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RESEARCH ARTICLE

SMOKING STATUS, HEALTH BELIEFS AND THOUGHTS ABOUT SMOKING OF NURSES IN AN ONCOLOGY HOSPITAL

Songul Kamisli[1], Pinar Guner[2], Kadir Mutlu Hayran[2]

[1] Cankiri Karatekin University, Faculty of Health Sciences, Gerontology Department, Cankiri, Turkey
[2] Hacettepe University, Cancer Institute, Preventive Oncology Department, Ankara, Turkey.

Address for Correspondence: Songul Kamisli, **E-mail:** songulkamisli@karatekin.edu.tr
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ABSTRACT

Purpose: Few studies are available that evaluate oncology nurses' health beliefs related to smoking and smoking status. The purpose of this study was to evaluate the health beliefs regarding smoking among nurses and status working in a cancer hospital.
Methods: This descriptive study was conducted among 152 nurses in a cancer hospital in Turkey. Data were collected by using The Self-Report Questionnaire Regarding Health Beliefs and Smoking Cessation Self-Efficacy Questionnaire
Results: Median age, body mass index, and working duration with cancer patients of the oncology nurses are 34.0, 23.9, and 9.0, respectively. Of the nurses, 54.1% stated that they have never smoked, while 27% smoke every day. Among regular smokers, 32.1% are in precontemplation stage. Of the participants, 91.9% noted that 'smokers are more likely to have cancer, 45.9% that 'it is difficult for smokers to quit smoking, and 52.3% that 'tobacco bans are effective on quitting smoking.
Conclusion: The majority of oncology nurses think that a healthy lifestyle is very important but a few of them follow the advice. Also even though the nurses mostly have healthy living beliefs they can't reflect these on their behaviors. Nurses working with cancer patients must also be considered as risk groups when planning cancer prevention and tobacco control studies. It is important that nurses should be informed and supported to take part in smoking cessation interventions.

Keywords: Oncology, nursing, smoking, self-efficacy, belief

INTRODUCTION

Cigarette smoking is an important health issue. It is the most preventable cause of illness and death worldwide. Tobacco use, which is causing 25% of all cancer deaths globally and associated to at least 20 cancer types, has a significant impact. 27% of all cancers in the World Health Organization European Region were attributed to tobacco use (1). National Comprehensive Cancer Network (NCCN) guidelines on smoking cessation advise screening, counseling, and access to cessation services for all cancer patients, as well as with appropriate follow-up as part of the overall treatment prescription (2).

While the relationship between smoking and cancer is known, unfortunately, the prevalence of smoking among health providers is high, even greater than the general population in our country (3). Particularly, past studies have reported that the smoking rate is high (30%-60%) among general clinical nurses (4-8). Nurses who are taught to have a philosophy of maintaining and improving public health practices play a vital role in teaching (9). WHO reports that

nurses are admirably standed to advise patients and their families to quit smoking by providing effective brief intervention (10).

Oncology nurses constitute the largest group of oncology health care professions in Turkey. As frontline health workers, oncology nurses are expected to promote healthy lifestyles among patients and families. Oncology nurses can also play a crucial role in managing the smoking-cessation behaviors of patients and their families, but no studies have explored their perspectives on these issues and how they should be managed. Their thoughts and perceived relation to smoking status remain unknown. Also, limitation is known between health belief and smoking perceptions in oncology nurses in Turkey. Therefore, this study aimed to assess the health beliefs, perceptions, and self-efficacy toward cigarette smoking of oncology nurses working in a cancer hospital. Thus, this study is expected to reveal the current situation and contribute to tobacco control and cancer prevention studies.

METHODS

In this cross-sectional and descriptive study, all 152 nurses working in the oncology hospital were reached. Data were collected using a self-reported questionnaire prepared by researchers, and the Smoking Cessation Self-Efficacy Questionnaire (SCSEQ). Incomplete questionnaires were not included in the study. After distributing the questionnaires, the participants were asked to return them within three days.

Instruments

The oncology nurses were asked to answer three parts of the self-reported questionnaire, which consisted of: (1) descriptive characteristics, (2) thoughts regarding health beliefs and smoking status of the nurses, and (3) Smoking Cessation Self-Efficacy Questionnaire (SCSEQ).

Questions for the second part were adapted from the Health Belief Model (11). Cancer and smoking relationship and smoke cessation counseling items were added to this part. The second and third parts of the questionnaire consist of self-report items with a three-point Likert format (1=disagree; 3=agree).

The validity and reliability of the SCSEQ (12) for Turkish smokers were made by Karanci (13). This form used the psychometric properties to assess smoking cessation self-efficacy. As this sample, the internal consistency of the Turkish version of the scale was high (Cronbach's Alpha=.92). Range of the SCSEQ was 25-125, with higher scores indicating strong belief about refraining from smoking. It consists of 25 items. SCSEQ assesses participants' perceptions of their ability to refrain from smoking in various situations. The grade of certainty in being able to refuse smoking in each situation was rated by the respondents, using a five-point scale ranging from (1) completely unsure that I will be able to refrain from smoking to (5) completely sure that I will be able to refrain from smoking. It assesses self-efficacy to keep from smoking in diverse circumstances such as negative affect, positive affect, social situations, and cravings (14).

Procedure

All oncology nurses working in the cancer hospital were invited to this study. The oncology hospital where this study was conducted has implemented smoke-free policies since 2010. A list of oncology nurses working in the hospital was received from the hospital nursing administration. The data were collected between 1 December 2019 and 21 December 2019 in all shifts in the cancer clinical departments. Detailed information about the aim of the study was given to all oncology nurses before asking them to join the study.

Ethical considerations

Ethical approval was obtained from the ethics committee of the university (Number: GO 19/1096). All nurses voluntarily provided their written informed consent.

Data analysis

Data of the studywere analyzed through using the statistical package program SPSS (IBM), version 21. Descriptive statistics were presented by using median, minimum, maximum, and interquartile range (IQR) values for continuous variables (age, body mass index, years working as an oncology nurse) and percentages for categorical variables (education level, having a child, shift type, health beliefs, smoking status, and self-efficacy thoughts regarding smoking). Statistical significance was set to $p<0.05$ for all analyses. Chi-square or Fisher’s Exact Test and Mann Whitney U Tests were used when comparing groups.

Table 1: Characteristics of Oncology Nurses (n=111).

Characteristics	n	%
Age (years old)		
Median=34, percentiles 25-75 (31.0-39.0) Min=23 Max=57		
Marital Status		
Married	80	72.1
Unmarried	31	27.9
Educational Level		
Bachelor degree	101	91.0
Master's degree	10	9.0
Having a child		
Yes	68	61.3
No	43	38.7
BMI		
Median=23.9, percentiles 25-75 (22.0-26.8) Min=17.4 Max=33.1		
Years as a nurse		
Median=12, percentiles 25-75 (7-15) Min=1 Max= 40		
Years as a oncology nurse		
Median=9, percentiles 25-75 (6-13) Min=1 Max=27		
Shift type		
Straight days	60	54.1
Rotating shift	51	45.9
Job title/position		
Inpatient clinic nurse	50	45.0
Outpatient clinic nurse	30	27.0
Clinic management nurse	12	10.8
Administrative nurse	8	7.2
Branch nurse (nutrition, pain management, psychosocial, bone marrow transplantation, education)	11	10.0

RESULTS

Characteristics of the oncology nurses

From the 152 oncology nurses invited, 111 nurses (73.2%) completed and returned the questionnaires. Their median age was 34.0 years, ranging from 23 to 57 years. Most of the nurses were female (96.4%), married (%72), and had children (61.3%). The nurses' height and weight measurements were used to the body mass index (BMI). The median BMI of the nurses was 23.9, ranging from 17 to 33 (22.0-26.8). Their median experience working with cancer patients was nine years, ranging from one to 27 years (see Table 1).

Cigarette smoking status of the oncology nurses

Table 2 shows the cigarette smoking status of the participants. Almost half of the participants (54.1 %) stated that they are nonsmokers, and 27% stated that they are smokers. Among current smokers, 35.8% were in the pre-contemplation stage. Among past smokers, some nurses (n=5) stated that their smoking-cessation decision was affected by working in the cancer hospital. The median age for starting smoking was 20 (min 13; max 34) years old (see Table 2).

Health beliefs related to smoking among the oncology nurses

Of the oncology nurses, 91.9% noted that "smokers are more likely to have cancer;" 45.9% stated, "it is difficult for smokers to quit smoking," and 52.3% said, "tobacco bans are effective for quitting smoking." The majority of them (89.2%) noted that "smoking is one of the most hazardous behaviors that increases the risk of cancer," and 87.4% of them stated, "smoking causes cancer."

Almost a quarter (25.2%) of the participants noted that "the tobacco laws have a positive effect on smoking cessation." Of the oncology nurses, 60.4% agreed with the statement, "I accept healthy lifestyle suggestions for health," and 39.6% of them reported exercising at least three times a week.

Nearly two-thirds (64.3%) disagreed with the opinion, "increasing cigarette prices reduces the incidence of smoking" (see Table 3). Demographic factors such as age, education, and years working in cancer hospitals were not associated with health beliefs about smoking ($p>0.05$).

SCSEQ scores

We found that the median SCSEQ score of the smoker nurses was 77.50 (IQR 25:55.75; IQR 75: 100). These nurses stated that they could not be completely sure they will not smoke when their spouse or friends smoke, when they feel work-related pressure and strain, during coffee or tea breaks, and especially in the event of a death or an accident in their family. They cannot manage to avoid smoking in these situations, and their self-efficacy scores decrease (Table 4).

DISCUSSION

In this descriptive study among oncology nurses working in an oncology hospital, we evaluated the health beliefs, perceptions, and self-efficacy toward cigarette smoking. In our study, 91% of the nurses stated that a healthy lifestyle is important for them, and 60.4% of them stated that they have a healthy diet. Their median BMI of 23.9 shows that their weight

is within normal weight limits, which confirms their healthy habits. Previous studies conducted among nurses showed them to have similar BMI values such as 25.1 or within the healthy weight range (15, 16). These studies report that nurses with a healthy weight engage significantly more in health-enhancing behaviors with the desired frequency.

The results show that about one-third of the oncology nurses in our study are cigarette smokers. However, studies on the smoking status of oncology nurses are limited; there are similar studies on nurses working in general practice. Previous studies have shown that smoking prevalence differs among nurses, 7.9% (17) to almost 50%1, respectively (15). Based on these results, it can be said that the smoking rates of oncology nurses in our hospital are not different from other nurses. However, the prevalence of smoking should be investigated in a large oncology nurse population.

In our study, the beliefs of nurses related to smoking are analyzed. Most of the nurses stated that they agree that "smoking is harmful to health and causes cancer," "being healthy is very important" for them, and they are "afraid of getting cancer." However, one-third of them are smokers. Thus, the perception that smoking is harmful does not prevent smoking.

Table 2: Cigarettes Smoking of the oncology nurses

Smoking Status (n=111)	**n**	**%**
Non smoker	60	54.1
Past smoker (quit within past twelve months)	12	10.8
Occasionally smoker	9	8.1
Current smoker	30	27.0
Cigarettes smoked per day (n=30)		
1-5	9	30
6-10	9	30
11 and more	12	40
Age of first cigarette (n=28)		
Median= 20 (min=13; max=34)		
SCSEQ scores (n=28)		
Median=77.50 (min=25; max=116)		
Reasons of smoking (n=51)*		
Psychologically	12	23.5
Dependency	13	23.5
Work load	10	19.6
Other**	6	11.8
Smoking stage of change (n=28)		
Precontemplation	10	35.8
Contemplation	6	21.4
Preparation (in next 6 months)	3	10.7
Action	9	32.1

* Multiple answers are marked. The number of the participants (n=51) includes those who current smokers and ex-smokers.
**Economic and habit reasons

Table 3: Percentage distribution of health belief-related smoking of the oncology nurses (n=111)

Items	Disagree	Neither Agree Nor Disagree	Agree
1. Smokers have a greater risk of cancer.	3.6	4.5	91.9
2. If members of my family smoke, I feel bad for them.	17.1	6.3	76.6
3. Having a person in my family diagnosed with cancer can increase my cancer risk.	9.0	7.2	83.8
4. I would like to detect my health problems associated with cancer.	4.5	7.2	88.3
5. I feel afraid of having cancer risk.	8.1	9.0	82.9
6. If I am diagnosed with cancer, I may suffer from depression.	8.1	14.4	77.5
7. Smoking is one of the most significant risk behaviors to increase the risk of cancer.	4.5	6.3	89.2
8. Not smoking cigarettes or quitting smoking prevents many cancer-related diseases.	7.2	9.9	82.9
9. People who are nonsmokers feel more healthy.	9.0	15.3	75.7
10. It is very difficult for smokers to quit smoking.	36.0	18.0	46.0
11. I think that smoking is responsible for cancer.	2.7	9.9	87.4
12. I am able to assist patients and their family in quitting smoking.	9.9	12.6	77.5
13. I inform my patients and their family about the harms of cigarette smoking	4.5	7.2	88.3
14. The tobacco law has a positive effect on smoking cessation.	25.2	22.5	52.3
15. A healthy lifestyle is very important for me.	3.6	5.4	91.0
16. I try to discover my health problems early.	8.1	13.5	78.0
17. Even if I am not sick, I get health checks regularly.	30.6	22.5	46.8
18. I adhere to healthy lifestyle recommendations to be healthy.	9.9	23.4	60.4
19. I eat healthily.	19.8	19.8	60.4
20. I get some exercise three times a week.	39.6	20.7	39.6
21. Nurses who work in the oncology hospital can provide support and information to cancer patients and their families about smoking cessation.	16.2	19.8	64.0

Table 4. Percentage distribution of self-efficacy for smoking cessation of the oncology nurses (n=28)

In the following situations, I am confident that I will not smoke:	Completely unsure	Unsure	Neither sure nor unsure	Sure	Completely sure
1-When I wake up in the morning, although I know that a hard day is waiting for me.	25.0	7.1	21.4	3.6	42.9
2-When driving or traveling by car.	21.4	3.6	14.3	10.7	50.0
3-When I am alone and feel sad.	39.3	14.3	14.3	17.9	14.3
4-When I feel happy and while celebrating something.	21.4	14.3	17.9	21.4	25.0
5-When I am with my husband or smoker friend.	39.3	10.7	7.1	14.3	28.6
6-When having a drink at home or outside.	35.7	21.4	3.6	3.6	35.7
7-When talking with a friend on the phone.	28.6	14.3	10.7	10.7	35.7
8-When talking about a difficult subject on the phone.	39.3	14.3	17.9	7.1	21.4
9-When I am with a friend or at friendly meeting.	35.7	14.3	7.1	21.4	21.4
10-When I feel difficulty or pressure in my work.	35.7	14.3	17.9	7.1	25.0
11-When I go home from work.	35.7	14.3	7.1	10.7	32.1
12-When chatting with my friend.	28.6	14.3	10.7	17.9	28.6
13-When I wake up in the morning and think that a hard day is waiting for me.	25.0	14.3	14.3	3.6	42.9
14-When I am at my workplace without any particular difficulty or trouble.	21.4	7.1	21.4	10.7	39.3
15-When I see that I am gaining weight.	25.0	21.4	10.7	7.1	35.7
16-When I am immobile or do sports.	17.9	25.0	14.3	7.1	35.7
17-When I'm bored and can't find anything to do.	35.7	21.4	14.3	7.1	21.4
18-When having coffee or tea, relaxing, or chatting.	42.9	10.7	14.3	10.7	21.4
19-When I have emotional problems or a serious crisis (for example, an accident or death in the family).	50.0	7.1	7.1	14.3	21.4
20-After a meal.	39.3	3.6	7.1	32.1	17.9
21-When I take a break from working at home or the workplace.	32.1	17.9	7.1	21.4	21.4
22-When I visit friends at their home.	28.6	17.9	7.1	28.6	17.9
23-When I feel nervous.	39.3	14.3	3.6	21.4	17.9
24-When I go to the toilet.	28.6	7.1	3.6	14.3	46.4
25-When I am resting or watching TV.	17.9	14.3	7.1	10.7	50.0

Previous studies found that a lack of smoking cessation support for nurses is a key barrier to the policy's success (18, 19). Their recommendations include the establishment of smoking-cessation services as a standard component of the policy.

Despite perceived personal health risk, still choosing to smoke does not connect with certain health-protective behaviors. It is known that personal barriers may make it difficult for individuals to form a relation between their personal cancer risk attitude and beneficial health behavior (20). Similarly, a previous study conducted among nurses showed that protective health measures taken by oncology nurses who are preparing and applying chemotherapy were insufficient (21). Another study about nurses' adaptation to health behaviors such as smoking, physical activity, and diet is insufficient (22). These studies show that engagement in preventive health behaviors is poor among nurses. However, although nurses know the significance of healthy behaviors, there is a gap between knowledge and practice of health behaviors. The reason for this gap is that health care staff do not have enough time, skills, of sufficient belief and motivation to implement these practices (23).

Nurses who smoke know that smoking is harmful, but they have difficulties in stopping smoking. One of the reasons for the gap between behavior and belief is found in addiction psychology. It is known that smoking cessation is difficult because nicotine causes physical and psychological addiction. In our study, although almost half of the oncology nurses think it is difficult to quit smoking, most of them stated that they can help their patients and their families quit smoking and inform patients and their families about the harms of smoking.

In our study, more than half of the nurses stated that working with cancer patients and a rise in cigarette price did not change the number of cigarettes they smoke. Nurses' smoking behavior is affected by multiple factors related to both social and workplace characteristics (24). Working in a cancer hospital

does not act as a deterrent to smoking attitudes in nurses.

Although nurses who participated in our study noted that they can provide information about the harms of smoking, most oncology nurses in Turkey do not receive formal education in smoking-cessation counseling. Previous studies evaluating the associations between perceptions and behaviors are not consistent with the present study. Besides the perceptions of nurses, their behavior is also important. It seems obvious that the smokers among nurses and physicians would not advocate for their patients' smoking cessation, despite agreeing that smoking is harmful to health, and would not advise young adults to cease smoking (25). Other surveys found that nurses are confident in helping smokers quit smoking, but their sense of responsibility and determination of the appropriateness of smoking-cessation interventions remains inadequate (26, 27).

Support for nurses' health promotion behaviors enhances their quality of life. Health promotion requires appropriate policies, planning, and interventions. To tackle serious health problems arising from smoking, all health care providers are reaasured to be actively involved in smoking cessation employement (22, 28). The increased educational status of nurses working in hospitals in Turkey positively affects their health beliefs link with breast cancer. Being promote the long-term persistence of this effect, postgraduate training will be beneficial in updating link with breastcancer health care knowledge of nurses and enabling the continuity of beneficial health behavior (9). A study was reported that nurses' health-related behaviors were better than the general population, but non-adherence to public health guidelines was regarding (29). To maximize their impact, health care providers have to prioritize increasing access to healthy food and smokingcessation programs. Some previous health behavior studies found different results. A cross-sectional survey showed the relationship between knowledge, risk perceptions, opinion of health toward seasonal influenza and vaccination, and the vaccination behaviors of nurses. Insight and and risk perception predict uptake of vaccination in nurses (30). Female smokers demonstrated significantly less knowledge of breast cancer and mammography, reported more barriers to screening, had less self-efficacy, and had a lower perceived risk of breast cancer than did nonsmokers (31).

Education about smoking cessation is rarely prioritized as part of nursing education. In Turkey, smoking cessation training does not occur in the nursing education curriculum. The survey identifies that nurse did not feel they had the knowledge, skills, or confidence to deliver successful smoking-cessation interventions to cancer patients (27). However, nurses can be educated through web-based training related to smoking-cessation counseling. They have requested opportunities for dialogue and interaction with colleagues or topic experts (10). Thus, training nurses in smoking cessation interventions can increase their confidence and delivery of such services. Once trained, oncology nurses can appraise patients' perceived difficulty in quitting smoking and tailor cessation advice to motivate them to accept in smoking cessation programs. Nurses intervention that assist smokers in overcoming their perceived difficulty in quitting may improve participation (32, 33).

Oncology nurses are in an important position to provide smoking cessation interventions for cancer patients and their families. They can play in effectively promoting quiting and preventing relapse is focused in the clinical practice guideline (34). It is supposed that smoking is highly relevant to the etiology, treatment, and prognosis of the cancers in these patients, the reported rates of assistance with smoking cessation in this setting is troubling (35). According to the result of another study health providers declared in assisting patients with a cessation plan and arranging follow-up, suggesting a need for developed tobacco control program (36).

Smoking cessation self-efficacy

In this study, the self-efficacy scores of smoking nurses were also evaluated. The nurses reported that it is difficult to avoid smoking, especially in times of emotional distress and loneliness. It is recognized that friends and close relationships are associated with the onset of smoking and maintenance (37). Cessation pertinent self-efficacy and withdrawal symptoms during abstinence robustly affect smoking cessation conlusions (38). Studying the possible interactions between these two factors could be important in understanding nicotine addiction and improving smoking cessation interventions. In case of smoking cessation, withdrawal symptoms like irritability, anxiety and depression candeeply affect smokers' self-efficacy to quit smoking or maintain abstinence during or after cessation (39). A study

offered that although high levels of withdrawal symptoms did not predict low levels of self-efficacy, low levels of self-efficacy after 24 hours of abstinence predicted high levels of withdrawal symptoms after 2 days of abstinence (40). The study suggested that smokers with low self-efficacy might have unfavorable expectations about smoking cessation, which enhances their sensitivity toward withdrawal symptoms. Although this provides great insight toward the link between self-efficacy and withdrawal symptoms, further research is required to provide more comprehensive findings. Accordingly, some clinical trials examining the effectiveness of self-efficacy to refrain from smoking have shown that increased self-efficacy resulted in more smoking avoidance (38, 41, 42).

However, other studies might overestimate the relationship by failing to appropriately control for smoking behavior at the time of the self-efficacy assessment (43). The study reviewed 54 studies that prospectively examined the relationship between self-efficacy and smoking cessation. Smoking was temperately when self-efficacy was assessed before a quit attempt; self-efficacy scores were .21 standard deviation units higher for those not smoking at follow-up than for those who were smoking. The relationship was robust when self-efficcacy was assessed postquit. However, this effect was diminished when only abstainers at the time of the self-efficacy assessment were included in the analysis. Controlling for smoking status at the time of self-efficacy assessment substantially reduced the relationship between self-efficacy and future smoking. Although they stated that self-efficacy has a reliable association with future abstinence, it is less robust than expected (43).

CONCLUSIONS

Smoking rates of oncology nurses were similar to those of other nurses. No difference arising from working in an oncology hospital was found.

Nurses have an important role in maintaining and improving the health of their patients. Understanding the perspectives of the oncology nurses on health beliefs and smoking status will help them practice without judgment and assumptions while ensuring care of the patients and their families. The results may also contribute to future research in this field.

Educating oncology nurses about smoking-cessation interventions and supporting their motivation may contribute to improved nursing care and reduce smoking prevalence in the general population. In addition, oncology nurses can receive training or psychosocial interventions to promotion health behaviors.

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