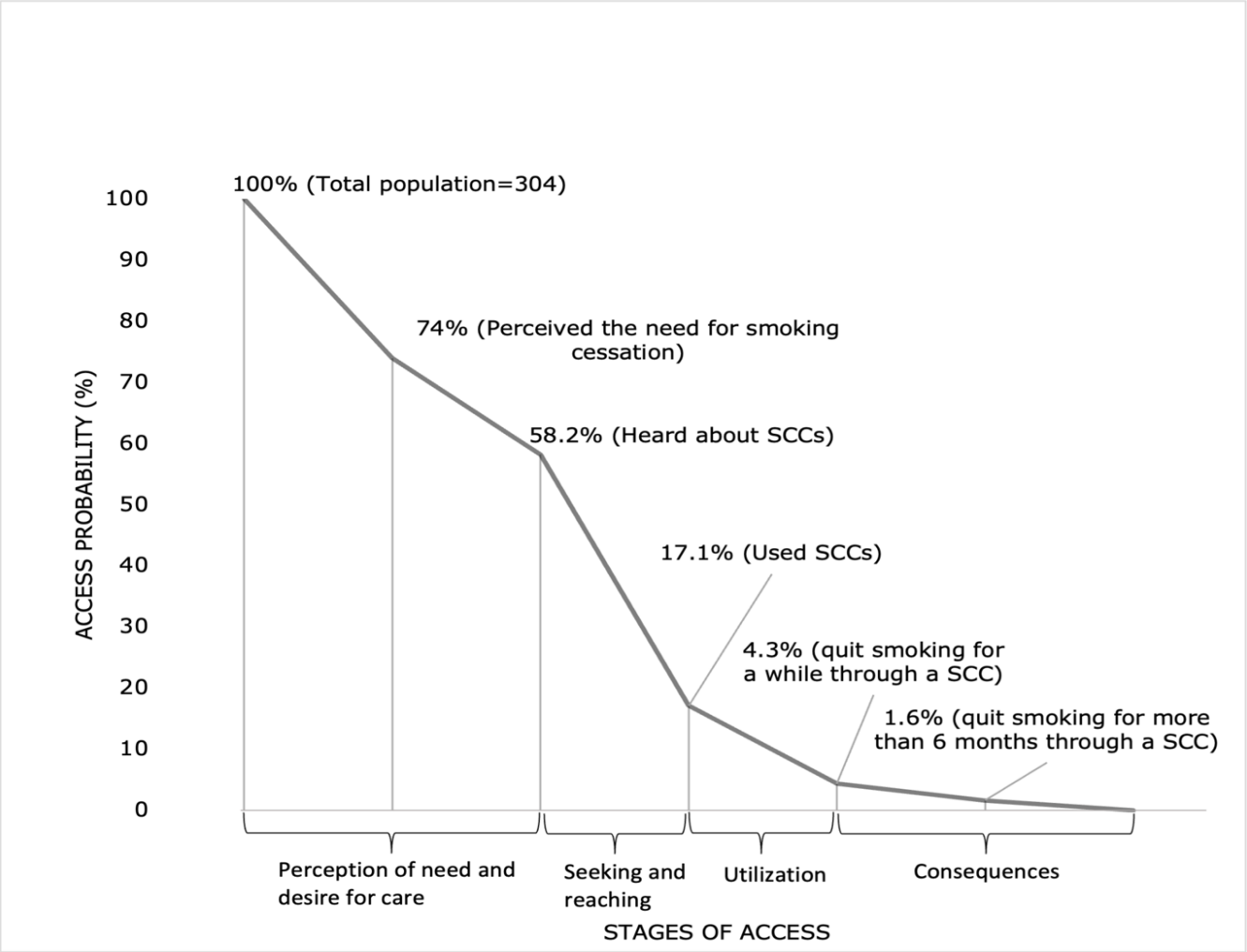

Figure 1. Probability of the participants achieving to pass different stages of access to smoking cessation clinics.

a. Perception of need and desire for care

In this study, it was found that; 74% of the total population have thought about quitting smoking and 68% have tried to quit smoking. Of those who have thought to quit smoking, 79% (n=177; 58.2% of the total population) have heard about SCCs. Among those who have heard about SCCs, 33% have heard about it from televisions or radios; 30.7% from health professionals; 18.2% from their social circles; 8% from internet or social media, and 10.2% from other sources. Among those who have heard of SCCs, 46.9% (n=82) stated that they do not know what kind of services are provided in SCCs.

There was no significant difference in terms of gender, age, marital status, education level, income level and the level of nicotine dependence between those who have thought about quitting smoking and those who have not; and also between those who have heard about SCCs and who have not (Table 2).

Table 2. Proportions of the participants successfully passed different stages of access to Smoking Cessation Clinics in relation to their socio-demographic characteristics

	Categories	Have thought about quitting smoking			Have heard about SCCs*			Have reached (utilized) SCCs*			Have quit smoking for a while via SCCs*		
Variables		**n**	**%**	**P value**	**n**	**%**	**P value**	**n**	**%**	**P value**	**n**	**%**	**P value**
Gender	Men	73	68.2	0.076	59	80.8	0.645	11	18.6	**0.024**	2	25.0	0.694
	Women	152	77.6		118	78.1		41	35.0		11	35.5	
Marital Status	Never married	67	70.5	0.587	53	79.1	0.367	12	22.6	0.122	3	42.9	0.416
	Married	144	76.2		115	80.4		35	30.7		10	35.7	
	Divorced/separated/widow	14	73.7		9	64.3		5	55.6		0	0	
Education Level	Primary school	69	77.5	0.684	50	72.5	0.268	17	34.0	0.720	4	28.6	0.913
	High school	84	72.4		67	80.7		19	28.8		4	33.3	
	University or higher	71	73.2		59	83.1		16	27.1		5	38.5	
Income Level	Income>expenses	43	74.1	0.884	35	81.4	0.788	12	34.3	0.585	3	30.0	1.000
	income=expenses	115	75.7		88	77.2		27	30.7		6	33.3	
	income<expenses	67	72.8		54	80.6		13	24.5		4	36.4	
Fagerström Test for Nicotine Dependence	very low	82	81.2	**0.050**	64	79.0	0.324	11	17.5	**0.027**	0	0	0.152
	low	57	68.7		44	77.2		16	36.4		4	33.3	
	moderate	18	58.1		13	72.2		2	15.4		1	50.0	
	high	48	80.0		42	87.5		16	38.1		5	41.7	
	very high	18	69.2		12	66.7		6	50.0		2	50.0	
Total		225	100		177	100		52	100		13	100	

*SCC: Smoking Cessation Clinic

a. Healthcare seeking and reaching

It was found that among those who have heard about SCCs, 34.1% (n=60) did not know where the closest SCC was; and 36.9% (n=65) did not know how they could apply to a SCC. Of those who knew where the closest SCC was, 33.6% said that the clinic was in walking distance; 32.9% could drive to one; and 33.6% could use public transportation to reach one. Also, 27.5% of those who knew of the closest SCC did find transportation moderately or very difficult to navigate; and 12.3% found it expensive. Eventually, 17.1% (n=52) of the total population had reached and used the services at SCCs.

This study found that the percentage of women (35%) reached (or utilized) the SCCs was significantly higher than that of men (18.6%) (p=0.024). There was no significant difference in terms of age, marital status, education level, and income level in regard to reaching/utilizing SCCs. Although there was a statistically significant difference in regard to the level of nicotine dependence, there was not a linear trend throughout the dependence levels (Table 2).

b. Health care utilization

In this study, it was found that, among the 52 people who utilized the services, 38.5% were not satisfied with the services provided, and 23% were moderately satisfied. Of those who utilized the services, 75.7% found the prescribed medications moderately or very expensive; 41% did not use the prescribed medications; and 64% did not re-visit the clinic for a follow-up. The main reasons stated for not visiting the clinic for a follow-up were: seeing no benefit from the treatments (26.7%), dissatisfaction with the services (16.7%), finding the medications expensive (10%), and finding the distance to the clinic too far (10%).

c. Health care consequences

It was found that 25% (n=13) of the participants who used SCCs were able to quit smoking for a certain period of time (4.3% of the total population); and among them, six people (1.6% of the total population) were able to quit smoking for more than six months.

DISCUSSION

Considering that quitting smoking through a SCC was the main outcome, it was found that smokers are "eliminated" progressively within consecutive stages of access before they quit smoking (Figure 1). Firstly, around 30% of the smokers are eliminated within the first step as they do not perceive the need for smoking cessation. Among those who wish to quit smoking, one out of five people do not know of SCCs and around half of them do not know what kind of services are provided in the clinics. Of those who know of SCCs, only 30% use SCCs to quit smoking (17.1% of all smokers). And among those who use SCCs, the majority (75.7%) finds the medications expensive, and a considerable amount (41%) do not use them. Also, the majority (64%) do not re-visit the clinic for follow-ups. In the end, a small amount (4.3% of all smokers or 25% of SCC users) quit smoking through a SCC (Figure 1).

Perception of need and desire for care

One of the main barriers in accessing SCCs in this stage is the high percentage of smokers who do not perceive the need to quit smoking and therefore do not consider entering into the treatment processes. Similar to previous studies,[6,12] it was also found that around 30% of smokers do not think about quitting smoking. The perception of the need to quit smoking is widely accepted as an "individual" motivation. However, healthcare systems can take an active role in moving the smokers from pre-contemplation (not thinking of quitting smoking) to contemplation (thinking) and then action. There are several proven techniques to motivate people to start thinking of change. Providing information to the smokers from a wider perspective and interpreting the risks and harms of smoking in the context of their own social norms and values can be both informative and motivating.[18] Also, a considerable amount of research reports that involvement of "significant others" (family members etc.) can move people from pre-contemplation to contemplation and help them participate in treatment processes and successful recovery.[19] Knowing the fact that peer pressure was the main reason to start smoking in this study population, interventions targeting the social meaning of smoking in friend groups and their collective lifestyles may play an important role in motivational change.[20,21]

Another important barrier in accessing SCCs is the lack of visibility of the clinics. Previous studies show that lower service awareness is a significant barrier in accessing healthcare.[22,23] Therefore, when a new health service or program is implemented, healthcare systems should make them visible. A study conducted in the Netherlands shows that the policy implementations that are accompanied by a media campaign increases the quit attempts and quit rates.[23] The mentioned media campaign in the Netherlands is an example of "how-to-quit" campaign. There have been campaigns in Turkey as well, but most of them are "why-to-quit" campaigns.[24,25] Consequently, these campaigns might not be sufficient to direct people to SCCs. Therefore, a media campaign that makes the SCCs more visible by giving more information about the services provided, where these clinics are and how to make an appointment might increase the attendance rates. Media campaigns for smoking cessation programs have been found to be potentially cost-effective.[26]

Healthcare seeking and reaching

Another important barrier in accessing SCCs is the inadequate availability and the distance of the clinics to people. This can be an indicator of the need for more clinics. Although after the introduction of the SCTSP the number of clinics has increased, this might still not be enough. Particularly in poorer neighborhoods, there might be a higher need because it is known that (although no significant difference was found in this study) the rate of smoking is higher among those with lower socioeconomic status[27] and they may not be able or willing to pay for transportation.[28] On the other hand, opening new clinics can be costly.

In terms of infrastructure and the needed equipment, SCCs are relatively cheap services.[29] However, in terms of human resources, they can be quite costly because these clinics are run by physicians. In addition, the recruitment of new physicians for these clinics may not be possible, because there is already a shortage of physicians particularly in the Eastern region of Turkey.[30] A solution for this might be recruitment of other health professionals in these clinics. For instance, nurses have been found to be potentially effective workforces in smoking cessation.[2] A factor complicating this may be the fact that in Turkey only physicians are allowed to prescribe medications. A regulation might be needed to let other trained health professionals prescribe smoking cessation medications. Or else, a consultation or referral system can be made to let these health professionals consult with doctors or refer complicated patients to them. Another suggestion can be integration of these services to the primary health care system and be provided by family physicians. The fact that family health centers are located in almost all neighborhoods, they can be more convenient and affordable. The experience of English smoking treatment services also suggests that forming new SCCs in existing healthcare services may speed up the implementation and make them available at the local level.[31,32] Some other studies also recommend these services to be provided by general practitioners because it is more cost-effective.[33]

Healthcare utilization and consequences

Another important barrier in accessing SCCs is the lack of engagement between the users and providers, and the high dropout rate of patients from their treatments and follow-

ups. Previous studies also show that a high amount of clinic users does not adhere to their treatments and follow-ups.[1,2,5,6,10,12,34] One of the reasons for poor adherence might be the fact that smoking cessation medications are not covered by SSI and are only distributed for free periodically only during the campaigns. In such situations, smokers apply to SCCs not because they are motivated to quit but because they want to get free medications before the campaign ends (a campaign generally lasts 1-1.5 year).[3] However, previous studies show that quit rates are much higher when the smoker is highly motivated to quit.[15,27,29] For this reason, the medications should be accessible constantly and should be covered by SSI to let the smokers use them whenever they are motivated to quit. Tobacco and substance addiction counseling is also provided in 'Healthy Life Centers'[35] in Turkey. Healthy Life Centers have been established to protect public health, promote a healthy lifestyle, and strengthen primary health care services. Similar to the services provided in these centers, providing motivational talks by psychologists in SCCs might help reduce the high dropout rate.

Another way to increase the follow-up rates can be a notification service to users with phone calls or messages when their appointment time nears. Short message notifications and telephone calls have been proven to be effective methods to increase follow-up rates and treatment adherence,[3,6,36] and also cost-effective.[37] Increased follow-up rates and closer monitoring have been proven to lead to increased success rates.[3,7] Another method to help increase follow-up rates may be involvement of "significant others", for instance family members, in the treatment processes to motivate smokers to adhere to the program.[19]

Study limitations and strengths

One of the limitations of this study is that all the participants are current smokers. It does not include past-smokers some of which might have quit smoking via SCCs. In this regard, the percentages found might be an under-estimation of the real usage of SCCs. On the other hand, the participants of this study are people who applied to Family Health Centers which might represent a population who is more interested or more able to use healthcare services. In that regard, the results can be an over-estimation, because the general population might not use SCCs as much as this population. Consequently, it can be thought that this under- and over-estimation may counterbalance each other.

Another limitation is that, while the sample size is considerably high for the first stages of access, few of them are left for the later stages. For instance, only 52 persons have reached SCCs. However for this study, the first stages of access are more important, because many studies have already assessed the later stages. Insights have been added to the literature mainly insights about the initial stages of access.

Also, knowing the complexity of health behaviors and healthcare delivery, although it was strived to cover all the stages and dimensions of access in Levesque et al.'s framework, capturing all these dimensions with one tool is difficult. Therefore, there will always be some dimensions that have not been covered.

Taking all this into account, the results can be considered show a good picture of the general smoker population in Istanbul. Keeping in mind that Istanbul is the biggest city in Turkey with a population of 15 million from all over Turkey,[17] this population can be a good picture of Turkey as well.

CONCLUSION

This study makes an important contribution to the literature about the accessibility of SCCs in Turkey and similar programs in other health systems. It was determined that SCCs in Turkey have some shortages in terms of the availability of the clinics at the local level; the visibility of the clinics; the reimbursement system for smoking cessation medications; and the engagement between the users and the providers.

This study has made some suggestions for more effective smoking cessation programs in Turkey and in other health systems planning to implement similar programs. Firstly, before a nationwide smoking cessation program is implemented, a wide involvement of health personnel and the community is needed. Next, these programs should be launched with a media campaign to make them visible for the potential users. Also, smoking cessation medications should be made available and affordable constantly to allow smokers to access them whenever they are motivated to quit smoking. Also, periodic training of service providers about the importance of their work and provision of up-to-date information might be helpful for sustainability of the program.

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Ethical Decleration: The authors declared that the study was conducted in accordance with the principles of the "Ethical Principles for Medical Research Involving Human Subjects" of World Medical Association Declaration of Helsinki. Ethics Committee approval was received from Marmara University Faculty of Medicine Clinical Research Ethics Committee (approval number: 09.2017.730, date: 08.12.2017). Institutional permission was obtained from the provincial directorate of health.

Author Contribution: Concept: TB, ŞGK, Design: TB, FÖ, YT, MAK, NBC, Supervising: TB, DS, Financing and equipment: FÖ, YT, Data collection and entry: FÖ, YT, MAK, NBC, Analysis and interpretation: TB, Literature search: TB, ŞGK, Writing: TB, Critical review: TB, ŞGK, DS.

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