

## Smoking and substance abuse among nurses in Turkey: A systematic literature analysis

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### ABSTRACT

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**Background:** It is necessary that physicians, nurses, other health professionals and even medical students and students of nursing and midwifery schools abstain from smoking. Those who are already smokers should quit or make sure that patients are not around when smoking.

**Purpose:** This study aims to examine the substance abuse among nurses, the substances that they mostly abuse and affecting factors in light of previous studies conducted in Turkey.

**Method:** Systematic literature review.

**Results:** Studies conducted in Turkey show that smoking rate among nurses varies between 42.3% to 68.6%, while quit rate varies between 6% to 12.7%. Unfortunately, these results are quite high. Being a widow/widower, having divorced, presence of a mental problem requiring treatment, and being

a high school graduate increase the likelihood of smoking. Nurses with a university degree start smoking at the age of 21 or above. The leading reason for smoking is social environment and friends, followed by stress/boredom and pretension/enjoyment.

**Conclusion:** Organizing educational programs and campaigns for all nurses, especially for the students of nursing and health vocational schools, which focus on the negative effects of smoking and quitting, and making changes in the curricula of health-related programs so that students get familiar with the topic as early as in the first year of their education, would make the fight against substance abuse more effective.

**Key words:** substance abuse, nurse, smoking, Turkey

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## **INTRODUCTION**

Creating both individual and social problems, substance abuse is one of the most serious issues posing a threat against public health. Preventing people from starting substance abuse is the most important component of the fight against substance abuse, high school and university students being the target group [1].

Some studies suggest that society observe and imitate the health-related behaviors of nurses and physicians. It is therefore necessary that physicians, nurses, other health professionals and even medical students and students of nursing and midwifery schools abstain from smoking. Those who are already smokers should quit or make sure that patients are not around when smoking [2].

It is very important to examine the rate of substance abuse among nurses and midwives, whose behaviors constitute a model for the rest of the society. Being a health professional, they are in direct contact with patients frequently, therefore they should keep such habits under control [3]. Nurses, with their expertise and professionalism, are often the people that patients undergoing substance abuse treatment trust without reserve. Whether nurses and midwives are equipped with adequate knowledge about substance abuse during school might affect their substance abuse status in the future. Before one can effectively fight against substance abuse, one should study substance abuse among nurses who play such a key role in society.

This study aims to examine the substance abuse among nurses, the substances that they mostly abuse and affecting factors in light of previous studies conducted in Turkey. In this article, we reviewed articles published between 2002-2011. We reviewed Pubmed, Google, National journals and this journals' websites, and Congress National Book.

Creating both individual and social problems, substance abuse is one of the most serious issues posing a threat against public health [1,4]. American Psychiatric Association divides substance use disorders into two categories: substance dependence and substance abuse [5]. Substance dependence is defined by the inability to quit using a substance despite many efforts, accompanied by an increase in the amount of substance used over time, presence of withdrawal symptoms upon quitting, persistent use of the substance despite the problems it causes, spending considerable time looking for the substance, strong desire and need to use the substance, and inability to resist using it. Substance abuse is defined by the use of substances in such a way that it does harm to oneself as well as others. The use of substance goes on, although many problems associated with

substance abuse are experienced by the users themselves [5].

There are many substances that could cause substance dependence. DSM-IV divides substance dependence into the following categories: alcohol dependence, amphetamine dependence, caffeine dependence, cannabis dependence, cocaine dependence, hallucinogen dependence, nicotine dependence, opioid dependence, phencyclidine dependence, sedatives, hypnotic or anxiolytic dependence, inhalant dependence, multiple substance dependence and others [6]. According to the World Health Organization, smoking is the leading health problem in the world. The statistics suggest that an individual dies from smoking every 8 seconds, and a total of 4.9 million people die from smoking every year around the world. Studies show that 70% of these deaths take place in developing countries [7]. Smokers and alcohol drinkers were 65 times more likely to use cannabis [5]. This finding indicates that use of a substance might increase the likelihood of developing dependence to other substances. Use of any substance might thus facilitate the use of others in time. The most effective weapon against substance abuse is therefore to prevent it on the onset. Ministry of Health in Turkey introduced many legal regulations in order to control the production of tobacco and to protect secondhand smokers. In 2004, the ministry took various measures in light of the Tobacco Control Framework Convention adopted by the WHO. Following this convention, smoking in closed areas except cafes, bars, and restaurants was banned in 2008. In 2009, this ban was expanded so as to cover all closed spaces. The ministry also organizes field controls to ensure the application of ban and provides help services through Alo 171 Smoking Cessation Hotline. Various smoking cessation clinics also help smokers quit smoking [8].

### **Substance abuse in Turkey and around the world**

Many studies indicate high rates of substance abuse around the world. In Brazil, 68.7% of the population use alcohol, 41.1% cigarettes, 6.9% cannabis, 5.8% solvents [9]. 32 million of the total 1.1 billion drinkers in the world reside in China, 9 million of which are adolescents aged 15-19 [10]. Of the adolescents aged 15-18, 24% in Denmark and Norway, 16% in Finland and Sweden are heavy drinkers [11].

According to the results of Global Adult Tobacco Survey, which was conducted by the Centers for Disease Control and Prevention (CDC) in a total of 14 countries including Turkey, 31.3% of the people aged 15 and over use tobacco and tobacco products occasionally or every day. The

rate was 47.9% among men and 15.2% among women. The rate of people who stated that they have never used tobacco or tobacco products was 52.8%. It was also found that the rate of smoking among midwives and nurses working for the Ministry of Health was 29.5%. Smoking rate was found to be highest among the 25-34 age group (40.3%) and that smokers aged 15-24 were more inclined to quit (47.2%) [12].

### **The Rate and Causes of Substance Abuse among Nurses in Turkey**

Although most studies show that the age of starting substance abuse is 11 and over, some studies found that it could be as low as 8 [13-16]. Given the low age of starting substance abuse in Turkey, especially health professionals are expected to act more responsibly and set example by showing proper health behaviors. However, surveys indicate that health professionals, especially nurses, have a high rate of substance abuse.

In a study about the smoking and quitting behaviors among nurses working in a university hospital, smoking rate was found to be 58.8%, while quit rate was as low as 14% [17]. Studies conducted in Turkey show that smoking rate among nurses varies between 42.3% to 68.6%, while quit rate varies between 6% to 12.7% [4,18- 23]. In a study conducted by Sezer et al. a quit rate of 54% was found in the absence of another smoker at home, while this figure was as low as 7% in the presence of a smoker at home [24]. Similarly, the studies conducted by Nehir et al. and by Çavuşoğlu and Bahar show that smoking rate goes up if there were smokers among one's close acquaintances, especially if the smoking acquaintance is the mother [18, 25].

Studies aiming to determine the level of substance abuse among the students of nursing schools in Turkey resembles those conducted in other countries. Studies show that the rate of substance abuse varies between 10.3% and 48.3% [25-33].

In a study conducted by Nehir et al. it was found that being a widow/widower, having divorced, being between 40-44 years of age, being a high school graduate and having a mental problem requiring treatment increase the likelihood of smoking among nurses. It was also found that 21.7% of the nurses consider asking for help for quitting, 49.2% smoke 10 or fewer cigarettes a day, 25.9% smoke the first cigarette within 60 minutes after waking up, and 32.3% do not mind being around smoke-free places [18]. Studies show that the factor that play the biggest role in starting smoking among nurses is social environment and friends (50%), followed by stress and anxiety (24.3%) [34]. In a study conducted by Akkaş and Olgun, it was found that 40.6% of nurses start

smoking because of pretension and enjoyment and keep smoking out of habit [35]. Erbaycu et al. demonstrated that 41.72% of smoking nurses were university graduates who responded affirmatively when asked if smoking was bad for health and that there was a statistically significant relationship between smoking and presence of a smoker in family, all the more so if the smoking family member was the spouse or a sibling [20]. Contrary to what Nehir et al. found, in a study conducted by Dilbaz and Apaydin with the participation of nurses working in a training and research hospital, it was found that smoking rate was highest for the 26-30 age group (34%) and the rate goes down as age increases. It was also found that those who had been working for 2-5 years at the time of the study (69.6%) and those who were widow/widower/separated/divorced (72.7%) had higher smoking rates, but no statistically significant relationship was found between these variables. A negative relationship was identified between years of smoking and quit rate. Nurses were found to be aware of the harms of smoking but could not quit. Some of them were also using other substances (5.5%). Smoking nurses showed symptoms of distress and agitation when they did not smoke (%35.7-20.9), but these symptoms disappeared after smoking a cigarette (56%) [17].

In a study conducted by Sayan et al. with the aim of identifying the smoking profile of nurses working in a training hospital, it was found that age of starting smoking was 18.9; 29.4% were smokers for more than 10 years; and 89.9% started smoking with the influence of an acquaintance and work environment. Using the Fagerstrom Test for Nicotine Dependence, Sayan et al. also found that 26.1% of the nurses had high or very high dependence. When some sociodemographic characteristics were compared with the level of knowledge about the negative effects of smoking on health, it was found that smokers' level of knowledge about the negative effects of smoking were significantly lower than nonsmokers [36]. Contrary to what Sayan et al. found, in a study conducted by Kutlu et al. with the participation of nurses working in Selcuk University Faculty of Medicine, 50% of the nurses were found to have low dependence according to the Fagerstrom Test for Nicotine Dependence. They also found that 55.2% of the nurses were considering quitting. Those who quit did so either because they thought, smoking was bad for their health (42.9%) or because they had a health problem associated with smoking (42.9%). 64.3% quit smoking suddenly [34].

In a study conducted with the participation of nurses working in Sivas Cumhuriyet University Hospital, it was found that 50% of the nurses started smoking after they became a nurse. Fifty-seven percent of the nurses responded affirmatively

to the question “ Do you ask inpatient about their smoking status as part of nursing care in the clinic?”. 39% participated in a seminar or lecture about smoking [24].

Tan et al. studied the impact of the smoking ban that was put in effect as of May 19<sup>th</sup>, 2008 on the smoking behavior of nursing students. They found that 27.9% of the students quit smoking. Among these students, the rates of those who quit before and after the regulation was put in effect were 25.6% and 74.4% respectively. Of all students who considered quitting smoking (48.8%), 6.2% did so because of legal necessity [37]. Arikan et al. also studied the impact of the ban in question in relation to the smoking behavior of nurses and doctors. It was found that 23.3% of the nurses quit smoking and that among those who quit smoking, 33.3% did so after the smoking ban in closed areas. The nurses who kept on smoking indicated that there became a decrease in the number of cigarettes that they smoke on a daily basis (47.8%). Among those nurses who considered quitting smoking (33.3%), 56.5% did so because they thought smoking in open areas would not leave a good impression on others [38].

In a study conducted by Ergeneilek about the quit attempts and consequences among smoking nurses, it was found that nurses with a university degree start smoking at the age of 21 or above, while nurses who graduated from a vocational high school of health start smoking at the age of 15 or below. 97.5% of smoking nurses stated that their close friends were also smokers, and 72.3% were considering quitting because of the emergence of health issues associated with smoking. Those who were considering quitting were mostly in the 21-25 age group (78.7), while those who do not think about quitting at all stated that they might quit in case of a serious health problem or pregnancy. 57.9% of smoking nurses attempted to quitting, but could not do so because they felt angry and needed smoking. Nurses thought that the reason why their attempts were unsuccessful was because they did not feel ready for quitting, and because their social environment and family affected them negatively. When the nurses were asked about how they cope with withdrawal symptoms, the responses were “thinking about something else” (27.9%), “eating more” (23.7%), and “chewing gum” (16.3%). 96.1% of nurses received professional help for quitting, and this help was received in the form of group therapy meetings [39]. Arikan et al. also investigated whether the nurses who quit smoking received professional help during the process. They found that 14.5% of them received professional help. Among those who received professional help, 50% received acupuncture treatment, while 40% received medical treatment [38].

In a study aiming to examine the quit rate among nurses during a psycho-educational

program, it was found that almost half of the nurses (48.1%) quit smoking in 10 sessions, while 25% reduced their smoking habits, and 26.9% kept smoking like before. A big majority of the nurses (84.6%) attempted to quit during the program. Of all nurses who reduced their smoking habits (25%), a big portion (66.6%) were able to smoke half as much as before, and 30.8% reduced their smoking habits to one cigarette a day. 61.5% of the nurses restarted smoking because of a strong urge for smoking [40].

In a study conducted by Akin to identify the level of need for education during high school about the negative effects of substance abuse, it was found that 65% of the participants think that the increase in the rate of substance abuse was caused by lack of knowledge, and that they sought for knowledge through family, teachers, dependents, radio, TV, and relevant associations and institutions. It is suggested that nurses as health educators should take an active role in educating students, families and teachers [41].

## **RESULTS**

It was noticed that most studies conducted in Turkey about substance abuse among nurses focus on smoking, while the use of other substances are understudied. In light of the existing literature on the subject, the following conclusions could be drawn regarding substance abuse among nurses in Turkey:

- Most nurses are smokers (42.3% - 68.6%)
- The rate of substance abuse is quite low (5.5%) with the exception of smoking
- Quit rates are quite low (6% - 12.7%).
- Being a widow/widower, having divorced, presence of a mental problem requiring treatment, and being a high school graduate increase the likelihood of smoking.
- Nurses smoke 10 or less cigarettes a day, and they smoke the first cigarette within 60 minutes after waking up.
- Nurses with a university degree start smoking at the age of 21 or above.
- The leading reason for smoking is social environment and friends, followed by stress/boredom and pretension/enjoyment.
- Presence of a smoking family member increases the likelihood of smoking, all the more so if the smoking family member is the spouse or a sibling.
- There is a positive relationship between years of smoking and smoking rate, and a negative relationship between years of smoking and quit rate.
- Smoking nurses are aware of the negative effects of smoking, and do not think of quitting unless they have a serious illness or get pregnant.

- Nurses state that they experience distress and agitation when they do not smoke, but these symptoms disappear as soon as they smoke a cigarette.
- Nurses quit smoking because of the negative effects of smoking or because they have a health issue associated with smoking. Some quit suddenly without any particular reason.
- Most nurses receive professional help for quitting such as group therapy meetings.
- It is seen that smoking ban in closed areas had a positive impact on smoking cessation among nurses.
- Nurses receive various types of professional help to quit smoking including group therapy meetings, acupuncture, and medical treatment.

### Suggestions

These conclusions that summarize the existing literature on the subject in Turkey are quite striking. Similar researches could be conducted in other countries to make comparisons between different cultures. Educational activities aiming to improve health, which pay attention to the reasons why people start smoking, could especially facilitate reducing the rate of substance use among nurses.

Organizing educational programs and campaigns for all nurses, especially for the students of nursing and health vocational schools, which focus on the negative effects of smoking and quitting, and making changes in the curricula of health-related programs so that students get familiar with the topic as early as in the first year of their education would make the fight against substance abuse more effective.

### Conflict of interest

None of the authors have any conflicts of interest.

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