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Awareness of Asthma and COPD Among Healthcare and Support Staff in Hospitals in TRNC

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Abstract

BACKGROUND/AIMS: With the increasing prevalence of chronic respiratory diseases worldwide, the likelihood of healthcare personnel encountering these patients has also risen. The purpose of this study is to determine the awareness of chronic obstructive pulmonary disease (COPD) and asthma among staff working in hospitals in North Cyprus.

MATERIALS AND METHODS: A survey was administered to staff in 4 hospitals. In addition to demographic data, the survey consisted of 22 questions related to COPD and asthma, which were part of the GARD-Türkiye Project established by the Turkish Ministry of Health in 2013. The data were analyzed using appropriate statistical methods.

RESULTS: A total of 316 personnel from 4 hospitals participated in the study. The age range was 18-59 years (36±9.82 years), and the average duration of work was 11.35±9.53 years. The group with more than 10 years of work experience had a lower awareness that COPD is seen in individuals over 40 years of age compared to other groups (p=0.008). Additionally, this group had a stronger belief that asthma medications cause addiction (p=0.035). When examining doctors, nurses, paramedics, and technicians as the "healthcare workers group" and auxiliary health staff and clerks as the "other group," it was found that neither group had sufficient knowledge that COPD is a disease affecting individuals over 40 years. Regarding whether COPD is a treatable disease, 46.2% (98) of healthcare workers responded "yes," while 43.9% (93) answered "no". In general, the level of knowledge about COPD and asthma was higher in the healthcare workers group.

CONCLUSION: Although the study population is quite heterogeneous and has a low participation rate from doctors, it is thought to represent hospital workers well. Awareness about asthma and COPD is low. In particular, the group with a longer duration of work was less aware of these two diseases than other groups. We believe that hospital staff should receive in-service training on these diseases at regular intervals.

Keywords: COPD, asthma, awareness, healthcare workers

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INTRODUCTION

Chronic respiratory diseases are a significant burden on health systems worldwide. These conditions, specifically asthma and chronic obstructive pulmonary disease (COPD), account for the vast majority (65%) of chronic respiratory illnesses. Nearly half a billion people live with asthma and COPD, and these two diseases cause approximately 4 million deaths each year.[1] The prevalence of chronic respiratory diseases is expected to increase in the coming years due to changes in the age structure of populations and rising smoking rates, especially in developing countries. Therefore, the likelihood of healthcare workers encountering these patients is also increasing.

COPD is a preventable and treatable disease characterized by airflow limitation that is not fully reversible.[2] This airflow limitation is usually progressive and is associated with an abnormal inflammatory response in the lungs to harmful particles and gases.[2] Today, COPD is defined as a preventable and partially treatable disease, particularly affecting adults aged 40 and older.[2] COPD is a significant and increasingly prevalent cause of morbidity and mortality worldwide. Currently, COPD ranks third among the leading causes of death from chronic diseases.[1] However, the disease is not sufficiently recognized, often underdiagnosed, misdiagnosed, and undertreated. The lack of awareness and diagnosis of COPD has led to inadequate reporting of the disease. Consequently, there have been significant differences in data related to the disease burden across countries, depending on awareness among healthcare personnel, the organization of healthcare services for chronic diseases, and the availability of medications for COPD.[3]

Asthma, another chronic airway disease like COPD is characterized by chronic airway inflammation and airflow limitation. The chronic inflammation in asthma is associated with airway hyperresponsiveness, which leads to recurrent episodes of wheezing, shortness of breath, chest tightness, and coughing, particularly at night or in the early morning.[4] It can occur in individuals of all ages and in all geographical regions. According to the World Health Organization (WHO), it is estimated that 350 million people worldwide have asthma, and more than 400,000 asthma-related deaths occur globally each year.[1] It has been stated that the causes of death are largely preventable, often due to a lack of access to healthcare during acute episodes and inadequate long-term medical treatment.[5] Asthma is a disease with a high economic burden, but in developed countries, diagnostic and treatment programs have reduced costs.

Due to the mortality, morbidity, and economic burden caused by chronic diseases worldwide, the WHO has made an urgent call to action for the prevention and control of chronic diseases. As part of this effort, the "Global Alliance Against Chronic Respiratory Diseases (GARD)" was established.[1,6,7] A study on chronic airway diseases conducted within the framework of the Turkish National GARD Program revealed that asthma and COPD are not well known in Türkiye.[8] In our country, there are no scientific data regarding asthma and COPD awareness, either among the general population or healthcare workers. The aim of this study is to investigate asthma and COPD awareness among hospital staff.

MATERIALS AND METHODS

This is a questionnaire study. This study was approved by the Ethics Committee of Dr. Burhan Nalbantoğlu State Hospital (approval number: YT.1.01, date: 25.05.2020), with personnel working at one university hospital and three state hospitals. The questionnaire, in addition to collecting demographic data, consisted of 22 questions related to COPD and Asthma, determined by the Turkish Ministry of Health in 2013 as part of the GARD-Türkiye Project.

A total of 500 personnel were approached, and 316 agreed to participate in the survey.To ensure representation of both healthcare workers and the general population, personnel from each department were included. Doctors, nurses, paramedics, technicians, other auxiliary healthcare staff, and administrative personnel were involved in the study. The personnel who agreed to participate were divided into two groups based on the unit they worked in: the health field workers group (HFG) and the other field workers group (OFG). The HFG group consisted of personnel who directly interacted with patients, such as doctors, nurses, and paramedics. The OFG group consisted of personnel who did not directly interact with patients, such as technicians, other auxiliary healthcare staff, and administrative personnel.

Additionally, data analysis was performed based on the length of service at the institution. Personnel were categorized into three groups: those with 0-5 years of service, those with 6-10 years of service, and those with more than 10 years of service.

Inclusion criteria are being employed at a hospital, being over 18 years old, and agreeing to complete the survey. Exclusion criteria include being under 18 years old and refusing to participate in the study.

Statistical Analysis

The analysis was performed using SPSS 27. The Kolmogorov-Smirnov test was applied to assess normality. Descriptive statistics were used to calculate the frequency and percentage for categorical data or the mean and standard deviation for continuous data. The chi-square test was used to compare categorical variables between two independent groups, whereas the Kruskal-Wallis test was used to compare non-parametric data among more than two independent groups. A statistical significance level of $p<0.05$ was accepted.

RESULTS

The questionnaire participation rate is 63.2%. Three hundred sixteen staff from four hospitals participated in the study. Of the participants, 71.2% (n=225) were female and 28.2% (n=89) were male. Of these, 64 (20.3%) were physicians, 107 (33.9%) were nurses, 19 (6%) were paramedics, 23 (7.3%) were technicians, 61 (19.3%) were other auxiliary healthcare staff, and 41 (13%) were civil servants. The range of age is 18-59 (36±9.82) years, average service period is 11.35±9.53 years. The majority of the study population consisted of those with less than 5 years of work experience (40.6%) and those with more than 10 years of experience (41.8%). All demographic data are shown in Table 1.

In total, 16 questions were asked to evaluate the level of knowledge about COPD (8 questions) and asthma (8 questions). The answers were examined separately according to both staff categorization (HFG and other group) and working period (0-5 years, 6-10 years, and 11 years and over).

Evaluation of Knowledge About Chronic Obstructive Pulmonary Disease

Answers to questions regarding knowledge of COPD are shown in Table 2. When the groups were compared according to the field of work, the following results were obtained: the vast majority of both groups knew that COPD is a lung-related disease and that smoking is the biggest risk

Table 1. Demographic features of participants		
		n (%)
Age (year) (mean ± SD)	36±9.82	
Sex	Male	225 (71.2)
	Female	89 (28.2)
Smoking status	Yes	114 (36.1)
Comorbitiy	Yes	59 (18.7)
Type of service to the institution	Physician	64 (20.3)
	Nurse	107 (33.9)
	Paramedic	19 (6)
	Technician	23 (7.3)
	Other auxiliary health personnel	61 (19.3)
	Officer	41 (13)
Duration of service to the institution	Mean 11.35±9.53	
	0-5 years	125 (40.6)
	6-10 years	51 (16.6)
	>11 years	132 (41.8)
Type of isnstitution	State hospital	230 (72.8)
	University hospital	86 (27.2)

SD: Standard deviation.

factor (p=0.230, p=0.364, respectively). In both groups, the majority mistakenly believed that COPD is a disease of young adults (HFG 84.9%, OFG 65.7%). The proportion of those who believed that COPD can occur at any age was higher in the OFG (29.3%). The proportion of those who thought that COPD is a disease seen after the age of 40 was higher in the OFG group (5.1% vs. 1.4%). The age at which COPD is observed was statistically significant between the two groups (p<0.001). 84% of the HFG group and 68.9% of the OFG group believed that cough, sputum, and shortness of breath symptoms occur together in COPD (p=0.019). 43.9% of the HFG group and 29.4% of the OFG group believed that COPD is an incurable disease (p=0.001). The proportion of those who thought COPD is treatable was similar in both groups (HFG: 46.2%, OFG: 46.1%). Most individuals in both groups knew that the first step in preventing and treating COPD is quitting smoking (p=0.298). The proportion of those who knew that spirometry is required to diagnose COPD was higher in the HFG (75% vs. 53.5%, p<0.001).

When the responses to the questions were analyzed according to the length of service, the awareness that COPD is a lung-related disease and that smoking is the most important cause was similar in all three groups (p=0.341, p=0.265, respectively). Those with more than 10 years of service tended to believe that COPD is frequently seen in young adults (84.1%). The proportion of those who believed that COPD can occur at any age was higher in the groups with 0-5 and 6-10 years of service (20.8%, 21.5%, respectively). The percentage of individuals who believe that COPD is a disease seen after the age of 40 was zero in the group with more than 10 years of service, while it was around 4% in the other groups (p=0.008).

In all three groups, the majority believed that all symptoms would be present in COPD (p=0.757). The responses to the question of whether COPD is a treatable disease were similar, with no statistical significance (p=0.428). The most frequently given answer in all groups for preventing and treating COPD was quitting smoking (94.4%, 96%, 95.5%, respectively, p=0.998). The proportion of those who knew that spirometry is required to diagnose COPD was lowest in the group with 0-5 years of service (58.4%) and highest in the group with more than 10 years of service (80%), with statistically significant differences between the responses of the three groups (p=0.001).

Evaluation of Knowledge About Asthma

Answers to questions regarding knowledge of asthma are shown in Table 3. When groups were compared according to the field of work, the following results were obtained: 95.2% of the HFG group and 87.3% of the OFG group believed that asthma is not a contagious disease, but 11.8% of the OFG had no opinion on this (p=0.002). 70.4% of the HFG and 58.8% of the OFG knew that asthma could be hereditary, although 21.4% in the HFG thought asthma could not be hereditary, and 23.5% of the OFG had no opinion on the matter (p=0.001). 80.4% of the HFG believed that all symptoms could be present in asthma, while this rate was 57.8% in the OFG (p<0.001). The response indicating that asthma can occur at any age was similar in both groups (HFG: 90.9%, OFG: 95.1%, p=0.258). The proportion of those who knew that asthma treatment is administered via inhalation was similar in both groups (HFG: 98.1%, OFG: 93.1%, p=0.061). The belief that asthma medications do not cause addiction was higher in the HFG (58.1%), while 54.9% of the OFG had no opinion (p<0.001). 69.9% of the HFG believed that asthma cannot be completely cured, while 33.3% of the OFG had no opinion (p<0.001).

When the groups were compared according to the length of service, the rates of knowing that asthma is not contagious, that it can be hereditary, that it can occur at any age, and that treatment is administered via inhalation were similar in all three groups (p=0.293, p=0.331, p=0.246, p=0.131, respectively). 64.8% of those with 0-5 years of service; 78.4% of those with 6-10 years of service; and 75.6% of those with more than 10 years of service believed that all symptoms of asthma could be present.

Table 2. Comparison of knowledge about COPD according to groups

Questions	Health field workers group (n=213)	Other field workers group (n=103)	p	0-5 years (n=125)	6-10 years (n=51)	>11 years (n=132)	p
COPD is a lung-related disease			0.230				0.341
Yes	210 (98.6%)	99 (96.1%)		121 (96.8%)	51 (100%)	130 (98.5%)	
No	0 (0)	1 (1%)		1 (0.8%)	0 (0)	0 (0)	
No idea	3 (1.4%)	3 (2.9%)		3 (2.4%)	0 (0)	2 (1.5%)	
The most important etiological factor of COPD is smoking			0.364				0.265
Yes	206 (96.7%)	96 (93.2%)		117 (93.6%)	50 (98%)	128 (97%)	
No	3 (1.4%)	3 (2.9%)		2 (1.6%)	1 (2%)	2 (1.5%)	
No idea	4 (1.9%)	4 (3.9%)		6 (4.8%)	0 (0)	2 (1.5%)	
In which age group is COPD more common?			<0.001				0.008
Childhood period	3 (1.4%)	0 (0)		0 (0)	0 (0)	3 (2.3%)	
Young adults	180 (84.9%)	65 (65.7%)		90 (72)	38 (74.5%)	111 (84.1%)	
Over 40 years old	3 (1.4%)	5 (5.1%)		6 (4.8%)	2 (4%)	0 (0)	
At any age	26 (12.3%)	29 (29.3%)		26 (20.8%)	11 (21.5%)	16 (12.1%)	
What are the complaints of a COPD patient?			0.019				0.757
Cough	2 (0.9%)	1 (1%)		1 (0.8%)	0 (0)	2 (1.5%)	
Phlegm	2 (0.9%)	2 (1.9%)		1 (0.8%)	0 (0)	3 (2.3%)	
Dyspnea	30 (14.1%)	29 (28.2%)		24 (19.2%)	9 (17.6%)	24 (18.2%)	
All	179 (84%)	71 (68.9%)		99 (79.2%)	42 (82.4%)	103 (78%)	
Is COPD a treatable disease?			0.001				0.428
Yes	98 (46.2%)	47 (46.1%)		64 (51.2%)	20 (39.2%)	58 (44%)	
No	93 (43.9%)	30 (29.4%)		42 (33.6%)	23 (45.1%)	57 (43.2%)	
No idea	21 (9.9%)	25 (24.5%)		19 (15.2%)	8 (15.7%)	14 (10.6%)	
The first step in preventing and treating COPD is to quit smoking or stay away from smoking environments			0.298				0.998
True	205 (96.7%)	94 (93.1%)		118 (94.4%)	49 (96%)	126 (95.5%)	
False	3 (1.4%)	2 (2%)		3 (2.4%)	0 (0)	2 (1.5%)	
No idea	4 (1.9%)	5 (5%)		4 (3.2%)	2 (4%)	4 (3%)	
Which test is required to diagnose COPD?			<0.001				0.001
Blood tests	2 (0.9%)	2 (2%)		2 (1.6%)	0 (0)	2 (1.5%)	
Spirometry	159 (75%)	54 (53.5%)		73 (58.4%)	32 (62.7%)	105 (80%)	
Chest X-ray	51 (24.1%)	41 (40.6%)		47 (37.6%)	17 (33.3%)	23 (17.4%)	
Sputum culture	0 (0)	4 (4%)		1 (0.8%)	2 (4%)	1 (0.8%)	
Have you been diagnosed with COPD by a physician?			0.076				0.760
Yes	3 (1.4%)	6 (5.9%)		3 (2.4%)	0 (0)	6 (4.5%)	
No	207 (97.2%)	94 (92.2%)		120 (96%)	51 (100%)	123 (93.2%)	
No idea	3 (1.4%)	2 (2%)		2 (1.6%)	0 (0)	3 (2.3%)	

COPD: Chronic obstructive pulmonary disease.

DISCUSSION

This study identified that asthma and COPD are not sufficiently understood among hospital staff in Turkish Republic of North Cyprus.

In a study conducted by Omotola[9] using the Bristol COPD Knowledge Questionnaire (BCKQ), COPD awareness among healthcare workers was found to be higher than in many other studies[10-12] but lower than in the study by White et al.[13] However, the BCKQ[13] is a questionnaire designed to assess the effectiveness of education, which means that participants are first educated about COPD, and then their knowledge is measured. The original sentence lacks sufficient context, making it difficult to refine while maintaining its intended meaning. Please provide additional information or context for accurate editing. Our study was designed to measure spontaneous knowledge and to develop an action plan based on the results.

In our study, the GARD questions, which are used to assess knowledge in the general population, were employed. Accordingly, both HFG and OFG participants were largely aware that COPD is a lung disease and that smoking is the biggest risk factor. In al.'s[8] study in the general population in Türkiye, using GARD questions, 50% of the population correctly identified COPD as a lung disease, and 51% identified smoking as the most important etiological factor.

The rate of awareness that spirometry is used to diagnose COPD was higher in the HFG group, which was expected. This is because individuals in the OFG group had not received any education about COPD during their lives, whereas those in the HFG group had received COPD education during their professional training. Both groups generally knew that smoking cessation is the first approach in the treatment. This may be due to the heavy emphasis on smoking and COPD in general media materials to date. Another reason might be that as the prevalence of COPD increases in society, hospital staff may encounter it more frequently within their own families.

Our study showed that as service duration increases, knowledge about COPD decreases. Particularly, the rate of knowing that COPD is a disease seen after the age of 40 was close to zero. This may have several reasons. First, they may have attributed COPD to all age groups, thinking of it as a general respiratory disease, like asthma. Second, their knowledge may not have been updated due to the lack of in-service training on COPD. Another possibility is that media materials intended for the public

Table 3. Comparison of knowledge about asthma according to groups

Sorular	Health field workers group (n=213)	Other field workers group (n=103)	p	0-5 years (n=125)	6-10 years (n=51)	>11 years (n=132)	p
Is asthma contagious?			0.002				0.293
Yes	5 (2.4%)	6 (1.9%)		2 (1.6%)	0 (0)	4 (3%)	
No	199 (95.2%)	89 (87.3%)		113 (90.4%)	47 (92.2%)	121 (91.7%)	
No idea	5 (2.4%)	12 (11.8%)		9 (7.2%)	3 (5.9%)	5 (3.8+)	
Can asthma be hereditary?			0.001				0.331
Yes	148 (70.4%)	60 (58.8%)		78 (62.4%)	37 (72.5%)	90 (68.2%)	
No	45 (21.4%)	18 (17.6%)		27 (21.6%)	8 (15.7%)	26 (19.7%)	
No idea	17 (8.1%)	24 (23.5%)		19 (15.2%)	5 (9.8%)	38 (28.8%)	
What are the complaints of an asthma patient?			<0.001				0.026
Cough	2 (1%)	3 (2.9%)		2 (1.6%)	0 (0)	3 (2.3%)	
Dyspnea	28 (13.4%)	32 (31.4%)		36 (28.8%)	7 (13.7%)	17 (12.9%)	
Wheezing	11 (5.3%)	8 (7.8%)		5 (4%)	3 (5.9%)	10 (7.6%)	
All	168 (80.4%)	59 (57.8%)		81 (64.8%)	40 (78.4%)	100 (75.6%)	
In which age group is asthma seen?			0.258				0.246
Childhood period	6 (2.9%)	3 (2.9%)		4 (3.2%)	2 (3.9%)	4 (3%)	
Adults	13 (6.2%)	2 (2%)		2 (1.6%)	2 (3.9%)	10 (7.6%)	
At all age	190 (90.9%)	97 (95.1%)		118 (94.4%)	46 (90.2%)	115 (87.1%)	
How are asthma medications usually used?			0.061				0.121
Injection	2 (1%)	2 (2%)		1 (0.8%)	2 (3.9%)	1 (0.8%)	
Pill	2 (1%)	5 (4.9%)		1 (0.8%)	2 (3.9%)	4 (3%)	
Inhalation	206 (98.1%)	94 (93.1%)		122 (97.6%)	46 (90.2%)	125 (94.7%)	
Are asthma medications addictive?			<0.001				0.035
Yes	33 (15.7%)	18 (17.6%)		23 (18.5%)	6 (11.8%)	22 (16.7%)	
No	122 (58.1%)	28 (27.5%)		46 (37.1%)	26 (51%)	77 (58.3%)	
No idea	55 (26.2%)	56 (54.9%)		55 (44.3%)	18 (35.2%)	32 (24.2%)	
Can asthma be cured completely?			<0.001				0.070
Yes	37 (17.7%)	19 (18.6%)		16 (12.8%)	11 (21.6%)	29 (22%)	
No	146 (69.9%)	49 (48%)		79 (63.2%)	31 (60.8%)	82 (62.1%)	
No idea	26 (12.4%)	34 (33.3%)		28 (22.4%)	8 (15.7%)	20 (15.2%)	
Have you been diagnosed asthma by a physician?			0.931				0.723
Yes	19 (9.3%)	9 (8.8%)		13 (10.4%)	4 (7.8%)	11 (8.3%)	
No	183 (89.3%)	92 (90.2%)		109 (87.2%)	44 (86.3%)	115 (87.1%)	
No idea	3 (1.5%)	1 (1%)		1 (0.8%)	1 (2%)	2 (1.5%)	

might not have sufficiently emphasized this issue. However, knowledge levels were also very low in the group with shorter service duration. Therefore, even if they had received COPD training, it suggests that this topic may not have been conveyed effectively. We did not come across any study comparing this data among hospital workers. However, looking at general population studies, al.'s[8] found that approximately half of the general population was unaware of which age group COPD occurs in.

When looking at the levels of knowledge about asthma, the level of awareness that asthma is not contagious, that it may be hereditary, that various symptoms can occur, and that asthma medications do not cause addiction was higher in the HFG group. In a study conducted in Jordan with 300 healthcare workers, including pharmacists (103), nurses (87), clinical pharmacists (28), and doctors (82), 84% knew that asthma could be hereditary, and more than 90% knew the symptoms of asthma.[14] In the study by Reza and Saha[15] colleagues on nurses, it was concluded that all participants knew about asthma and its management. In our study, the rate of knowing that asthma is not contagious was 95.2% in the HFG group and 87.3% in the OFG group, much higher than the 58% in Yıldız et al.'s[8] study of the general population.

The awareness that medications used in the treatment of asthma do not cause addiction was 58.1% in the HFG group, and higher than in the OFG group. In our study, the belief that asthma medications might cause addiction was most prevalent among those with 0-5 years of service and lowest among those with more than 10 years of service. In a study conducted in Brazil, 30% of the general population thought that asthma medications do not cause addiction[16]; and in Yıldız et al.[8] study, this rate was 27%. In our study, 69.9% of the HFG group believed that asthma cannot be cured, while 33.3% of the OFG group had no opinion on the matter. In Yıldız et al.[8] study, 35.2% of participants thought that asthma could not be completely cured. Just as with COPD, inadequate in-service training and insufficient coverage of the issue in the media may be among the explanations for the current results concerning asthma.

The strengths of our study can be listed as follows. This is the first study conducted in North Cyprus on awareness of chronic airway diseases. Although the study was conducted only among hospital workers, including non-patient-facing staff (clerks) provides an aspect of representing the general population. The fact that we treated the study population as separate groups of healthcare staff directly dealing with patients (HFG) and auxiliary healthcare staff (OFG), and examined based on service duration is an important advantage. The weaknesses are a limited number of questions and an inability to explore the reasons behind the given responses. However, had the number of questions been higher, participation in the survey might have been lower. Therefore, in its current form, this study should be considered a situational analysis.

Study Limitations

Our study has some limitations. The first is the numerical difference between the groups. The second is the low participation rate in the survey. However, given that this is the first awareness study about airway diseases in our country, the current participation rate is significant.

CONCLUSION

Although the population in this study was quite heterogeneous, with low participation from doctors, we believe it adequately represents healthcare workers. Awareness of asthma and COPD is low in this group. Notably, the level of knowledge about these two diseases is lower in the group with longer service duration compared to other groups. We believe that periodic in-service training is necessary to educate hospital staff about these diseases and that increasing the visibility of COPD and asthma in the general population through media could contribute to improving knowledge levels.

MAIN POINTS

- The prevalence of chronic respiratory diseases [(COPD)and asthma] is increasing globally, leading to significant morbidity and healthcare costs. The level of knowledge among healthcare workers about these diseases is the most important factor facilitating the recognition and management of COPD and asthma.
- The level of knowledge about COPD and Asthma among hospital staff in the Turkish Republic of North Cyprus is low.
- All healthcare sector employees should receive in-service training and similar methods to provide information on chronic respiratory diseases.

ETHICS

Ethics Committee Approval: This study was approved by the Ethics Committee of Dr. Burhan Nalbantoğlu State Hospital (approval number: YT.1.01, date: 25.05.2020).

Informed Consent: This is a questionnaire study. The questionnaire form contains information about the study at the beginning, and those who accepted this information filled out the survey.

Footnotes

Authorship Contributions

Concept: A.B., F.Y., Design: A.B., F.Y., Data Collection and/or Processing: A.B., E.Ü.E., H.Y., F.C., D.Ö.R., Analysis and/or Interpretation: A.B., E.Ü.E., H.Y., F.C., D.Ö.R., Literature Search: A.B., F.Y., E.Ü.E., H.Y., F.C., D.Ö.R., Writing: A.B.

DISCLOSURES

Conflict of Interest: One author of this article, Ayşe Baha, is a member of the editorial board of the Cyprus Journal of Medical Sciences. However, he did not take part in any stage of the editorial decision of the manuscript. The editors who evaluated this manuscript are from different institutions. The other authors declared no conflict of interest.

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