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Factors Affecting Employees Level of Smoking Addiction and the Relationship Between Smoking Addiction and Life Satisfaction

Çalışanların Sigara Bağımlılığı Düzeyini Etkileyen Faktörler ve Sigara Bağımlılığı ile Yaşam Memnuniyeti Arasındaki ilişki

İlke KARABAĞ **Başak GÜVEN** **Şilan IŞIK**

ABSTARACT

The aim of this study was to evaluate the level of nicotine addiction and the factors affecting addiction in actively working individuals, and to examine the relationship between the degree of nicotine addiction and life satisfaction. This cross-sectional study was conducted on patients who applied to the smoking cessation clinic of a training and research hospital between January 2023 and December 2023 to quit smoking. An electronic questionnaire was administered to patients who gave informed consent. The data collection form consisted of three parts: descriptive information form, the Fagerstrom Nicotine Dependence Test (FNDT), and the Satisfaction with Life Scale (SWLS). The study revealed that males had higher FNDT scores compared to females (p=0.012). It was found that individuals who answered 'Yes' to having a psychologically challenging work environment had higher FNDT scores than those who answered 'No' (p=0.005). In the correlation analysis conducted to examine the relationship between FNDT and Satisfaction with Life Scale scores, a low level significant negative correlation was found between FNDT and Life satisfaction scores (r=-0.181 p=0.010). In our study, male gender and stress factors in the work environment were found to be associated with smoking addiction, while smoking addiction was associated with low life satisfaction.

Keywords: Fagerstrom Nicotine Dependence Test, Nicotine, Smoking, Satisfaction with Life Scale, Addiction.

ÖZET

Bu çalışmanın amacı gelir getiren bir işte çalışan bireylerde nikotin bağımlılığı düzeyini ve bağımlılığı etkileyen faktörleri belirlemek ve sigara bağımlılığı düzeyi ile yaşam memnuniyeti arasındaki ilişkiyi incelemektir. Çalışma kesitsel bir çalışma olup, Ocak 2023 ile Aralık 2023 arasında bir eğitim ve araştırma hastanesinin sigara bırakma kliniğine başvuran ve gelir getiren bir işte çalışan bireyler üzerinde yürütülmüştür. Çalışmaya katılmayı kabul eden katılımcılara çevrimiçi bir e-anket gönderilmiştir. Veri toplama formu üç bölümden oluşmaktadır: tanımlayıcı bilgi formu, Fagerstrom Nikotin Bağımlılığı Testi (FNDT) ve Yaşam Memnuniyeti Ölçeği (SWLS). FNDT puanı erkeklerde kadınlardan daha yüksek bulunmuştur (p=0,012). Psikolojik olarak zorlu iş yeri ortamına 'Evet' diyenlerin FNDT puanı 'Hayır' diyenlerden daha yüksek bulunmuştur (p=0,005). FNDT ile Yaşam Doyumu Ölçeği puanları arasındaki ilişkiyi test etmek için yapılan korelasyon analizinde, FNDT ile Yaşam Doyumu Ölçeği puanları arasında zıt düşük düzeyde anlamlı bir ilişki bulunmuştur (r=-0,181 p=0,010). Çalışmamızda, erkek cinsiyetinin ve iş ortamındaki stres faktörlerinin sigara bağımlılığı ile ilişkili olduğunu ve sigara bağımlılığının düşük yaşam doyumu ile ilişkili olduğunu bulduk.

Anahtar Kelimeler: Fagerstrom Nikotin Bağımlılığı Testi, Nikotin, Sigara, Yaşam Doyumu Ölçeği, Bağımlılık.

İlke KARABAĞ | ilke_ileri@hotmail.com | Corresponding Author
Van Eğitim ve Araştırma Hastanesi, İş ve meslek hastalıkları polikliniği, Van, Türkiye
Van Traınıng and Research Hospıtal, Department of Occupational Medicine,Van, Türkiye

Başak GÜVEN | basaksedaa@gmail.com
Hacettepe Üniversitesi, Tıp Fakültesi, İş ve meslek hastalıkları polikliniği, Ankara, Türkiye
Hacettepe University School of Medicine, Department of occupational medicine, Ankara, Türkiye

Şilan IŞIK | dr.silan.ankara@gmail.com
Van Eğitim ve Araştırma Hastanesi, Göğüs hastalıkları polikliniği, Van, Türkiye
Van Traınıng and Research Hospıtal, Department of chest disease, Van, Türkiye

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I. INTRODUCTION

Smoking is a significant public health concern that not only leads to numerous detrimental health effects but also contributes to many preventable illnesses. This habit poses a substantial threat to overall well-being and is associated with a wide range of avoidable diseases. Tobacco consumption is linked to long-term health problems, increased mortality rates, and a reduced quality of life over time. Cigarette addiction is primarily driven by nicotine, the addictive component of tobacco products. This substance triggers the release of dopamine by interacting with specific receptors in the brain, thereby playing a crucial role in both the initiation and persistence of cigarette dependence [1, 2].

In recent years, researchers have examined the concept of human happiness through various perspectives, including life satisfaction, psychological well-being, quality of life, and positive affect. Life satisfaction refers to the positive evaluation of one's overall life based on self-determined criteria [3]. Unfortunately, individuals who use nicotine to cope with stress, adapt to their environment, and seek life satisfaction may reinforce addiction [4]. Socioeconomic status, education level, region of residence, occupation, and poor working conditions cause individuals in working life to choose smoking.

Contrary to common perception, the relationship between smoking and life satisfaction is significant and predominantly negative. The practice of smoking adversely impacts numerous individuals' quality of life and diminishes their overall contentment. Smoking negatively affects the quality of life of many individuals and reduces overall life satisfaction [5]. Research has shown that quitting smoking can lead to improvements in general mood, perceived health status, life satisfaction and overall quality of life [6, 7].

This study aims to assess the level of nicotine dependence and factors affecting addiction in actively working individuals who apply to the smoking cessation clinics, and to examine the relationship between the employees' cigarette addiction levels and life satisfaction.

II. METHOD

A. Patients and Method

This cross-sectional study was conducted between January 2023 and December 2023 among individuals who applied to the smoking cessation clinic of a training and research hospital and were actively employed in paid work. During the study period, 203 individuals who met the inclusion criteria completed the online questionnaire and were included in the final analysis. Participants who agreed to participate in the study completed a web-based questionnairedeveloped using Google Forms after providing informed consent. The data collection form consisted of three sections: a descriptive information form, the Fagerstrom Nicotine Dependence Test (FNDT), and the Satisfaction with Life Scale (SWLS). The descriptiveinformation form included researcher-developed questions regarding participants' sociodemographic characteristics, health status, and working conditions.

Fagerstrom Nicotine Dependence Test: In this study, the level of nicotine addiction was assessed using the FNDT. The test was first developed by Fagerstrom in 1978 as the Fagerstrom Tolerance Test and was later revised and named Fagerstrom Nicotine Dependence Test. FNDT is a widely used screening tool for nicotine dependence and consists of six short questions. The total score ranges from 0 to 10. Each score range indicates a different level of addiction. Based on the overall scores derived from the test evaluation, nicotine dependence level is graded in three groups; 0 to 2 points represent low level dependence; 3 to

7 points represent moderate level dependence; 8 to 10 points represent high level dependence [8].

Life Satisfaction Scale: Life satisfaction was assessed using the Satisfaction with Life Scale developed by Dien and colleagues. This unidimensional measure comprises 5 items designed to evaluate overall life satisfaction. Each item is scored on a seven-point Likert scale. On the life satisfaction scale, scores range from a minimum of 5 to a maximum of 35. While higher scores obtained from the scale indicate high life satisfaction, low scores reflect lower life satisfaction [4].

B. Statistical Analysis

Statistical analyses were performed using the SPSS and JAMOVI software packages.Descriptive statistics were calculated with SPSS. The normality of numerical data distribution was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests. The Mann-Whitney U test was used to compare two independent groups, while the Kruskal-Wallis test was used for comparisons involving more than two groups.Bonferroni correction was applied in post-hoc analyses. Multiple linear regression analysis was performed using theJAMOVI software to examine variables that showed statistically significant differences in univariate analyses. The level of statistical significance was set at $p<0.05$.

III. RESULTS

When the sociodemographic characteristics of the participants were analyzed, the mean age was 39.90±10.71 years (minimum: 18, maximum: 67). Of the participants 30,0% were between the ages of 30-39 and 28,2% were between the ages of 40-49. In total, 46,8% were female and 66,5% were married. 63,1% of the participants had children and 9,9% had a first-degree dependent relative. The mean Fagerstrom Nicotine Dependence Test (FNDT) score of the participants was 3.64±2.75. According to the FNBT, 38,9% of the participants were very low-level smokers, 23,6% low-level smokers, 17,2% high-level smokers and 10,3% very high-level smokers. No significant relationship was found between nicotine dependence and age group (p=0.82), marital status (p=0.81), having children (p=0.41) or having a disabled relative (p=0.19). The nicotine dependence score according to FNDT was found to be significantly higher in males than in females (p=0.005). Economic status was also found to be associated with nicotine dependence score (p=0.036). In the post-hoc analysis, the FNDT score of the group with in adequate economic status was found to be significantly higher than the score of the group with adequate economic status. The mean Satisfaction with Life Scale score was 13.86±4.61. There was no significant relationship between the participants' age group (p=0.054), gender (p=0.957), having children (p=0.422) and life satisfaction. A significant statistical relationship was found between the status of having a dependent disabled relative and life satisfaction (p=0.019). Accordingly, the life satisfaction score of the group with dependent disabled relatives was found to be lower. The study also revealed a statistically significant correlation between an individual's marital status and their score on the life satisfaction scale (p=0.024) and the score of the married group was found to be significantly higher than the score of the single group in the post-hoc analysis.

Post-hoc analysis of the relationship between economic status and life satisfaction ($p < 0.001$) showed that participants who reported their economic status as “adequate” or “moderate” had higher life satisfaction scores than those in the “inadequate” group. Additionally, the “adequate” group had significantly higher life satisfaction scores than the “moderate” group (Table 1). Regarding health sta-

tus, 21,2% of the participants had a chronic disease, 7,9% had a psychiatric disease and 32,5% needed psychological support in the last 12 months. In addition, approximately one quarter of the participants used alcohol. There was no significant relationship between having chronic and psychiatric illness, alcohol use and nicotine dependence (p=0.30/ p=0.56/p=0.20, respectively). A statistically significant relationship was found between needing psychological support in the last twelve months and nicotine dependence score (p=0.033). Accordingly, in the post-hoc analysis, the FNDT score of the group who needed psychological support in the last twelve months but did not receive support was significantly higher than the FNDT score of the group who did not need psychological support. There was no significant relationship between the participants' chronic disease status (p=0.767) and alcohol use status (p=0.448) and life satisfaction.

The life satisfaction score of those with out psychiatric illness was significantly higher than those with psychiatric illness (p=0.042). Likewise, a significant relationship was found between the need for psychological support in the last twelve months and life satisfaction score (p<0.001). In the post-hoc analysis, the life satisfaction scale scores of the groups who needed psychological support in the last twelve months and received support and the groups who did not need psychological support were found to be significantly higher than the scale score of the group who needed psychological support but did not receive support (Table 2).

When we look at the findings related to the Professional characteristics of the participants, more than half of them work in the public sector. In addition, 39.9% of the participants work in the field of education and 26,6% in the field of health, and almost all of the mare related to the education they receive and the work they do. No significant relationship was found between the participants' occupational group (p=0.4), the compatibility of the education they received and the work they do (p=0.5), and the characteristics and status of the place of work [public-private (employee-employer)] (p=0.5) and nicotine addiction. There was no significant relationship between life satisfaction and the compatibility of the participants' vocational education and work (p=0.976) and workplace characteristics and status [public-private (employee-employer)] (p=0.059). A significant relationship was found between occupational group and life satisfaction scale score (p=0.001). In the post hoc analysis, "the score of the education group was significantly higher than th escore of the civilservant group" and "the score of the engineering, education and other groups was significantly higher than the score of the health group" (Table3).

When the findings related to working characteristics are examined; 66,5% work 5 days a week and 38,4% work more than 40 hours a week. More than half of the participants stated that the workplace environment was physically challenging and three quarters stated that it was mentally challenging. 59,6% of the participants continue to work despite having a health problem, and 70,0% of the participants experiencemental in ability to focus and loss of productivity at work. No significant correlation was found between the participants' weekly working hours (days and hours), the workplace environment being physically challenging, continuing to work despite having a health problem, and experiencing mentalinability to focus and loss of productivity at work and nicotine addiction. There was correlation between the psychologically challenging workplace environment and nicotine dependence score (p=0.038). In post-hoc analysis, the score of the mentally challenging group was found to be significantlyhigher than the score of the non-challenged group.

There was no significant relationship between the we-

ekly working hours (days and hours) of the participants and life satisfaction. There was a correlation between the physical and psychological strain of the workplace environment and the life satisfaction score ($p<0.001$ and $p<0.001$, respectively). The subsequent analysis revealed that individuals with partial physical and mental challenges, as well as those without challenges, achieved notably higher scores compared to the challenged group. There was a statistically significant difference between continuing to work despite having a health problem and life satisfaction score ($p=0.031$). A statistically significant difference was found between the inability to focus and loss of productivity while continuing to work and life satisfaction score ($p<0.001$). In the post-hoc analysis, the score of the "never and occasionally" groups was significantly higher than the score of the "frequently" group and the score of the "never" group was significantly higher than the score of the "occasionally" group.

Variables that were found to be significantly associated with nicotine dependence in univariate analyses were included in the multiple linear regression analysis (Table 5). FNDT scores were higher in men than in women ($p=0.012$). The FNDT score of those who answered "Yes" to the psychologically challenging workplace environment was higher than those who answered "No" ($p=0.005$). According to the results of multiple analysis, economic status was not found to be effective on FNDT.

Variables significantly associated with life satisfaction in univariate analyses were included in the multiple linear regression analysis (Table 6). According to the results of multiple analysis, marital status was not found to be effective on life satisfaction. The group with "adequate" economic status had higher life satisfaction than the groups with "moderate and inadequate" economic status ($p=0.003$ and $p<0.001$, respectively). Those whose occupational group was "education" had higher life satisfaction than those whose occupational group was "health and civilservant" ($p=0.030$ and $p=0.047$, respectively). The life satisfaction score of those who answered "Yes" to the question of whether the workplace environment was physically challenging was higher than those who answered "No" ($p=0.040$). The life satisfaction score of those who did not need psychological support in the last 12 months was higher than those who needed psychological support but did not receive support ($p=0.002$).

Finally, correlation analysis revealed a low-level but statistically significant negative relationship between FNDT scores and Satisfaction with Life Scale scores ($r = -0.181$, $p = 0.010$), indicating that higher nicotine dependence was associated with lower life satisfaction.

IV. DISCUSSION

This study aimedto examine the relationshipbetween the levelof nicotine dependence and life satisfaction levels and the effective factors in nicotine dependence. The findings showedthat male gender and stres factors in the work environment were associated with cigarette dependence and that cigarette dependence was associated with lower life satisfaction. In our study, nicotine dependence score was higher in men than in women in accordance with the literature. When the studies conducted in Turkey are examined, it is noteworthy that the mean FNDT scores of males are higher than females in general [9, 10]. In the study conducted by Tarı et al. with 301 students, the proportion of males among the students with a high degree of addiction was statistically significantly higher compared to females [11]. In the study conducted by Terzi et al. with 30147 university students, the addiction score of males was higher than females [10]. Researchers believe that factors such as gender, socioeconomic status, and cultural backg-

round contribute to the increased prevalence of smoking among certain groups and addiction level of men compared to women. Stereotypes caused by gender perceive cigarette smoking as a symbol of power and consider it normal for men, whereas women, who are considered weaker than men, find it strange to smoke. This circumstance is recognized as a contributing factor to the initiation of smoking at a young age and the higher prevalence of smoking among males, especially in underdeveloped and developing countries [12].

The present study also found that nicotine dependencewas higher among individuals who reported a psychologically challenging work environment. Stress related factors in the workplace may contribute to the increase in smoking addiction or make it difficult to quit smoking. In a survey study conducted by Westman et al. on work stress, smoking frequency and smoking cessation with 560 patients, it was observed that work stress, lack of support from coworkers, lack of influence, and length of working hours were associated with smoking intensity [13]. In Turkey, in a study conducted by Kütükçü et al. with 200 nurses in a state hospital, it was found that smoking rates were higher in nurses who worked in intensive care and emergency units, who were responsible nurses, who defined their working conditions as bad and who had problems in the unit where they worked [14]. Life satisfaction can be defined as a person's emotional response to life defined as work, leisure time and other non-work time. Various factors can influence an individual's life satisfaction. These include contentment in everyday experiences, success in reaching personal objectives, a positive self-concept, physical well-being, financial stability, and interpersonal connections [15].

It will not be possible to deal with the concept of life satisfaction in dependently from work life. Work life as a risk factor or a protective factor that also affects the degree of satisfaction withone's life is an issue that needs to be examined in this respect. In order for life satisfaction to be positive, work and life balance should be established. Because work life, which has a very important place in the general life of the individual, is one of the most important factors affecting life satisfaction. In our study, the life satisfaction score of the participants who found the work place environment physically challenging was found to be higher than those who did not find it physically challenging. In Chacko's study, the most important source of life satisfaction was found to be working conditions and in come status. It was observed that while high in come increased satisfaction, poor working conditions caused dissatisfaction with life [16]. In studies conducted between life satisfaction and income level, a positive relationship was generally observed. In our study, in line with the literature, the life satisfaction of the group with "adequate" economic status was found to be higher than the groups with "moderate and inadequate" economic status. If the income level of an individual is high, life satisfaction may also be high. While the relationship between income level and happiness is more effective on basic needs, cultural and psychological factors may reduce the effect of Money [17]. In a study on job and life satisfaction conducted by Çimete et al. on 501 nurses, a positive relationship was noted between employee satisfaction and job performance and quality of life and that life satisfaction was higher in direct proportion to economic status [18].

Previous studies have emphasizedlife satisfaction as a positive outcome of psychological resilience. Tümlü et al. found a significant relationship between psychological resilience and life satisfaction among university academic staff, indicating that higher resilience was associated with greater life satisfaction [19]. In the present study, participants who

did not need psychological support in the last year had higher life satisfaction scoresthan those who needed psychological support but did not receive support. Similarly, in a study conducted at Mersin University with 100 individuals diagnosed with mood disorder or anxiety disorder and 100 healthy individuals with out physical and psychological disorders, it was found that quality of life and life satisfaction scores of patients with psychological problems were lower than healthy individuals [20].

In this study, the life satisfaction of the employees whose occupational group was "education" was found to be higher than the groups whose occupational group was "health and civilservant". This finding is consistent with the studyby Uslan et al. with 6149 public employees in order to examine whether the job satisfaction, life satisfaction and burnout levels of public employees differ according to some demographic variables, it was found that the intrinsic, extrinsic and general job satisfaction of education employees were higher than those working in health and other units [21].

Regarding the relationship between smoking and life satisfaction level, it was concluded that smoking generally decreases life satisfaction. In our study, a low level significant relationship was found between FNDT and Life Satisfaction Scale scores in the opposite direction. There are several studies examining the relationship between smoking and life satisfaction. In a study conducted by Kang et al. with 5519 smokers, a negative correlation was found between smoking frequency and life satisfaction [22]. A study conducted by Piko et al. examined adolescents between the ages of 13 and 20 in urban and metropolitan regions of Ames, Iowa, United States, Szeged (Hungary), Izmir (Turkey) and Warsaw (Poland) and found that higher life satisfaction was associated with lower smoking rates across countries [6]. Heshmat et al. found that life satisfaction was negatively affected by passive and active smoking in 1480 school students selected from both urban and rural areas in 30 provinces of Iran [23]. In addition, a study by Bogart and colleagues examined the potential impact of adolescent substance use, including tobacco, alcohol, cannabis, and hard drugs, on future life satisfaction during young adulthood. According to their multivariate analysis, individuals who smoked at 18 years old reported decreased life satisfaction levels by age 29, even when accounting for various behavioral, environmental, and social variables [24].

V. CONCLUSIONS

The primary aim of this study wasto investigate the relationship between the degree of nicotine dependence and life satisfaction levels, as well as the factors influencing nicotine dependence. The findings indicated that male gender and stress factors in the workplace were associated with higher nicotine dependence, and that higher nicotine dependence was associated with lower life satisfaction.

This study is strengthened by its focus on actively employed individuals and its simultaneous evaluation of nicotine dependence and life satisfaction using validated measurement tools (FNDT and SWLS). However, the generalizability of the findings is limited by the study being conducted in a single center and including only individuals who applied to a smoking cessation clinic, and the cross-sectional design does not allow causal inferences.

Based on the findings,increasing access to smoking cessation resources such as counseling services, targeted media campaigns, and free support programs may help reduce smoking behavior and improve life satisfaction among working individuals.

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Table 1: Socio-demographic characteristics of the participants

Socio-demographic characteristics (n=203)		**n (%)**	**FNDT Total**		**Life satisfaction**	
			Mean ±SS	**p value**	**Mean±SS**	**p value**
Age group	<30	43 (21,2)	3,42±2,75	0,827[a]	12,25±4,29	0,054 [a]
	30-39	61 (30,0)	3,62±2,93		14,26±4,50	
	40-49	58 (28,2)	3,57±2,59		14,58±4,68	
	50≤	41 (20,2)	3,98±2,76		13,92±4,76	
Gender	Female	95 (46,8)	3,05±2,60	**0,005[b]**	13,93±4,79	0,957 [b]
	Male	108 (53,2)	4,15±2,79		13,79±4,46	
Marital status	Married (1)	135 (66,5)	3,64±2,72	0,817[a]	14,42±4,49	**0,024** [a] **1-3***
	Divorced(2)	15 (7,4)	4,13±3,22		13,33±4,99	
	Single (3)	53 (26,1)	3,49±2,73		12,56±4,62	
Having a child	Yes	128 (63,1)	3,75±2,70	0,410[b]	14,02±4,53	0,422 [b]
	No	75 (36,9)	3,44±2,84		13,58±4,76	
Disabledrelativewho is obligedtocarefor	Yes	20 (9,9)	4,50±3,18	0,194[b]	11,55±3,59	**0,019** [b]
	No	183 (90,1)	3,54±2,69		14,11±4,65	
Economcsituation	Sufficient (1)	71 (35,0)	3,23±2,64	**0,036[a]** 3-1*	16,00±4,65	**<0,001** [a] 1-3* 2-3* 1-2*
	Middle(2)	98 (48,3)	3,47±2,86		13,67±4,43	
	Insufficient (3)	34 (16,7)	4,50±2,51		11,47±3,64	

[a]Kruskal-Wallis, [b] Mann-Whitney U *post hoc test. **FNDT:**Fagerstrom Nicotine Dependence Test

Table 2: Characteristics of participants regarding health status

Healthstatus (n=203)		n (%)	FNDT Total Mean±SS	p value	Life satisfaction Mean±SS	p value
Having a chronic disease	Yes	43 (21,2)	4,00±2,65	0,305[b]	14,00±4,37	0,767[b]
	No	160 (78,8)	3,54±2,77		13,82±4,68	
Having a psychiatric illness	Yes	16 (7,9)	4,24±2,77	0,568[b]	11,76±4,17	**0,042**[b]
	No	187 (92,1)	3,58±2,75		14,05±4,61	
Need for psychological support in the last 12 months	I needed but did not get support(1)	34 (16,7)	4,63±3,29	**0,033**[a] 1>3	11,65±3,67	**<0,001**[a] **1>2*** **1>3***
	I needed and received support (2)	32 (15,8)	3,33±2,95		13,75±4,74	
	Not needed (3)	137 (67,5)	3,28±2,31		14,86±4,64	
Alcohol use	Yes	57 (28,1)	4,00±2,73	0,203[b]	13,45±4,52	0,448[b]
	No	146 (71,9)	3,49±2,75		14,02±4,65	

[a]Kruskal-Wallis, [b] Mann-Whitney U *post hoc test. **FNDT:**Fagerstrom Nicotine Dependence Test

Table 3: Professional characteristics of the participants

Professional characteristics (n=203)		n (%)	FNDT Total Mean±SS	p value	Life satisfaction Mean±SS	p value
Profession	Education(1)	81 (39,9)	3,80±2,61	0,445[a]	14,91±4,87	**0.001**[a] **1-4*** **3-2*** **5-2*** **1-2***
	Health (2)	54 (26,6)	3,24±2,88		11,77±3,84	
	Engineering (3)	24 (11,8)	3,08±2,35		14,29±3,85	
	Officer (4)	10 (4,9)	4,22±2,99		11,66±4,15	
	Other (5)	34 (16,8)	3,85±2,94		14,91±4,61	
Compatibility of education and occupation	Compatible	191(94,1)	3,61±2,77	0,545[b]	13,87±4,65	0,976[b]
	Incompatible	12 (5,9)	4,00±2,52		13,58±4,14	
Workplace	Public sector	119(58,6)	3,73±2,73	0,564[a]	14,20±4,72	0,059[a]
	Private sector					
	Employee	67 (33,0)	3,39±2,86		12,83±4,25	
	Employer	17 (8,4)	3,94±2,48		15,52±4,62	

[a]Kruskal-Wallis, [b] Mann-Whitney U *post hoc test. **FNDT:**Fagerstrom Nicotine Dependence Test

Table 4: Multiple linear regression analysis results of factors associated with FBNT scale score

Characteristics		B	St. E	St. B	p value
Constant		0,990	0,091		**<0,001**
Gender	Male-Female	**0,157**	0,062	0,351	**0,012**
Economic situation	Medium -sufficient	0,024	0,073	0,055	0,737
	Insufficient-sufficient	0,091	0,087	0,203	0,298
Is the work place environment mentally challenging?	Yes-No	0,252	0,088	0,562	**0,005**
	Partially- No	0,152	0,090	0,339	0,094

R^2:0,772 **Adjusted R^2:**0,053

Table 5: Study characteristics

Study characteristics (n=203)		**n (%)**	**FNDT Total**	**p value**	**Life satisfaction**	**p value**
			Mean±SS		Mean±SS	
Weekly working time (days)	<5	17 (8,3)	3,35±2,59	0,582[a]	15,17±5,84	0,336[a]
	5	135(66,5)	3,56±2,81		13,91±4,49	
	5<	51 (25,1)	3,92±2,67		13,29±4,47	
Weekly working time (hours)	<40	56 (27,6)	3,84±2,79	0,801[a]	14,80±5,07	0,234[a]
	40	69 (34,0)	3,54±2,86		13,53±4,22	
	40<	78 (38,4)	3,58±2,65		13,47±4,56	
Is the work place environment physically demanding?	Yes (1)	41 (20,2)	4,40±2,95	0,078[a]	11,60±3,81	**<0,001**[a]
	Partially(2)	76 (37,4)	3,58±2,86		14,20±4,49	**2>1***
	No (3)	86 (42,4)	3,17±2,37		15,04±4,76	**3>1***
Is the work place environment mentally challenging?	Yes	70 (34,5)	4,17±2,95	**0,038**[a]	12,52±4,51	**<0,001**[a]
	Partially	77 (37,9)	3,44±2,66	**1-3**	14,26±4,27	**2>1***
	No	56 (27,6)	2,75±2,13		16,27±4,53	**3>1***
Continuing to work despite a health condition	Yes	121(59,6)	3,56±2,71	0,636[b]	13,27±4,37	**0,031**[b]
	No	82 (40,4)	3,75±2,81		14,74±4,85	
Inability to focus mentally while continuing to work and loss of efficiency at work	Often (1)	20 (9,9)	4,00±3,25	0,628[a]	11,04±4,07	**<0,001**[a]
	Occasionally (2)	128(63,1)	3,70±2,71		13,55±4,12	**2-1***
	Never(3)	55 (27,1)	3,29±2,60		16,01±5,12	**3-1*** **3-2***

[a]Kruskal-Wallis, [b] Mann-Whitney U *post hoc test. **FNDT:**Fagerstrom Nicotine Dependence Test

Table 6: Multiple linear regression analysis results of factors associated with satisfaction with life scale score

Characteristics		**B**	**St. E**	**St. E**	**p value**
Constant		15,193	0,959		<0.001
Marital status	Divorced -married	0,020	1,147	0,004	0,986
	Single -married	-0,526	0,713	-0,114	0,461
Economic situation	Medium -sufficient	-2,059	0,687	-0,446	0,003
	Insufficient -sufficient	-3,140	0,844	-0,682	< 0,001
Occupational group	Health -education	-1,749	0,801	-0,379	0,030
	Engineer -education	-0,049	0,979	-0.010	0,960
	Officer -education	-2,890	1,448	-0.626	0,047
	Other -education	0,123	0,840	0.026	0,883
The workplace is physically demanding	Yes -no	-1,747	0,845	-0.378	0,040
	Partially -no	-0,230	0,685	-0.049	0,737
Need for psychological support in the last 12 months	I needed and received support - I needed but did not receive support	1,607	0,933	0,348	0,087
	Did not need -needed but did not receive support	2,306	0,724	0,499	0,002
R^2:0.264 **Adjusted R^2:**0.218					