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Association between cancer-related worry and intention to quit smoking among Turkish smokers: a cross-sectional study

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Abstract

Concerns about getting cancer may increase the desire to quit smoking in smokers. This study was conducted to determine the level of cancer worry in smokers and the relationship between cancer worry and intention to quit smoking. An online survey was administered to smokers aged 18 years and older without a history of cancer between January and February 2025. The questionnaire included questions about socio-demographic characteristics, the Fagerstrom Test for Nicotine Dependence (FTND), the Cancer Worry Scale (CWS) and the Smoking Cessation Intention Scale (SCIS). The mean age of the participants (n=321) was 33.72 years, and the majority were male (75.1%). Mean scores for FTND, CWS, and SBNS were 4.82 ± 3.16 , 15.69 ± 5.02 , and 28.11 ± 8.39 , respectively. High levels of cancer concern ($CWS \geq 14$) were found in 67.3% of smokers. A statistically significant, moderate positive correlation was found between CWS and SCIS scores ($r=0.362$, $p<0.001$). Participants' SCIS scores were significantly higher among individuals who were 30 years or older compared to younger participants, in married individuals compared to their unmarried counterparts, and in those with a high level of cancer worry compared to those with a low level of worry. Participants with a high cancer worry level were significantly more likely to think about quitting smoking in the next year than participants with a low worry level ($p=0.027$). The findings show the positive effect of increased cancer worry on the intention to quit smoking. Increased awareness about cancer may increase motivation to quit smoking.

Key words: cancer, worry, smoking, quitting intention.

Introduction

Using tobacco products and smoking are defined as the most commonly attributed risk factors for cancer. It causes approximately one third of cancer deaths and 90% of lung cancer deaths [1]. There are approximately 1.3 billion tobacco users worldwide and more than 8 million people die each year due to cancers and other diseases caused by tobacco use [2]. Cigarette smoke comprises nearly 7,000 chemical constituents, the majority of which are toxic, with a considerable proportion classified as carcinogenic [3]. The use of tobacco products is associated with various types of cancer, particularly those affecting the larynx, bronchi, lungs, and oral cavity [4]. Although the harmful effects of smoking on health are almost universally recognized, its use continues worldwide [5].

Most tobacco consumers (80%) live in low- and middle-income countries [2]. Turkey is one of the countries with high tobacco consumption. With a daily tobacco product consumption rate of 41.3% in men and 15.5% in women [6].

The majority of smokers are aware of the serious cancer-related consequences of smoking, such as lung and laryngeal cancer, and are aware of these risks [7]. However, many smokers continue their habit with self-exempting beliefs, i.e., beliefs that minimize the risk against the dangers of smoking [8]. The process of quitting smoking generally proceeds in three stages: forming the intention to quit, attempting to quit and successful, i.e. permanent, quitting smoking [9]. Many smokers who are aware of the health hazards of smoking have the desire to quit smoking; however, they often fail to achieve success in this process [10]. It is estimated that approximately 1.1 billion tobacco users worldwide aim to quit smoking and more than 40% of them have tried to quit smoking [11]. Failure in the process of smoking cessation is associated with many cognitive, physiological, psychological, behavioral, environmental and social factors [10]. Nicotine addiction is one of the most important barriers that make quitting difficult [12].

Fear of developing cancer is described as the greatest health fear prevalent in the general population [13]. In the USA and the UK, an estimated 25% to 50% of the general population express concern about the possibility of developing cancer [14]. Individuals who believe that they are more likely to develop cancer are more likely to follow cancer screenings and participate in cancer risk reduction activities such as smoking cessation

[15]. It has been found that people whose relatives have cancer are affected by this situation and question their own smoking and make efforts to quit smoking [16].

Smokers' concerns about developing cancer may influence their smoking behavior and enhance their motivation to quit. However, information on this issue is limited. This study examined the levels of cancer-related worry among smokers and explored the relationship between cancer-related worry and their intention to quit smoking.

Materials and Methods

Study design and sample

This cross-sectional study was conducted between 01.01.2025 and 01.02.2025 using an online survey (Google Forms). A total of 321 smokers were reached using snowball sampling techniques. The study started with a few people who met the inclusion criteria (≥ 18 years of age, smoked every day in the last month, no cancer diagnosis/story). The sample was expanded with new participants suggested by these individuals. Smokers were invited to participate through web-based applications and social digital media platforms (WhatsApp, Facebook, Instagram and Telegram). Each participant was asked to complete the survey only once and their digital informed consent was obtained. All participants were informed that the surveys were anonymous and that the information provided would be kept confidential.

A pilot study was conducted with a sample of ten smokers to assess the clarity of the questionnaire items. No difficulties in comprehension were reported. The average completion time was approximately 10–12 minutes. Data obtained from the pilot study were not included in the final analysis.

Questionnaire form

The questionnaire form included questions assessing participants' sociodemographic characteristics (age, gender, marital status, educational status, occupation, and chronic disease status) and family history of cancer. Participants were also asked whether they intended to quit smoking within the next year (yes/no) and whether they had made a serious attempt to quit smoking during the previous year (yes/no). In addition, nicotine dependence, cancer-related worry, and smoking cessation intention were assessed using

standardized scales (the FTND, CWS, and SCIS, respectively), each of which is described below.

Fagerstrom Test for Nicotine Dependence (FTND)

The FTND consists of six questions and the scores vary between 0-10 [17]. The validity and reliability study of the test was performed by Uysal et al. [18] who reported a Cronbach's alpha coefficient of 0.56. Based on a previous study [19], a cut-off score of 6 was used to identify high nicotine dependence, with participants classified as having low (FTND <6) or high (FTND $\geq$ 6) dependence. In the present study, the Cronbach's alpha coefficient for the FTND was 0.78.

Cancer Worry Scale (CWS)

The scale developed by Custer et al. is used to assess worry about the risk of developing cancer and the effect of this worry on daily functioning [20]. The CWS is a scale comprising eight items. Scale responses are categorized as “Almost never”, ‘Sometimes’, “Most of the time”, “Almost always” on a 4-point Likert scale. The Turkish validity and reliability evaluation of the scale (Cronbach's alpha = 0.87) was conducted to evaluate cancer-related fear in women who applied for colposcopy [21]. In the present study, the Cronbach's alpha coefficient for the CWS was 0.90.

The scale includes items such as “How often do you think about the possibility of getting cancer?” and “How worried are you about the possibility of getting cancer one day?”. Scores on the scale range from 8 to 32, with higher scores indicating more cancer-related worry.

Based on previous studies, scores of 14 and above were defined as high cancer-related worry and scores below 14 as low cancer-related worry [22,23].

Smoking Cessation Intention Scale (SCIS)

The SCIS was developed by Söyler and Yorulmaz [24] and consists of eight items rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Total scores range from 8 to 40, with higher scores indicating a stronger intention to quit smoking. The scale includes items such as “I want to quit smoking” and “I intend to speak

to a healthcare professional regarding smoking cessation.” Söyler and Yorulmaz reported a Cronbach's alpha coefficient of 0.94 for the scale [24]. In the present study, the Cronbach's alpha coefficient for the SCIS was 0.95.

Ethics

The study was carried out following the approval of the Gaziantep University Non-Interventional Clinical Research Ethics Committee (Decision No: 2024/416, dated 20.11.2024).

Statistical analysis

Data analysis was performed using IBM SPSS Statistics for Windows, version 25.0. Continuous variables in the study were evaluated using skewness and kurtosis values (within the ± 1 range) and a histogram, and were considered to follow a normal distribution. Continuous variables were presented as mean and standard deviation (SD), while categorical variables were expressed as frequency and percentage. The chi-square test was used to examine associations between categorical variables, and Pearson's correlation test was employed to assess relationships between continuous variables. A p-value of <0.05 was considered statistically significant.

Results

Respondents' (n=321) mean age was 33.7 (S.D.=11.1), and 75.1% were male; 68.2% had completed university. Most of the participants were married (52.6%) and not working in a health-related field (63.9%). About one-fifth reported having a chronic disease (19%) and 19.3% reported a history of cancer in a first-degree relative (Table 1).

"It was determined that 31.8% of smokers lit their first cigarette within five minutes of waking up. The majority of participants (34%) reported smoking 11-20 cigarettes daily. More than half of the participants (56.7%, n=182) had a high level of nicotine dependence (FTND ≥ 6), while 43.3% (n=139) had a low level of dependence (FTND < 6). The mean FTND score was 4.82 ± 3.16 . Moreover, 58.3% of participants expressed an intention to quit smoking within the next year, and 36.8% had made a quit attempt in the past year.

The mean SCIS score of the participants was 28.11 ± 8.39 , and the mean CWS score was 15.69 ± 5.02 , with 67.3% exhibiting a high level of cancer worry ($CWS \geq 14$). A statistically significant, moderate positive correlation was found between CWS and SCIS scores ($r = 0.362$, $p < 0.001$). When CWS scores were analyzed according to sociodemographic variables, significantly higher scores were observed among individuals aged 30 years and older, women, those who were married, those without a university degree, individuals with a family history of cancer, and those with a chronic illness compared to their counterparts. Furthermore, participants with high nicotine dependence ($FTND > 6$) had significantly higher cancer worry levels than those with low nicotine dependence ($FTND \leq 6$) (Table 2).

Participants with high cancer worry were more likely to consider quitting smoking within the next year (62.5%) compared to those with low cancer worry (49.5%) ($p = 0.027$). However, the rate of quit attempts in the past year did not differ significantly between the groups (39.4% vs. 31.4%, $p = 0.167$), (Table 3).

As shown in Table 4, participants aged 30 years and older had significantly higher smoking cessation intention scores compared to younger individuals ($p = 0.005$), and married participants had significantly higher scores compared to unmarried participants ($p = 0.016$). No significant difference in smoking cessation intention scores was observed between individuals with low and high levels of nicotine dependence. However, participants with high levels of cancer worry had significantly higher SCIS scores compared to those with low levels of worry ($p < 0.001$).

Discussion

The current study examined the relationship between cancer-related worry and intention to quit smoking among smokers. To the best of our knowledge, this is the first study to explore in detail the association between cancer-related worry and smoking cessation intention using a validated scale (SCIS) among smokers. Our findings revealed a significant moderate positive correlation between cancer-related worry and the intention to quit smoking. We found that those with higher levels of cancer-related worry had higher smoking cessation intention scores. Furthermore, participants with high levels of cancer-related worry were significantly more likely to consider quitting smoking within the next year compared to those with low worry levels. However, this stronger intention

did not translate into a significantly higher rate of actual quit attempts in the past year. This may indicate that cancer-related worry alone is insufficient to translate intention into actual quitting behavior. Additional factors, such as pharmacological support and strategies for overcoming nicotine dependence, may be necessary to facilitate the transition from intention to action.

The findings of our study revealed that more than half of the individuals who smoke (67.3%) experienced a high level of cancer-related worry. However, these findings appear to contradict the well-documented tendency of many smokers to underestimate the harmful consequences of smoking due to unrealistic optimism [25]. Previous studies have shown that while awareness of the health risks associated with smoking is generally high, misconceptions still persist. For instance, a nationwide study conducted in France among individuals aged 40 to 75 years reported that although 96% of participants identified tobacco use as the primary risk factor for lung cancer, one-third believed that smoking ≤ 10 cigarettes per day was not associated with an increased cancer risk [26]. Similarly, another French study revealed that 38% of respondents believed smoking causes cancer only when daily consumption exceeds their own use, and 22% thought cancer risk increases only with longer durations of smoking [27]. In a study by Ayanian and Cleary conducted in the United States, most smokers did not perceive themselves to be at high risk for myocardial infarction or cancer [28]. Importantly, these studies assessed cancer risk perception rather than cancer-related worry, which was measured in our study using the validated CWS. Since risk perception and emotional worry represent distinct constructs, this distinction may partly account for the apparent discrepancy between our findings and the previous literature. In our study, lower cancer-related worry scores were observed in younger participants, men, single individuals, university graduates, those without chronic illness or a family history of cancer, and smokers with low nicotine dependence. Younger and healthier participants may perceive cancer as a more distant or less immediate threat, which could contribute to lower worry levels. Furthermore, the higher worry observed among participants with chronic illness or a family history of cancer may reflect greater awareness of cancer risk due to personal or familial health experiences. Similarly, smokers with lower nicotine dependence may perceive themselves to be at lower risk of smoking-related health consequences, which may contribute to reduced cancer-related worry.

Our findings revealed that individuals with higher levels of cancer-related worry were significantly more likely to consider quitting smoking within the next year, and that there was a moderate positive correlation between cancer-related worry and intention to quit smoking. Previous studies have demonstrated that awareness of health risks and accurate risk perceptions can motivate individuals to engage in healthier behaviors [29,30]. A study conducted among socially disadvantaged individuals in Poland found that smokers who were aware of four major health risks associated with smoking (serious illness, lung cancer, stroke, and myocardial infarction) were more likely to report an intention to quit smoking within the next month compared to those who lacked such awareness [31]. Similarly, a multi-country study involving smokers showed that concerns about both past and future health consequences were associated with increased attempts to quit smoking [32]. In another study conducted among young adults in the United States, higher perceived health risks related to hookah tobacco use were significantly associated with greater motivation to quit [33]. However, some studies have found that increased cancer awareness does not necessarily lead to a greater intention to quit smoking. For example, a study conducted in the United Kingdom showed that the addition of an informational message on standard cigarette packaging—stating that tobacco smoke contains more than 70 carcinogens—led to increased risk perception but did not influence quitting intentions or actual cessation behavior [34]. Similarly, a randomized clinical trial conducted in California, USA, found that smokers exposed for three weeks to health-related chemical risk messages on cigarette packaging did not report significantly higher intentions to quit compared to the control group [35]. These findings suggest that heightened cancer awareness or concern alone may be insufficient to motivate smoking cessation and that additional psychological, or environmental supports.

In the current study, no statistically significant difference was observed between individuals with high and low levels of cancer-related worry in their attempts to quit smoking in the last year. Consistent with these findings, some studies have shown that approximately one in eight smokers continue to smoke even after surviving cancer [36,37]. This suggests that nicotine addiction, through its behavioral, cognitive, social, and physiological components, strongly impedes smoking cessation [12].

Our study found that married participants and those aged ≥ 30 years had higher scores on both the CWS and the SCIS than unmarried participants and younger individuals.

These findings are consistent with previous studies demonstrating the relationship of age and marital status with smoking cessation [38,39]. This may be explained by greater health awareness and a heightened sense of responsibility later in life, which increase individuals' sensitivity to health risks.

Study limitations

This study has several limitations. First, its cross-sectional design precludes the establishment of causal relationships. Second, data were collected through an online questionnaire distributed via social media using a snowball sampling method, which restricted participation to smokers with internet and social media access. Moreover, recruitment through participants' own social networks may have resulted in a relatively homogeneous sample, potentially introducing selection bias and limiting the representativeness and generalizability of the findings. Additionally, the self-reported nature of the questionnaire may have led to responses that do not fully reflect participants' true thoughts or behaviors. Finally, information regarding the use of smoking cessation treatments or professional support, such as nicotine replacement therapy, pharmacotherapy, or counselling, was not collected. Therefore, the potential impact of these factors on the intention to quit smoking and quit attempts could not be assessed.

Conclusions

Our study findings reveal that increased cancer-related worry is positively associated with the intention to quit smoking. However, this increased intention was not significantly associated with the likelihood of attempting to quit smoking, suggesting that cancer-related worry alone may not be sufficient to initiate smoking cessation behavior. These findings may inform the design of public health interventions and highlight the need for further research to identify the factors that facilitate the translation of cessation intention into actual quitting behavior.

References

1. Jassem J. Tobacco smoking after diagnosis of cancer: clinical aspects. *Transl Lung Cancer Res* 2019;8:S50-8.
2. Shankar A, Parascandola M, Sakthivel P et al. Advancing tobacco cessation in LMICs. *Curr Oncol* 2022;29:9117-24.
3. Gallaway MS, Henley SJ, Steele CB et al. Surveillance for cancers associated with tobacco use - United States, 2010-2014. *MMWR Surveill Summ* 2018;67:1-42.
4. Laczmanski L, Laczmanska I, Lwow F. Association of select vitamin D receptor gene polymorphisms with the risk of tobacco-related cancers - a meta-analysis. *Sci Rep* 2019;9:16026.
5. Hecht SS, Hatsukami DK. Smokeless tobacco and cigarette smoking: chemical mechanisms and cancer prevention. *Nat Rev Cancer* 2022;22:143-55.
6. T.C. Sağlık Bakanlığı Sağlık İstatistikleri Yıllığı 2023. Ankara: 2024. Available from: <https://dosyasb.saglik.gov.tr/Eklenti/50500/0/siy202307032025pdf.pdf>.
7. Trofor AC, Papadakis S, Lotrean LM, et al. Knowledge of the health risks of smoking and impact of cigarette warning labels among tobacco users in six European countries: Findings from the EUREST-PLUS ITC Europe Surveys. *Tob Induc Dis* 2018;16:A10.
8. Guillaumier A, Bonevski B, Paul C, et al. Self-Exempting Beliefs and Intention to Quit Smoking within a Socially Disadvantaged Australian Sample of Smokers. *Int J Environ Res Public Health* 2016;13:118.
9. Hwang JH, Park SW. Smoking cessation intention and its association with advice to quit from significant others and medical professionals. *Int J Environ Res Public Health* 2021;18:2899.
10. Kim Y, Lee JS, Cho WK. Factors associated with successful smoking cessation according to age group: findings of an 11-year Korea national survey. *Int J Environ Res Public Health* 2021;18:1576.
11. Nguyen TNP, Love J, Hunsberger M, et al. Individual-, social- and policy- factors associated with smoking cessation among adult male cigarette smokers in Hanoi, Vietnam: a longitudinal study. *BMC Public Health* 2023;23:1883.

12. Gill KK, van der Moolen S, Bilal S. Phenomenological insight into the motivation to quit smoking. *J Subst Abuse Treat* 2021;131:108583.
13. Vrinten C, van Jaarsveld CH, Waller J. The structure and demographic correlates of cancer fear. *BMC Cancer* 2014;14:597.
14. Murphy PJ, Marlow LAV, Waller J, et al. What is it about a cancer diagnosis that would worry people? A population-based survey of adults in England. *BMC Cancer* 2018;18:86.
15. Hay J, Shuk E, Cruz G, et al. Thinking through cancer risk: characterizing smokers' process of risk determination. *Qual Health Res* 2005;15:1074-85.
16. McBride CM, Blocklin M, Lipkus IM, et al. Patient's lung cancer diagnosis as a cue for relatives' smoking cessation: evaluating the constructs of the teachable moment. *Psychooncology* 2015;26:88-95.
17. Heatherton TF, Kozlowski LT, Frecker RC, et al. The Fagerstrom Test for Nicotine Dependence: a revision of the Fagerstrom Tolerance Questionnaire. *Br J Addict* 1991;86:1119-27.
18. Uysal MA, Kadakal F, Karsidag C, et al. Fagerstrom test for nicotine dependence: reliability in a Turkish sample and factor analysis. *Tuberk Toraks* 2004;52:115-21.
19. Lim KH, Cheong YL, Sulaiman N, et al. Agreement between the Fagerstrom test for nicotine dependence (FTND) and the heaviness of smoking index (HSI) for assessing the intensity of nicotine dependence among daily smokers. *Tob Induc Dis* 2022;20:105.
20. Custers JA, van den Berg SW, van Laarhoven HW, et al. The Cancer Worry Scale: detecting fear of recurrence in breast cancer survivors. *Cancer Nurs* 2014;37:E44-50.
21. Uner FO, Korukcu O. A prevalence and psychometric study on fear of cancer in women with abnormal cervical cytology undergoing colposcopy. *Psychooncology* 2020;29:1850-5.
22. Hawranek C, Maxon J, Andersson A, et al. Cancer worry distribution and willingness to undergo colonoscopy at three levels of hypothetical cancer risk-a population-based survey in Sweden. *Cancers* 2022;14:918.
23. Vesterberg A, Asplund E, Marras G, et al. Exploring the psychological burden in a pancreatic cancer surveillance programme based on high-risk individuals: a Swedish cross-sectional study. *BMJ Open* 2025;15:e097814.

24. Söyler S, Yorulmaz M. Intention to quit smoking scale: development and validation. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi* 2024;13:626-34.
25. He Y, Tan M, Shi M, et al. Smoking characteristics and readiness-to-quit status among smokers attending preoperative assessment clinic - a prospective cohort study. *Risk Manag Healthc Policy* 2021;14:2483-90.
26. Greillier L, Cortot AB, Viguier J, et al. Perception of lung cancer risk: impact of smoking status and nicotine dependence. *Curr Oncol Rep* 2018;20:18.
27. Peretti-Watel P, Seror V, Verger P, et al. Smokers' risk perception, socioeconomic status and source of information on cancer. *Addict Behav* 2014;39:1304-10.
28. Ayanian JZ, Cleary PD. Perceived risks of heart disease and cancer among cigarette smokers. *JAMA* 1999;281:1019-21.
29. Zewude B, Siraw G, Engdawork K, et al. Health seeking behavior of street connected children in Addis Ababa, Ethiopia. *Front Sociol* 2023;8:1188746.
30. Nyman AL, Spears CA, Churchill V, et al. Associations between COVID-19 risk perceptions and smoking and quitting behavior among U.S. adults. *Addict Behav Rep* 2021;14:100394.
31. Milcarz M, Polanska K, Bak-Romaniszyn L, et al. Tobacco health risk awareness among socially disadvantaged people-a crucial tool for smoking cessation. *Int J Environ Res Public Health* 2018;15:2244.
32. Upadhyay S, Lord J, Gakh M (2019) Health-Information Seeking and Intention to Quit Smoking: Do Health Beliefs Have a Mediating Role? *Tob Use Insights*. 2019;12:1179173X19871310.
33. Alalwan MA, Keller-Hamilton B, Long L, et al. Correlates of motivation to quit waterpipe tobacco smoking among US young adults: implications for cessation interventions. *Health Educ Res* 2019;38:338-49.
34. Moodie C, Best C, Critchlow N, et al. The impacts of including information about the number of carcinogens in smoke on standardized cigarette packs in the UK. *Eur J Public Health* 2021;31:1031-7.
35. Brewer NT, Jeong M, Mendel JR, et al. Cigarette pack messages about toxic chemicals: a randomised clinical trial. *Tob Control* 2019;28:74-80.

36. Gonzalez Ruiz LM, Mondragon Marquez LI, Dominguez Bueso DL, et al. Prevalence of current cigarette smoking by sociodemographic characteristics in U.S. cancer survivors. *Subst Use Misuse* 2024;59:486-93.
37. Gallaway MS, Glover-Kudon R, Momin B, et al. Smoking cessation attitudes and practices among cancer survivors - United States, 2015. *J Cancer Surviv* 2019;13:66-74.
38. Chandra M, Fokom Domgue J, Yu R, et al. Association of perceived neighborhood air quality problems with attempt to quit cigarette smoking: a cross-sectional study in Texas. *Front Public Health* 2024;12:1392065.
39. See JHJ, Yong TH, Poh SLK, et al. Smoker motivations and predictors of smoking cessation: lessons from an inpatient smoking cessation programme. *Singapore Med J* 2019;60:583-9.

Table 1. Socio-demographic characteristics of the participants.

Variables		n	%
Age, mean (SD), years	33.72 (11.1)		
Age group (years)	< 30	170	53.0
	≥ 30	151	47.0
Sex	Male	241	75.1
	Female	80	24.9
Marital status	Married	169	52.6
	Single	152	47.4
Educational level	Primary school	24	7.5
	Secondary school	11	3.4
	High school	67	20.9
	University	219	68.2
Occupation	Healthcare worker	116	36.1
	Non-healthcare worker	205	63.9
Chronic disease	Yes	61	19.0
	No	260	81.0
Family history of cancer	Yes	62	19.3
	No	259	80.7

Table 2. Comparison of participants' socio-demographic characteristics, addiction levels, and cancer worry scale scores.

Cancer Worry Scale			
Variables		Mean ± SD	p-value
Age (years)	<30	14.82±4.62	0.001
	≥30	16.68±5.29	
Sex	Male	15.33±4.86	0.035
	Female	16.78±5.37	
Marital Status	Married	16.26±5.34	0.032
	Not married	15.06±4.58	
Educational level	Below university level	16.53±5.68	0.041
	University graduate	15,30±4,65	
Chronic disease	Yes	17.38±5.66	0.009
	No	15.30±4.79	
Occupation	Healthcare worker	15.33±4.35	0.330
	Non-healthcare worker	15.90±5.36	
Family history of cancer	Yes	17.65±4.98	0.001
	No	15.22±4.93	
Nicotine dependence	Low (FTND<6)	14.75±4.48	3
	High (FTND≥6)	16.41±5.30	

Table 3. Smoking cessation intention within the next year and smoking cessation attempts according to cancer worry level.

Cancer Worry Level	Smoking Cessation Intention Within the Next Year, n (%)			Smoking Cessation Attempt in the Past Year, n (%)		
	Yes	No	p	Yes	No	p
Low (n = 105) (CWS<14)	52 (49.5%)	53 (50.5%)	0.027	33 (31.4%)	72 (68.6%)	0.167
High (n = 216) (CWS≥14)	135 (62.5%)	81 (37.5%)		85 (39.4%)	131 (60.6%)	

Table 4. Comparison of participants' characteristics and Smoking Quit Intention Scale scores.

Variables		Smoking Quit Intention Scale	
		Mean ± SS	p -value
Age (years)	<30	26.88 ±8.44	0.005
	≥30	29.49 ±8.15	
Sex	Male	27.70 ±8.62	0.106
	Female	29.35 ±7.60	
Marital Status	Married	29.18 ±8.11	0.016
	Not married	26.91 ±8.57	
Educational level	Below university	28.82 ±8.25	0.295
	University graduate	27.78 ±8.46	
Chronic disease	Yes	28.59 ±9.32	0.648
	No	28 ±8.18	
Occupation	Healthcare worker	28.12 ±7.13	0.985
	Non-healthcare worker	28.1 ±9.05	
Family history of cancer	Yes	29.42 ±8.14	0.165
	No	27.80 ±8.44	
Nicotine dependence	Low (FTND<6)	27.80 ±7.53	0.554
	High (FTND≥6)	28.35 ±9.02	
Cancer Worry Level	Low (CWS <14)	24.61±8.67	<0.001
	High (CWS ≥14)	29.81±7.72	