

Extended Abstract

Investigation of Independent Variables Affecting Smoking Cessation Success in Early Period Among Adult Patients Using Non-Nicotine Replacement Therapy

Introduction

Tobacco use is one of the chief preventable causes that lead to fatal health problems. The prevalence of adults that use tobacco products in Turkey is 31.2%. Cigarettes have a serious addictive effect because of the nicotine they contain. The Fagerström Test for Nicotine Dependence (FTND) has been widely used to evaluate tobacco dependence. In the choice of treatment, the general characteristics of the patient; additional diseases, if any; the level of nicotine dependence; and the patient's preference should be considered. In Turkey, few studies have examined the factors that may predict the success of smoking cessation. We aimed to identify the independent variables that may predict the success of smoking cessation and compare the effectiveness/side effects of treatments in 466 adult patients who applied to our smoking cessation clinic and who received pharmacotherapy other than nicotine replacement therapy (NRT).

Methods

This study was designed as a single-center, retrospective cohort, and the sample comprised 466 adult patients with a high FTND score, no additional disease-preventing medication, and who were prescribed non-nicotine treatments based on various factors, for example, their preferences.

Behavioral and psychological characteristics were examined in two groups. Although mood disorders, history of depression, presence of anxiety, and reluctance to quit smoking were determined to be negative features, they have been determined to be positive features relatives in examination, to have a sample individual and to plan a pregnancy.

The FTND is widely used to evaluate nicotine addiction. The Turkish version of the FTND has been tested for reliability.

After determining the appropriate treatment, an appointment was made post two weeks for the first control and evaluation of effects and side effects. The planned duration of the treatment was two months, unless a condition that could cause drug cessation was detected.

We examined the independent variables that started the success of smoking cessation as the primary outcome of this study. Secondary outcomes were determined by comparing the Varenicline and Bupropion treatment effects and side effects.

Results

Data of 466 patients were examined: 66.7% received Varenicline therapy, 33.3% received Bupropion therapy, and 66.1% quit smoking. When the groups that quit and did not quit smoking were compared, no significant difference was observed in age, gender, occupational status, additional diseases, treatment initiated, number of trials, and package/year. A significant difference was observed in the FTND score, accompanying negative features, number of cigarettes smoked per day, and years of smoking. The FTND score and the number of packs smoked per day were lower in the quit group, and years of smoking was higher in non-quit group. Although the mean FTND score was 6.67 ± 2.16 for the quit group, 7.25 ± 1.97 was the score for the non-quit group, and our post hoc power analysis was 82.9%.

Independent variables that reduced the success of smoking cessation in the logistic regression analysis tested for model fit as follows: an FTND score above 8 was accompanied by negative features and a short smoking period.

No significant difference was observed in the success of smoking cessation and the adverse effects of patients receiving Varenicline therapy and/or Bupropion therapy.

Discussion

The results of this study demonstrated that smoking cessation success was higher in patients who had more years of smoking, who had an FTND score below 8, and who were not accompanied by negative features.

Although some studies have demonstrated that age as a factor has no effect on smoking cessation success, other studies have demonstrated that older age has a positive effect. In our study, age had no effect on smoking cessation. Although some studies have demonstrated that gender has no effect on smoking cessation, other studies have demonstrated that men have a higher rate of smoking cessation. In our study, no difference was observed between both genders.

Because the studies reviewed have generally been retrospective and only the package/year information is available in the hospital database, few studies have examined the relationship between the number of cigarettes smoked per day and the years of smoking, and the success of smoking cessation. In a study conducted with a sample of 137 cases in Turkey, years of smoking and number of daily cigarettes were high in the quit group, but the result was not statistically significant. In our study, we observed that the success of smoking cessation increased as the years of smoking increased and that the success of smoking cessation decreased as cigarettes smoked per day increased. Regardless of age, the literature has shown that patients who smoke fewer cigarettes per day and have more years of smoking are more likely to quit

smoking. In our study, the success of smoking cessation in blue-collar and white-collar occupational groups was similar, which concurs with the literature.

Some studies have shown that the rate of smoking cessation decreases as the level of dependence increases. In our study, the response to treatment was less in patients with high nicotine dependence, and the success of smoking cessation was higher in patients with an FTND score below 8.

Some studies found no difference between the two drugs in terms of smoking cessation, and other studies observed that Varenicline was more effective than Bupropion. In our study, no significant difference was found in terms of quitting smoking between the patients who received the Bupropion treatment and Varenicline treatment. In a study conducted in Turkey, the effectiveness of the Varenicline treatment was lower. The reason provided for that finding was the extremely low number of cases of Varenicline therapy.

Smoking behavior is more common in individuals with psychiatric disorders. Additionally, psychiatric illnesses is thought to make quitting smoking difficult, but treatments conducted with careful observation do not conflict with mental disorders. In our study, depressive complaints, a history of depression, and anxiety disorders affected treatment success negatively.

Studies have demonstrated a positive correlation between the number of attempts to quit smoking and the success of quitting. In our study, the number of trials was higher in the quit group, but statistical significance was not observed.

One of the limitations of our study is its retrospective and single-centered design. However, the involvement of patients with unknown results may have caused biased sampling. Other limitations of this study are as follows: the absence of an objective biochemical marker to test the patients' smoking cessation status, recurrence rates, and the absence of an examination of the factors affecting the success of smoking cessation in the long term.

Our study determines the independent factors that affect smoking cessation in the early stages of smoking in Turkey, one of the ten countries where approximately two thirds of the world's smokers reside, with a high post hoc power value; we found that smokers for longer periods of time, smokers with an FTND score below 8, and smokers unaccompanied by negative features were more likely to quit smoking. Additionally, we found that neither the Varenicline treatment nor the Bupropion treatment was superior to each other. We propose that our study, to determine the group wherein the success of smoking cessation was low, provides topics for further research on increasing the chance of smoking cessation. Because the recurrence rates in Turkey are high, further research could employ a longer duration for the follow-up with patients.