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اصول تنظیم قراردادها

آموزش مهارت‌های کاربردی در تدوین و چاپ مقاله
Cigarette Smoking in Iran

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Introduction

Cigarette smoking is the largest preventable cause of death worldwide. No systematic review is available on the situation of the smoking in Iran, so we decided to provide an overview of the studies in the field of smoking in Iranian populations.

Abstract

Background: Cigarette smoking is the largest preventable cause of death worldwide. No systematic review is available on the situation of the smoking in Iran, so we decided to provide an overview of the studies in the field of smoking in Iranian populations.

Methods: Published Persian-language papers of all types until 2009 indexed in the IranMedex (http://www.iranmedex.com) and Magiran (http://www.magiran.com). Reports of World Health Organization were also searched and optionally employed. The studies concerning passive smoking or presenting the statistically insignificant side effects were excluded. Databases were searched using various combinations of the following terms: cigarette, smoking, smoking cessation, prevalence, history, side effects, and lung cancer by independent reviewers. All the 83 articles concerning the prevalence or side effects of the smoking habit in any Iranian population were selected. The prevalence rate of daily cigarette smoking and the 95% confidence interval as well as smoking health risk associated odds ratio (OR) were retrieved from the articles or calculated.

Results: The reported prevalence rates of the included studies, the summary of smoking-related side effects and the ORs (95%CI) of smoking associated risks and the available data on smoking cessation in Iran have been shown in the article.

Conclusion: Because of lack of certain data, special studies on local pattern of tobacco use in different districts, about the relationship between tobacco use and other diseases, especially non communicable diseases, and besides extension of smoking cessation strategies, studies on efficacy of these methods seems to be essential in this field.

Keywords: Surveillance, Prevalence, Smoking Related Complications, Cessation, Iran

尼古丁（Nicotina tobacum）（2）。当前估计表明，几乎三分之一的世界人口吸烟（3）。大约35%的男性和22%的女性在发展中国家吸烟。这些数字在发展中国家约为50%和9%，分别（2）。大约84%的全球吸烟者生活在发展中国家，其中约有13亿人（4）。在伊朗，吸烟习惯是在沙阿巴斯萨法维
(1571 – 1629) kingship era. It rapidly spread throughout the country and in 1937 the first cigarette factory with the capacity of producing 600 million cigarettes per year started to work (5). Currently, Iranian Tobacco Company, a governmental organization, with more than 10 divisions/manufactories throughout Iran, produces about 12 billion cigarette sticks per year. In addition almost same amount is legally imported. We recently showed that the prevalence rate of current and daily cigarette smoking in Iran is correspondingly 12.5% (23.4% males and 1.4% females; burden: 6.1 million) and 11.3% (21.4 males and 1.4 females; burden: 5.6 million). We also reported that the average number of cigarettes smoked daily by an Iranian smoker was 13.7 sticks (6). Subsequently it is estimated that roughly 30 billion cigarette sticks is consumed a year in Iran. Recent data in Iran shows 62% increase in the manufactured cigarette from the period of 2000-2004 to 2005-2009 (7). Globally, more than five trillion cigarettes are manufactured yearly. Although there is no exact assessment of the world cigarette marketing expenditures/incomes, it seems that the cigarette is the most marketed production. Considering that in the USA more than $10 billion is spent yearly on tobacco trade, the market is certainly more pronounced in developing countries (1). Two third of the world’s tobacco is produced in 5 countries- China, USA, India, Brazil and Turkey with more than 100,000 hectares devoted to growing tobacco (1). In Iran 10,000-100,000 hectares are probably devoted to tobacco agriculture (2).

Nonetheless, no systematic review is available on the situation of the smoking in Iran, probably because most of the reported data are published in Persian journals and are unavailable to the international readership. In this review, the authors intended to bring the light into the more hidden/unavailable part of the researches in the field of cigarette smoking in Iran. Furthermore, certain national/international studies were included in order to mention the smoking cessation programs designed worldwide to provide a direction for policy makers and future studies.

Methods

We conducted an integrated review of the literature on tobacco use (i.e. smoking and cessation smoking) and its related harms, focusing on Iranian population. Eighty three published Persian-language papers of all types until 2009 were collected by using IranMedex (index of 183 Iranian medical Journals; http://www.iranmedex.com) and Magiran (index of more than 1300 Iranian journals; http://www.magiran.com) databases using various combinations of the following terms: cigarette, smoking, smoking cessation, prevalence, history, side effects, and lung cancer. Reports of WHO were also searched and option ally employed. The studies concerning passive smoking or presenting the statistically insignificant side effects were excluded. The prevalence rate of daily cigarette smoking (which is mostly defined as consuming at least one cigarette stick per day) has been collected from the results of the included articles. The 95% confidence interval (CI 95%) of the prevalence rates as well as smoking health risk associated odds ratio(OR) and CI 95% of ORs were retrieved from the articles or calculated.

The results are presented in three main sections: first the summary of the prevalence studies; second, side effect studies; and finally the articles discussing the cessation strategies in Iran.

Results

Prevalence of daily cigarette smoking

The reported prevalence rates of the included studies are shown in Table 1. The target populations, sample sizes and the gender as well as time and location of the studies are also presented. Cigarette smoking in Iran has been studied mostly among specific communities such as high school and university students, whereas studies on smoking among various occupations
and rural areas are limited, and seemingly the situation of smoking among men has been at the center of attention.

There are 3 studies which report the amount of cigarette smoking over the whole country Iran; the former study was conducted between 1991 and 1999. In 1991 the prevalence of smoking was reportedly 14.6%; and 11.7% in the 1999 (8). In second study conducted at 2005 the prevalence rate was 15.3% (9); and lastly in 2007 daily cigarette consumption was 11.3% (CI=95%=9.0-14.1) (6). In the view of 95% CIs there is no significant gap between the results of these studies. The observed differences are somehow due to various definitions of daily smoking especially between studies of 2005 and 2007.

In regard with geographical distribution, the prevalence rate of daily smoking among adults ranged from 5.9% (CI=95%=3.5%-8.3%) in Gonabad, northeastern of eastern, (10) to 50% (CI=95%=45.6%-54.4%) in Savejbelagh near Tehran the capital (11). Among men and women specifically available data suggests that Savejbelagh owns the highest rates with 38.5% (CI=95%=47.1%-56.1%) and 21.2% (CI=95%=2%-39.4%) respectively, whereas the lowest rates belong to women in Isfahan (12) and in Gonabad with 0.5% (CI=95%=0%-1%) and 12.9% (CI=95%=7.4%-18.5%), respectively (10).

Smoking rate among male students ranged from 2.3% (CI=95%=0.8%-4.3%) in Zahedan, the center of an eastern province (13) to 39.6% (CI=95%=36.8%-42.5%) in Tehran (14). Prevalence of smoking among female students was between 13% in Guilan, northern Iran, (15) and 0.4% (CI=95%=0%-0.9%) in Kerman located at the mid-eastern Iran (16).

Also some focused populations show high prevalence of smoking such as traumatic patients and patients suffering bladder carcinoma with the rate of 38% and 44.5%, respectively (17, 18).

**Side effects of active cigarette smoking**

The summary of smoking-related side effects and the ORs (95% CI) of smoking associated risks are presented in Table 2. We found 37 articles on smoking associated damages conducted in Iran from 1999 to 2009. There were studies which investigated the relation of smoking and health problems among students. In a study on university students, smoking was inversely linked to general health levels (49). Kelishadi et al. reported that the levels of LDL and HDL were respectively higher and lower among smoking students (27) and the mean systolic and diastolic pressures were higher among smoking population. Among studies focused on adult populations, in 2000 Azizi et al. documented that smokers had lower HDL levels than non-smokers, OR=2.57 (CI=95%=2.24-2.76) (50); their study included almost 9500 participants. Also, among 9632 individuals over 20, increased risk of dyslipidemia was found among smoking participants; OR was 1.30 (CI95%=1.13-1.5) (51). In a review the hazardous effect of smoking on risk of tuberculosis infection has been emphasized (52). Smoking during pregnancy was reported to be a significant risk factor for maternal and fetal untoward outcomes with OR=2.71 (CI95%=1.52-4.84) (53). Also oral and dental problems were reported among smoking individuals in a few studies (56). Risks of bladder cancer and infertility were also increased among cigarette smokers (54, 55).

**Smoking cessation**

The available data on smoking cessation in Iran suggests that the prevalence of quitting daily smoking is 3.4% of whole population. This rate was higher among those aged 55-64 years, 7.9% (6).

We included the main conclusions of the 4 available studies on the smoking cessation methods in Iranian population along with some international suggestions in Table 3.
Table 1: Prevalence of smoking among different populations studied so far in Iran

<table>
<thead>
<tr>
<th>Group</th>
<th>Location</th>
<th>Sample size</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Year</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth at the military</td>
<td>Tehran</td>
<td>976</td>
<td>20.8(18.3-23.3)</td>
<td>-</td>
<td>-</td>
<td>1999</td>
<td>19</td>
</tr>
<tr>
<td>Medical students</td>
<td>Arak</td>
<td>475</td>
<td>29.5(25.4-33.6)</td>
<td>-</td>
<td>-</td>
<td>1999</td>
<td>20</td>
</tr>
<tr>
<td>Medical students</td>
<td>Shiraz</td>
<td>694</td>
<td>15.4(11.8-18.9)</td>
<td>0.7(0-1.6)</td>
<td>9.1(6.9-11.2)</td>
<td>2000</td>
<td>21</td>
</tr>
<tr>
<td>Senior high school</td>
<td>Tehran</td>
<td>4023</td>
<td>7.2(6-8.2)</td>
<td>1(0.6-1.4)</td>
<td>4(3.4-4.6)</td>
<td>2001</td>
<td>22</td>
</tr>
<tr>
<td>Medical students</td>
<td>Yasuj</td>
<td>206</td>
<td>18.4(13.2-23.7)</td>
<td>-</td>
<td>-</td>
<td>2001</td>
<td>23</td>
</tr>
<tr>
<td>High school students</td>
<td>Urmia</td>
<td>1096</td>
<td>12.1(10.2-14.1)</td>
<td>-</td>
<td>-</td>
<td>2001</td>
<td>24</td>
</tr>
<tr>
<td>High school students</td>
<td>Rasht</td>
<td>1297</td>
<td>15(13.1-17)</td>
<td>-</td>
<td>-</td>
<td>2002</td>
<td>25</td>
</tr>
<tr>
<td>University students</td>
<td>Tehran</td>
<td>1066</td>
<td>25.4(21.9-28.9)</td>
<td>5(3.1-7)</td>
<td>16.3(14.1-18.5)</td>
<td>2003</td>
<td>26</td>
</tr>
<tr>
<td>High school students</td>
<td>Isfahan-Avak</td>
<td>1950</td>
<td>12.9(10.5-14.7)</td>
<td>4(2.8-5.2)</td>
<td>8.7(7.5-10)</td>
<td>2004</td>
<td>27</td>
</tr>
<tr>
<td>Junior high school</td>
<td>Shiraz</td>
<td>1132</td>
<td>2.5(1.6-3.4)</td>
<td>-</td>
<td>-</td>
<td>2004</td>
<td>28</td>
</tr>
<tr>
<td>High school students</td>
<td>Tabriz</td>
<td>1000</td>
<td>12.6(10.5-14.7)</td>
<td>-</td>
<td>-</td>
<td>2004</td>
<td>29</td>
</tr>
<tr>
<td>High school students</td>
<td>Tehran</td>
<td>1119</td>
<td>6.06</td>
<td>1.5</td>
<td>4.4(3.2-5.6)</td>
<td>2004</td>
<td>30</td>
</tr>
<tr>
<td>High school students</td>
<td>Zahedan</td>
<td>475</td>
<td>2.3(0.3-4.3)</td>
<td>0.4(0-1.1)</td>
<td>1.3(0.3-2.3)</td>
<td>2004</td>
<td>13</td>
</tr>
<tr>
<td>Medical students</td>
<td>Ardebil</td>
<td>1106</td>
<td>22.1(17.6-26.6)</td>
<td>1.2(0.5-2.1)</td>
<td>7.4(5.9-9)</td>
<td>2005</td>
<td>31</td>
</tr>
<tr>
<td>High school students</td>
<td>Gilan</td>
<td>1950</td>
<td>25.9(24.0-27.8)</td>
<td>13(10.8-15.2)</td>
<td>20(18.2-21.8)</td>
<td>2007</td>
<td>15</td>
</tr>
<tr>
<td>University students</td>
<td>Tehran</td>
<td>2297</td>
<td>39.6(36.8-42.5)</td>
<td>14.8(12.7-16.8)</td>
<td>24.2(22.7-25.7)</td>
<td>2008</td>
<td>14</td>
</tr>
<tr>
<td>University students</td>
<td>Kerman</td>
<td>833</td>
<td>3.9 (2.8-5)</td>
<td>-</td>
<td>-</td>
<td>2008</td>
<td>32</td>
</tr>
<tr>
<td>University students</td>
<td>Kerman</td>
<td>1677</td>
<td>21.5(18.5-24.4)</td>
<td>2.4(1.4-3.4)</td>
<td>11(9.5-12.5)</td>
<td>2008</td>
<td>33</td>
</tr>
<tr>
<td>High school students</td>
<td>Birjand</td>
<td>1233</td>
<td>3.9 (2.8-5)</td>
<td>-</td>
<td>-</td>
<td>2008</td>
<td>34</td>
</tr>
<tr>
<td>Junior high school</td>
<td>Kerman</td>
<td>860</td>
<td>2.3(0.7-3.9)</td>
<td>0.4(0-0.9)</td>
<td>1.2(0.4-1.9)</td>
<td>2008</td>
<td>16</td>
</tr>
<tr>
<td>over 15</td>
<td>National</td>
<td>26618</td>
<td>27.2(26.4-28)</td>
<td>3.4(3.1-3.7)</td>
<td>14.6(14.2-15)</td>
<td>1991*</td>
<td>8</td>
</tr>
<tr>
<td>over 15</td>
<td>National</td>
<td>36475</td>
<td>23.9(23.3-24.6)</td>
<td>1.7(1.5-1.9)</td>
<td>11.9(11.5-12.2)</td>
<td>1990*</td>
<td>8</td>
</tr>
<tr>
<td>Adult (over 20)</td>
<td>Yazd</td>
<td>2154</td>
<td>31.2(29.2-33.1)</td>
<td>-</td>
<td>-</td>
<td>2000</td>
<td>35</td>
</tr>
<tr>
<td>Adult (over 15)</td>
<td>Meibod</td>
<td>330</td>
<td>14.8(11.4-16.2)</td>
<td>-</td>
<td>-</td>
<td>2000</td>
<td>36</td>
</tr>
</tbody>
</table>
### Table 2: Reported adverse effects of active cigarette smoking

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Effects</th>
<th>OR (CI95%)</th>
<th>Year</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>206</td>
<td>Oral mucosal lesions</td>
<td>13.06(3.83-44.52)</td>
<td>1999</td>
<td>56</td>
</tr>
<tr>
<td>20</td>
<td>Increased number and abnormalities in alveolar macrophages</td>
<td>UA*</td>
<td>1999</td>
<td>57</td>
</tr>
<tr>
<td>340</td>
<td>Increased sperm morphological abnormalities</td>
<td>2.69(1.64-4.40)</td>
<td>1999</td>
<td>55</td>
</tr>
<tr>
<td>390</td>
<td>Perforated peptic ulcer</td>
<td>2.4</td>
<td>2000</td>
<td>58</td>
</tr>
<tr>
<td>9514</td>
<td>Decreased HDL level (&lt;35mg/dL)</td>
<td>2.57 (2.24-2.76)</td>
<td>2000</td>
<td>50</td>
</tr>
<tr>
<td>150</td>
<td>Increased dental plaques</td>
<td>UA</td>
<td>2001</td>
<td>59</td>
</tr>
</tbody>
</table>

The prevalence rates are % and 95% confidence limits in parentheses. The studies are sorted by the study date (Not publication date).
**Table 2: Continued…**

<table>
<thead>
<tr>
<th>Study Year</th>
<th>Condition</th>
<th>Prevalence Rate</th>
<th>95% Confidence Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Dislipidemia, Increased carboxy hemoglobin level</td>
<td>2.73</td>
<td>(1.00-7.44)</td>
</tr>
<tr>
<td></td>
<td>Atherosclerosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Depression</td>
<td>UA</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Dermal adverse effects</td>
<td>UA</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Psychological disorders</td>
<td>3.71</td>
<td>(1.36-10.09)</td>
</tr>
<tr>
<td>2002</td>
<td>Bladder cancer initiation and progress</td>
<td>UA</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Hyperactivity of airways</td>
<td>49.33</td>
<td>(13.80-176.46)</td>
</tr>
<tr>
<td>2002</td>
<td>Increased IgM, IgG and IgA levels</td>
<td>UA</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Increased IgE level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Insulin resistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Periodontal diseases</td>
<td>4.66</td>
<td>(1.53-14.21)</td>
</tr>
<tr>
<td>2003</td>
<td>Higher fatality of TB</td>
<td>4.19</td>
<td>(1.78-10.1)</td>
</tr>
<tr>
<td>2003</td>
<td>Increased risk of stroke</td>
<td>1.85</td>
<td>(1.18-2.91)</td>
</tr>
<tr>
<td>2003</td>
<td>Increased insulin resistance</td>
<td>UA</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Airway constriction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Progression of asbestosis</td>
<td>22.5</td>
<td>(2.7-187.6)</td>
</tr>
<tr>
<td>2005</td>
<td>Increased oxidative stress level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Increased risk of tuberculosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Increased female/male conception</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Increased hemoglobin and hematocrite</td>
<td>Non-achievable</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Delaying tibia fracture fusion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Dislipidemia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Maternal and fetal untoward outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Coronary artery disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>TB infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Cardiac arrhythmias after acute MI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Decreased saliva</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Short-term memory decline</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The prevalence rates are % and 95% confidence limits in parentheses.

* Unavailable
Table 3: Qualitative results of international cessation programs, (Ordered by the study date)

<table>
<thead>
<tr>
<th>Publication date</th>
<th>Participants</th>
<th>Result of cessation programs</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>Pregnant women from public health maternity clinics of USA</td>
<td>More success of health education vs. standard clinic</td>
<td>86</td>
</tr>
<tr>
<td>1990</td>
<td>United States adult smokers</td>
<td>More success of self-managed quitting vs. cessation programs</td>
<td>84</td>
</tr>
<tr>
<td>1992</td>
<td>Randomized placebo-controlled trial in a smoke clinic in London</td>
<td>Success of nasal nicotine spray</td>
<td>93</td>
</tr>
<tr>
<td>1994</td>
<td>Randomized placebo-controlled trial in a research clinic</td>
<td>Success of nicotine patch and mecamylamine</td>
<td>94</td>
</tr>
<tr>
<td>1999</td>
<td>Female smokers of a behavioral-cognitive cessation program</td>
<td>Success of exercise involved cessation programs with less weight gain</td>
<td>95</td>
</tr>
<tr>
<td>2000</td>
<td>Cochrane review on hypnotherapy</td>
<td>No success of hypnotherapy</td>
<td>96</td>
</tr>
<tr>
<td>2000</td>
<td>Cochrane review on training</td>
<td>No strong evidence of the efficacy of training health personnel</td>
<td>97</td>
</tr>
<tr>
<td>2002</td>
<td>Cochrane review of 45 randomized trials</td>
<td>More success of self-help materials vs. no intervention</td>
<td>98</td>
</tr>
<tr>
<td>2002</td>
<td>Cochrane systematic review of cessation programs</td>
<td>No success of acupuncture</td>
<td>99</td>
</tr>
<tr>
<td>2002</td>
<td>Participants of the programs of first cessation clinic in Iran</td>
<td>Success of lighter smokers and attending clinical courses</td>
<td>91</td>
</tr>
<tr>
<td>2003</td>
<td>Cochrane review of nursing interventions</td>
<td>Importance of educational and behavioral therapy</td>
<td>89</td>
</tr>
<tr>
<td>2006</td>
<td>Cochrane review of NRT trials</td>
<td>Success of nursing support</td>
<td>88</td>
</tr>
<tr>
<td>2007</td>
<td>Cochrane review of NRT trials</td>
<td>Success of 5 NRT programs (gum, transdermal patch, nasal spray, inhaler and sublingual tablets/lozenges)</td>
<td>87</td>
</tr>
<tr>
<td>2008</td>
<td>4 quit and win campaigns in Isfahan</td>
<td>Success of Quit and Win contest</td>
<td>90</td>
</tr>
<tr>
<td>2009</td>
<td>00</td>
<td>Success of using bupropion with less weight gain and side effects</td>
<td>100</td>
</tr>
</tbody>
</table>

Discussion

Our result is significant as a summary of internationally unavailable part of smoking related researches is Iran; nevertheless a reasonable level of uncertainty should be considered in terms of credibility for the studies published in internationally unavailable literature.
The prevalence of cigarette smoking in Iran ranges from 0.4% to 41% in various subpopulations, both extremes correspond to the adolescence and in students. The latest data of the prevalence of daily smoking in the whole country is 11.3% with no significant change from 1991 to 2008. Whilst we cannot conclude a generalized pattern for the prevalent smoking and particularly its geographical distribution, the summary of the studies gathered in Table 1 could be helpful in somewhat retrospective way for the future studies and researchers. Obviously the males are the population requiring attention in addition to teenagers with smoking rates as high as 40% and 13% in male and female students in certain areas. Seemingly the smoking rate associates with the regional income westernized lifestyle highest in the central and northern provinces and lowest in the eastern and border provinces.

The reported smoking-related complications in Iran are comparable with studies elsewhere and a wide range of diseases possibly affecting every organ have been linked to smoking. Dyslipidemia, oral cavity and respiratory disorders / infections have been reflected mostly in Iranian studies. Considering these effects and smoking burden on health care system, increased tobacco production in Iran is a major obstacle for public health and challenge for policy makers. The only way to reduce hazard risk in the smokers is the complete cessation. Unfortunately there are limited studies on the efficacy of smoking cessation strategies in Iran. Tobacco control program strategies should be on preventing initiation and fostering cessation. However, these are not attainable in many smokers. So, a comprehensive tobacco control program should also include methods to reduce risks in those individuals who continue to smoke (84). Smoking-cessation treatment consists of three phases: preparation, intervention, and maintenance. Preparation aims to increase the smoker's motivation to quit and to build confidence. Intervention can take certain methods or a combination of them to help smokers to achieve abstinence. Maintenance, including support, coping strategies, and substitute behaviors, is necessary for permanent abstinence (85).

The efficacy of different methods to quit smoking in Iran has been investigated in 4 studies. In the study by Shahrokhi and Kelishadi the strategy “Quit and win contest” has been reported as a successful program in Iran and the authors claimed that the quit rates of smoking individuals participating this strategy increased from 1998 to 2004. Quit and win contest was designed by WHO as an effective and low-cost cessation programs especially for low and middle income countries (90). Education and behavioral therapy had a significant role in the successfulness of smoking cessation (89). Also, the lighter smoking and attending clinical courses by smokers comprised the success to quit smoking (91). The effect of smoking cessation on improving hematological disorders attributed to smoking was underscored (92). Many smokers stop smoking by themselves, but support with advice and information may be helpful to increase the success rate. Health education methods have been shown successful in changing smoking behavior (86). In the Cochrane review of five different forms of Nicotine Replacement Therapy (87), all were significantly effective compared to placebo. The result of some studies revealed that the role of education and behavioral therapy in implementing smoking cessation program is essential (86, 88, 89). In general literature, intervention methods are divided into two categories. First, unassisted methods: these include quitting "cold turkey"; gradually decreasing the number of cigarettes smoked per day; using low-tar or low-nicotine cigarettes; quitting with friends, relatives, or acquaintances; using special cigarette filters or holders; using over the counter products; or substituting with another tobacco product (snuff, chewing tobacco, pipes, or cigars). Second, assisted methods: these include attending a program or course for a fee, consulting a psychiatrist or psychologist, using hypnotherapy, acupuncture, or nicotine gum. The latter method
is "assisted" because nicotine gum requires a prescription and the physician should provide cessation counseling with the gum.

**Ethical considerations**

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

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**References**


35. Razavi SM, Ashrafi Z, Hosseini S (2000). The first time, place, role model and the most important stimulant to cigarette
45. Taghavi R, Ramazani A, Barzegarnejad A (1999). Possible effect of smoking on the...
75. Nasimi A, Rostami A, Nemat Bakhsh M (2005). Difference of blood’s Oxygen between smokers and non-smokers patients with acute myocardial infarction and find-


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