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Frequency of GERD in women of childbearing age in Malatya region

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Abstract

Gastroesophageal reflux disease (GERD) is frequently seen not only in our country but also all over the world. GERD not only impairs health and quality of life, but also causes serious financial losses in the working population. In this study, our aim is to determine the frequency of gastroesophageal reflux disease among female healthcare professionals of childbearing age in our region. Questions were asked about demographic data such as weight, age, height, BMI, medical history, and gastroesophageal reflux of female healthcare workers, whose data were generated by us. The answers to the questionnaires were collected and evaluated retrospective. All participants in the study were women. This study was carried out on 1224 female healthcare workers of reproductive age working in Malatya Turgut Özal University training and research hospital. Approximately 1150 of the employees who were distributed questionnaires filled out the questionnaires. The mean age of the female healthcare workers of childbearing age was 30.01±5.38 years, between 19-50. The mean height of the healthcare workers was 1.64±7.8 meters, the average weight was 68.05±13.2 kg, and their body mass index (BMI) was 27.4±3.6 kg/m². The frequency of GERD in the study group was found to be positive in 24%. 38.5% of the healthcare workers had previously gone to the doctor with complaints of pyrosis and/or regurgitation. A significant relationship was found between GERD and stress, fizzy drinks, lying down after meals, and family history of GERD. There was no significant relationship between the smoking and coffee use and age of the participants in the study in terms of the presence of GERD.We think that gastroesophageal reflux symptoms are common due to stress, unbalanced diet, irregular sleep and lifestyle habits due to the COVID pandemic in the last two years due to the fact that the participants in the study were healthcare professionals. Among our healthcare professionals, both pyrosis and other GERD symptoms were found to be higher than some of the previous studies, similar to those in our country. We think that the reason for this is that the extremely stressful work of health workers in the last 2 years has contributed to this. As it is known, health workers have worked very hard in the last 2 years, they did not even use their annual leaves, even those who wanted to retire could not retire. We think that this stress environment may also contribute to GERD symptoms.

Keywords: Gastroesophageal reflu, regurgation, heartburn, GERD

Introduction

Gastroesophageal reflux disease (GERD) is frequently seen not only in our country but also all over the world [1]. It affects more than 20% of the population in the West [2]. There are many differences even in the definition of gastroesophageal reflux, in some societies it is defined as burning behind the sternum and/or esophageal escape seen once a week, while some accept it as at least once a week, some at least once every 3 months. These differences in definitions are found and interpreted differently because pyrolysis and regurgitation are interpreted differently in each language, and even in some Far Eastern languages, they cannot adequately describe regurgitation and pyrolysis [1,2].

Because of the differences in these definitions, GERD is found at different frequencies in different parts of the world and even

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in different cities of the same country. In a study by Mungan et al. in our country, the definition of GERD was defined as burning and/or acid regurgitation behind the sternum once a week, and the prevalence was found to be 19.1%, and it was stated that the prevalence was higher in those living in the Mediterranean, Black Sea, eastern Anatolia and Central Anatolia regions compared to other geographical regions [3]. Again, in an evaluation made in Sivas in our country, the frequency of GERD was found to be 19.1%, while it was found to be 21.7% in the study of the same group among medical school students in Sivas [4].

Gastroesophageal reflux is the upward movement of stomach contents from the lower end of the esophagus and even coming into the mouth. Physiologically, it is an event that can be observed for a short time 10-15 times a day, normally after something is eaten [5-7]. It does not cause symptoms and complications due to the existing protection mechanisms of the esophagus. If it occurs more frequently than normal or lasts longer, especially during sleep, it causes both clinical symptoms and histopathological damage, from gastroesophageal reflux disease [8]. In studies investigating the prevalence of GERD; In general, the frequency of symptoms is investigated. Therefore, asymptomatic patients are ignored in studies.

The prevalence of GERD is 10-20% in Western countries and the United States (USA), and 5% in Asia [9-11]. The prevalence of this disease is high, its incidence is low, it is a chronic disease with high morbidity and low mortality [9].

In a study in the USA, it was found that 42% of the participants had burning behind the sternum and 45% of them had acid and food in their mouth [9]. In the GORHEN study conducted in Turkey, erosive esophagitis was found in 35% of 1421 patients with a diagnosis of GERD, who had burning in the chest and/or passing stomach contents into the esophagus once a week. GERD is as common in our country as in Europe and the USA, but has a milder course [12]. In this study, we aimed to evaluate the prevalence of gastroesophageal reflux disease among female employees of childbearing age working in our hospital. This study is the first study to investigate the frequency of gastroesophageal reflux among female healthcare professionals in our country.

Material and Methods

In the questionnaires that we compiled from the questionnaires used in GERD studies both in the world and in our country, the participants were asked questions about demographic characteristics such as age, weight, height, BMI, education and marital status, as well as questions about their medical history and GERD. The questionnaire forms filled by the participants were evaluated retrospectively. The questionnaires used in the study were created by taking samples from the prevalence studies conducted in our country and they are valid questionnaires. The majority of those who distributed questionnaires filled out the questionnaires. In the questionnaires given to the participants, questions were asked about the frequency of GERD, age, socio-demographic characteristics, the presence of GERD symptoms, their effects on daily life, drug use for various reasons, smoking, coffee consumption, and the relationship between the body mass index (BMI) of the employee. Burning behind the sternum and sour bitter water in the mouth (regurgitation) among the symptoms of GERD once a week or more were accepted as GERD.

In the questionnaire, patients were asked the following questions: heartburn, regurgitation, chest pain, dry cough, odynophagia, dysphagia, dysphonia, and asthma. Heartburn, regurgitation, chest pain, and dry cough were scored from 0 to 3 (0: none; 1: at least monthly; 2: at least weekly; 3: daily) and dysphagia, dysphonia, and asthma 0 (absent) to Queried as 1 (existing) and saved.

Ethics Committee Approval

The approval number 2022-94 dated 10.05.2022 was obtained from the Malatya Turgut Özal University Ethics Committee to allow the study to be conducted.

Results

All of the individuals participating in the study were women. This study was conducted among 1224 female healthcare workers of reproductive age working in Malatya Turgut Özal University training and research hospital. Approximately 1150 of the employees who were distributed questionnaires filled out the questionnaires and submitted them, 74 of them could not fill out or deliver. The mean age of the healthcare professionals in the reproductive age range was 30.01±5.38 years, between 19-50. The participants of the study consisted of doctors, nurses, anesthesia technicians, dialysis unit workers, laboratory assistants, emergency medicine technicians, cleaning personnel and x-ray technicians.

The minimum age of the study participants was 19 and the maximum age was 50. The mean age was 30.01±5.38 years. Average height is 1.64±7.8 meters, average body weight is 68.05±13.2 kg. Body mass indexes (BMI) calculated using body weight and height were found to be 27.4±3.6 kg/m² (17.2-33.2) (Table 1).

Table 1. Demographic characteristics of the participants

	Numbers (n)	Minimum	Maximum	Avarage
Age	1150	19	50	30.01±5.38
Height (cm)	1150	148	172	1.64±7.8 m
Weight (kg)	1150	39	87	68.05±13.2
BMI (kg/m2)	1150	17.2	33.2	27.4±3.6 kg/m²

Among the female healthcare professionals of childbearing age, 278 (24%) of the 1150 people evaluated were accepted as GERD if the questions investigating the presence of pain behind the sternum and/or the presence of sour bitter water in the mouth were answered once a week and/or more (Table 2). Therefore, these patients were accepted as gastroesophageal reflux patients (GERD). GERD was positive in 24% of our patients.

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Participants with body mass index BMI <18kg/m2 2% (n=24) 18-24.99kg/m2 76% (n=869); 25-30kg/m2 19% (n=212); and those with >30kg/m2 were 3% (n=32) (Table 2). There was no statistically significant difference between the frequency of GERD according to BMI (p>0.05) (Table 3).

Table 2. Prevalence of GERD

GERD	Number of people (n)	Percentage (%)
Positive	278	24
Negative	872	76
Total	**1150**	**100**

Table 3. The relationship between GERD and BMI

	GERD (+) n (%)	GERD (-) n (%)	Maximum
<18 kg/m²	7(0,06)	17 (1.47)	24 (2)
18-24.99 kg/m²	202 (17.5)	667 (58)	869(76)
25-30 kg/m²	56 (4.8)	156 (14)	212(19)
>30 kg/m²	22 (1.9)	10 (1)	32 (3)
Total	**287 (24)**	**872(75.8)**	**1150 (100)**
x^2=5.6	p=0.165	p>0.05 insignificant	

Considering the relationship between GERD and age, the frequency of GERD was 0.8% in the 19-25 age group, 5.2% in the 26-35 age group, 15.6% in the 36-45 age group, and 6% in the 45-50 age group. It is observed that the frequency of GERD increases with age (Table 4). Although the frequency of GERD increased with age, the difference was not statistically significant (p>0.05).

Table 4. Relationship between GERD and age groups

Age groups	GERD (+) n (%)	GERD (-) n (%)	Total n (%)
19-25	10 (0.8)	165 (14.3)	175 (15.2)
26-35	60 (5.2)	190 (16.4)	250 (21.7)
36-45	180 (15.6)	340 (29.5)	520 (45.2)
45-50	70 (6.0)	135 (11.7)	205 (21.7)
Total	**278(24.1)**	**872 (75.8)**	**1150 (100)**
x^2=4.6	p=0.154	p>0.05 insignificant	

Among the healthcare professionals who answered the questionnaire, the frequency of regurgitation, which is one of the main symptoms of GERD, was 60% (n=691) and the frequency of those who did not have regurgitation was 40% (n=459). Of the 278 participants with GERD positive, 95% (n=265) had a complaint of sour and bitter water in the mouth (regurgitation), and 5% (n=13) had no regurgitation.

When we questioned the complaints of regurgitation, which is one of the main symptoms of GERD, among the participants with GERD positive, it was observed that 4% were observed less than once a month, 10% once a month, 14% once a week, 9% several times a week, and 3% every day.

Among the female healthcare professionals of childbearing age, the presence of heartburn behind the chest, one of the main symptoms of GERD, was 60.7% (n=691) and 39.3% (n=459) of those who did not. The presence of heartburn was detected in 91% (n=253) of the participants with GERD positive, and 9% (n=9) of those without.

Among those with GERD positive, 4% of GERD symptoms reported the frequency of chest pain (heartburn) less than once a month, 13% every month, 16% once a week, 10% several times a week, 4% every day.

When we investigated the frequency of symptoms among GERD positive participants, only chest pain (heartburn) at least once a week was 37% (n=103), and the frequency of regurgitation at least once a week was 33% (n=92), both together. at least one frequency was found to be 30% (n=83).

When stress was questioned among female healthcare professionals of childbearing age, 85% (n=975) stated that they were positive, and when the relationship between GERD and stress was examined, 91% (n=254) of GERD (+) patients stated that they had experienced serious stress within a year. GERD and stress were found to be statistically significant (p<0.05) (Table5)

Table 5. GERD stress relationship

Stress	GERD (+) n (%)	GERD (-) n(%)	Total
Positive	254(%22)	721 (%63)	975 (%85)
Negative	24 (%2)	151 (%13)	175 (%15)
Total	**278 (%24)**	**872 (%76)**	**1150 (%100)**
x^2 =11	p=0.01	p< 0.05 significant	

5% (n=172) of female healthcare professionals of childbearing age stated that they used to smoke for a period, the rate of active smoking was 19% (n=215) in the GERD positive group, but there was no significant difference between the smoking and non-smoking groups (p> 0.05).

In terms of coffee drinking habits among healthcare workers, the rate of coffee drinking was found to be 67% (n=770) in the whole group, and 70% (n=800) in the GERD-positive group. There was no significant difference between GERD and coffee consumption (p>0.05)

When carbonated beverage habits were compared, the rate of drinking carbonated beverages among healthcare workers was found to be 52% (n=598) and 68% (n=782) in the group with GERD positive. A significant correlation was found between GERD positivity and consumption of carbonated beverages (p=0.04) (Table 6).

When asked to lie down and lie down within 2 hours after a meal among healthcare professionals, 64% (n=736) answered yes. They stated that 80% (n=56) of GERD (+) cases were hospitalized within 2 hours after eating. A significant correlation

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was found between GERD positivity and lying down within 2 hours after a meal (p=0.023) (Table 7).

Table 6. The existence of a relationship between GERD and carbonated beverages

Carbonated drink	GERD(+) n(%)	GERD (-) n(%)	Total n(%)
Positive	253(%22)	529 (%46)	782 (%68)
Negative	25 (%2)	343 (%30)	368 (%32)
Total	**278 (%24)**	**872(%75.8)**	**1150(%100)**
x^2 =8.7	p=0.4	p< 0.05 significant	

Table 7. The existence of a relationship between GERD and lying down 2 hours after a meal

Lying down two hours after eating	GERD(+) n(%)	GERD (-) n(%)	Total n(%)
Positive	223(%19)	513 (%45)	736 (%64)
Negative	55 (%5)	359 (%31)	414 (%36)
Total	**278 (%24)**	**872(%75.8)**	**1150(%100)**
x^2 =4.3	p=0.02	p< 0.05 significant	

Among the atypical findings observed in GERD, the frequency of painful swallowing was found to be 3% (n=33) in all participants, 1% (n=13) in the GERD positive group, and 97% (n=1117) in those without odynophagia symptoms. There was no significant difference in terms of odynophagia between the group with and without GERD (p>0.05).

The frequency of dysphagia, one of the rare symptoms of GERD, was 3% (n=40) in the participants, and the frequency of difficult swallowing (dysphagia) in the GER positive group was 1% (n=16). Those without dysphagia symptoms were found in 97% (n=1110). There was no difference in the frequency of dysphagia between the GERD positive group and the negative group (p=>0.05).

When the participants were questioned about the presence of GERD in their families, the family history was positive in 35% (n=402). There is a family history in 55% (n=153) of GERD (+) cases. A significant correlation was found between GERD and family history of GERD (p=0.001) (Table 8).

Table 8. Presence of a relationship between GERD and family history

Family history	GERD(+) n(%)	GERD (-) n(%)	Total n(%)
Positive	153(%13)	249 (%22)	402 (%35)
Negative	125 (%11)	623 (%54)	748 (%65)
Total	**278 (%24)**	**872(%75.8)**	**1150(%100)**
x^2 =21.2	p=0.001	p< 0.05 significant	

38.5% of the healthcare workers had previously gone to the doctor with complaints of pyrosis and/or regurgitation. It can be thought that working in the hospital and having easy access to health services will contribute to this. GERD was found to be significantly associated with stress, soda, lying down after a meal, and having a family history of a person with GERD (p<0.05) (Table 5-8). No statistically significant relationship was found between age, smoking and coffee drinking and GERD.

In addition, 38.5% of those with GERD used stomach medication, 10% (n=27) antacids, 14% (n=38) PPI, 9% (n=24), H2RA, 8%. (n=22) were using PPI+ antacid, 13% (n=38) were using PPI + alginic acid, 15% (n=45) were using alginic acid, 10% (n=28) were using H2RA+antacid. About 21% stated that they did not take regular medication.

Conclusion

Among our healthcare professionals, both pyrosis and other GERD symptoms were found to be higher than some of the previous studies, similar to those in our country. We think that this is due to the fact that healthcare professionals have worked extremely stressful due to the COVID pandemic in the last 2 years, which will have contributed to this. As it is known, health workers have worked very hard in the last 2 years, they could not even use their annual leaves, even those who wanted to retire could not retire. We think that this stress environment may also contribute to GERD symptoms.

As a result, GERD is increasingly seen in all parts of the society, it is a condition that disrupts the comfort of life, reduces the quality of life and employee productivity, and increases health expenditures. Being aware of this issue, it is necessary to try to adopt the measures to eliminate the causes of GERD, both among health professionals and in the society, with lifestyle changes. Everyone diagnosed with GERD should be encouraged to adopt appropriate treatment and lifestyle changes.

Statistical Evaluation

Evaluation of the retrospective data collected in our study was done in computer environment using SPSS (Statistical Package for Social Sciences/ver:22.0) program. In the evaluation of the data obtained in the study, the Chikare test was used, and the Khikare test was used in multi-eyed schemes. All data were first entered into the Microsoft Access database, and general results were obtained with the Microsoft Excel program. The evaluation of the data was made with the SPSS 22.0 package program.

Discussion

GERD is when gastric or duodenal contents pass into the esophagus and cause symptoms. Since the symptoms of GERD are similar to many diseases, it can be easily diagnosed after excluding many diseases. It is a very common health problem in society. Although it seems innocent; Due to its symptoms, it not only impairs the quality of life of the person, but also causes complications [1, 2]. Thus, it leads to loss of workforce and cost increase in employees.

GERD is defined by the American College of Gastroenterology as the passage of stomach contents into the esophagus, causing symptoms and causing damage to the mucosa [2]. In the Montreal Classification (MC), reflux of stomach contents into the esophagus causing symptoms and complications was accepted

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as GERD [1, 2]. Two important findings of gastroesophageal reflux disease are bitterness in the mouth and burning behind the sternum [4]. Heartburn may not be present in all patients [3].

In a nationwide study conducted in the United States (USA), 44% of the participants reported burning in the chest once a month [1, 2]. In a study conducted in the USA, 22% of the participants described chest pain and mouth watering in the last month, while 16% described only bitter water in the mouth [12]. The frequency of symptomatic reflux has been reported to be between 5% and 15.5% in 3 months in Europe [6]. The frequency of GERD has been reported as 10-20% in Europe and America, and 5% in Asia [8]. Although GERD is at equal rates in both men and women, complications are more common in men [13].

In many GERD epidemiological studies conducted in Turkey, the Mayo questionnaire and the GERD-Q form were used [9, 10, 14]. In the study of Bor S et al. using the Mayo score, the frequency of GERD was found to be 20% [14]. In the study conducted in Sivas province in Turkey, the prevalence of GERD was 19.3% [9], the prevalence in Bolu province was 12.5%, and the prevalence in the GORHEN study was 22.8% [12]. In the study of Mungan et al. using the GERD-Q questionnaire in the Turkish general population, the frequency of GERD was found to be 24.7% [3].

In our study, the frequency of GERD was found to be 24%, which is higher than some of the studies in our country. Our study is only female healthcare workers of childbearing age working in the hospital. One of the reasons why the results are so high may be working in a stressful field such as the health sector. Considering the COVID pandemic in the last two years, both working hours and conditions are heavier for people working in the health field, while those working in other sectors can take leave, conditions are applied differently for those working in the health field. This may have contributed to the increase in GERD symptoms by increasing the stress factor of the patients.

GERD is a common health problem in the community. Although the predisposition to reflux is physiologically more common in some people than in the normal population, dietary habits and lifestyles also play an important role in the frequency of reflux [15-17]. In some patients, GERD only manifests itself with sour, bitter water in the mouth after a meal and pain in the chest, while in others it may appear as esophageal cancer. In the diagnosis of GERD, it is an advantage to be able to diagnose the disease only by anamnesis rather than advanced methods and instruments [15, 18-20].

Using this advantage, we determined the frequency of GERD at a rate of 24% among female healthcare professionals of reproductive age in our hospital, in the study we conducted through a questionnaire on symptoms and complications to determine the prevalence of reflux in the environment we live in. This rate is higher when compared to the studies carried out at different times in the provinces around us.

The frequency of GERD, which emerged from the cumulative evaluation of other studies conducted in our country at different dates, was found to be 10-23% . The prevalence of GERD in our Konya city center is 10.9%, and it is similar to the frequency in Bolu (12.5%) [11].

The prevalence of GERD has been studied in different countries for many years, and a distinction has been made according to many demographic characteristics. Although modern life, obesity, economic status, and being old seem to increase the probability of encountering the disease more, regional studies give quite different results [21-26].

In a similar study conducted in Germany including the adult population, nutrition, quality of life, and demographic characteristics were investigated in 7124 individuals aged 18-79, and the frequency of mild reflux was found to be 25%, moderate 14%, and severe reflux 4% [23]. The female-male ratio was found to be similar when age was not taken into account; Severe reflux complaints were found to be more common in women aged 60-70 years. In the study, the frequency of reflux was found to be more common in older ages, and sufficient opinions were not expressed about socioeconomic status, BMI, and smoking. In our study, there was a statistically significant relationship between the prevalence of GERD, stress, soda, lying down after meals, and family history of GERD ($p<0.05$), but no statistically significant relationship was found between age, BMI, smoking and coffee drinking ($p>0.05$).

Since the participants in our study were health workers, they gave healthy and correct answers to the questions asked in the questionnaire, and in cases where they had difficulty, they answered correctly by getting help from more senior health workers around them. In our study, it was observed that GERD increased with age and BMI increase, but it was not statistically significant.

There were also questions in our study that questioned extraesophageal symptoms. In this study, it was determined that cough, hoarseness and hoarseness in the voice were higher in those with GERD, although it was not statistically significant.

In a study conducted in Germany, in another study examining the frequency of dysphagia in patients with reflux, the frequency of reflux was found to be 34% as a result of the evaluation of the questionnaires directed to 268 people [22]. In the study, in which men had more complaints (36%), it was found that 90% of the patients had monthly symptoms, 25% had symptoms more than twice a week, 9% had daily symptoms, and 45% had taken medication due to reflux.

In our study, the frequency of those who applied to a doctor due to reflux and were using medication was 38%. The high rate of drug users in our study, the fact that those included in the study work in hospitals, and the fact that they have easy access to physicians and drugs may also have an impact.

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In a study conducted among the people in Konya, the rate of those using medication due to reflux was found to be 13.8%. In a study conducted in Konya, gender, educational status and marital status did not show a relationship with reflux, while age and BMI were found to be closely related [11]. There was no gender difference as our study was conducted only among female healthcare workers of childbearing age.

In a study conducted on minorities in the USA, weekly reflux was found to be as high as 26.2% on average [27]. In a study conducted on Caucasian, Spanish, African and Asian immigrants, 32.9% of the patients were found to be overweight and 31.7% to be obese. Among the reflux patients who were correlated with BMI, age and low socioeconomic status, the prevalence of reflux was found to be higher in African and Hispanic patients [24, 26, 28]. What is interesting here is that the prevalence of reflux was lower in similar studies conducted in their own countries. This supports the increased prevalence in Western societies. The reason for this situation, which is a problem, can be revealed with large and detailed studies [26, 29-32].

In our study, overweight people (BMI between 25-30) were 19% and obese were 3%, there was no significant socioeconomic difference between them as they were all healthcare professionals. The high prevalence of GERD in the American study can be explained by the high rates of overweight and obesity in that study [33].

The relationship between reflux and antisecretory drug use was highlighted in a survey study of 2973 people conducted in Australia. While the frequency of reflux found was 12.4%, the rate of patients using medication due to reflux symptoms was reported as 16.9%. The fact that antisecretory drug use is so high may be an indicator of the increase in the frequency of reflux in western countries [34].

In our study, the rate of those who used drugs for symptom or treatment was 38%. It is possible that our study was conducted during the COVID period and that the working conditions of healthcare workers in this period were due to the stress and related stress, because the stress rate was shown to be high in the study.

In a study conducted in Iran, a very high reflux frequency of 33% was found [35]. However, in this study, the number of samples was kept relatively low and was carried out on nomads. Still, the results found are interesting. There was no statistical difference between obese or non-obese people and gender, and it was observed that consumption of fruits and vegetables, in particular, increased reflux as a risk [35, 36].

In a prevalence study conducted in Israel; weekly reflux frequency was found to be 12.5% [37] . A total of 2027 interviews were conducted in the survey, which was conducted in the form of telephone conversations, and there was no gender difference in the evaluation like other studies [37]. While the prevalence of reflux in the Middle East, Europe, and America is between 10-20%, data in Asia show the frequency to be between 2-7%. However, it has been shown by endoscopic studies that the prevalence, which seems to be low numerically, is higher than expected in Asia [38-40].

Some of the reasons for the difference in reflux frequency in different countries may be the inaccuracy of symptom definition and the lack of standardization in the diagnosis. Not just patients with symptoms; Patients with complications should also be included in the prevalence. So much so that in some countries, the participants were asked one-to-one survey questions, and the participants gave negative answers, especially without fully understanding the term "heartburn". In fact, the term "heartburn" does not have an exact equivalent in some Far Eastern languages [38-40].

In a study conducted among individuals who came to the hospital for routine control in Japan, the frequency of GERD was found to be 4.6% weekly, 12.8% monthly, and an average of 6.6% [39]. It cannot be generalized to the whole population, as all of the evaluations for which no gender differences were found were made on certain companies and employees.

In a study from Korea, the frequency was 3.5% per week [40]. No correlation was found with age, gender, BMI, socioeconomic status. H. pylori was presented as a protective factor in the study in which the genetic and Helicobacter pylori (H. pylori) effect on the reflux frequency difference between East and West was mentioned. However, although there is no data for H. pylori in the study, the high prevalence of H. pylori in South Asian and black races also supports the data statistically [40].

Finally, in a prevalence study conducted in patients coming to primary health care institutions in our country, patients with and without dyspeptic complaints were surveyed, and reflux was diagnosed in 38.3% of patients presenting with dyspeptic complaints, while a very high figure of 25.4% was found in the other group [41]. While it is noteworthy that the questionnaire is done by the doctor and the diagnosis is made by the doctor, it is an acceptable situation to have a high frequency of reflux in patients who have already applied to the health institution due to any ailment. In our study, the survey questions were filled by the participants themselves, but since they were all healthcare professionals, we can accept that they gave truthful answers to the questions.

After all; In all studies, GERD-related conditions include weight gain, age, diet, smoking-alcohol use, which are already mentioned in the etiology of the disease in the literature. The increase in the rate of fat in the diet as one goes to the west may explain the fact that the disease is less common in eastern countries. Contrary to expectations in almost all studies, the prevalence of reflux in women was almost equal to that in men. However, with the increase in age, there seems to be an increase to the detriment of women.

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The prevalence of GERD is higher in western societies. The frequency of GERD is also increasing in Turkey. Among the reasons for this difference between regions, factors such as differences in lifestyle and dietary habits, the high frequency of Helicobacter Pylori infection, genetic factors, and the difficulty of accessing health facilities in eastern societies can be counted.

In our study, the frequency of GERD was found to be 24% among female healthcare workers of childbearing age. This result is similar to the studies conducted in Turkey. However, the frequency of GERD in our study was found to be slightly higher. The reason for this is thought to be due to the fact that the participants in our study were healthcare workers, their employees were under high stress due to the coinciding period of the COVID pandemic, irregular lifestyle and unbalanced eating habits.

This study, which we conducted among healthcare workers of childbearing age, is the first study in this field. In this study, we found a statistically significant relationship between GERD and stress, lying down after a meal, soda, and a family history of GERD. As age and weight increase, GERD increases, but it does not reach statistical significance. As in our study, other studies in which no association was found have also been reported. In this regard, more comprehensive studies are needed to clarify these relations.

The majority of people diagnosed with GERD do not receive appropriate treatment. When we consider asymptomatic cases, we see that most of the cases do not receive adequate treatment. It is seen that this disease, which causes serious complications when left untreated, should be well screened and treated in primary health care institutions.

Accurately determining the prevalence of GERD can be done with a thorough analysis and asking the right questions. After the correct diagnosis, regular drug therapy can be easily overcome with regular lifestyle changes and a healthy diet.

Conflict of interests
The authors declare that there is no conflict of interest in the study.

Financial Disclosure
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Ethical approval
The approval number 2022-94 dated 10.05.2022 was obtained from the Malatya Turgut Özal University Ethics Committee to allow the study to be conducted.

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