JAREN 2023;9(2):108-117
doi:10.55646/jaren.2023.57614

Illness Perceptions and the Use of Complementary and Alternative Medicines in Patients with Chronic Illnesses

Kronik Hastalığı Olan Bireylerin Hastalık Algısı ve Tamamlayıcı Terapileri Kullanma Durumlarının İncelenmesi

Özlem Akman, Dilek Yıldırım, Duygu Dokumacı

ABSTRACT

***Aim**: Existing studies show that CAM is widely used by patients with chronic illnesses. However, the majority of patients who use CAM do not receive information about the CAM from health professionals, do not inform them about the CAM they use, or do not even share the side effects of CAM with them. This study aims to evaluate the illness perceptions and the use of complementary alternative medicines (CAM) in patients with chronic illnesses.*

***Methods**: This study, which had a descriptive, correlational, and cross-sectional design, was conducted on 200 patients, who were followed up in a family health center. A sociodemographic information form, a CAM usage form, and the revised illness perception questionnaire (IPQ-R) were used for data collection.*

***Results**: Mean scores obtained from the views about illness subscale of the IPQ-R were low. The dimensions of the causes of illness subscale of the IPQ-R with the highest and the lowest scores were the risk factors and accident/chance. There was no significant relationship between illness perceptions and age, education level, and other characteristics of the participants. Of the participants, 31% used CAM and 84.7% expressed their intentions to use CAM if informed by a health professional.*

***Conclusion**: The illness perceptions of the participants and the knowledge about chronic illnesses were not adequate. Compared to other counties, CAM usage in this study was at moderate levels and the majority of the participants had intentions to use CAM if informed by a health professional.*

***Keywords:** Chronic diseases, illness perceptions, complementary and alternative medicines*

ÖZ

***Amaç**: Kronik hastalığı olan bireylerin hastalık algısı ve hastaların TAT yöntemlerini kullanma durumlarını belirlemektir.*

***Yöntem**: Çalışma, tanımlayıcı, ilişki arayıcı ve kesitsel araştırma tipinde olup, sosyal medya aracılığıyla online platformda, bir aile hekimliği merkezine kayıtlı, 200 kişi ile gerçekleştirildi. Verilerin toplanmasında, Sosyo-demografik Bilgi Formu, Tamamlayıcı Alternatif Tedavi Yöntemlerini Belirleme Formu (TAT), Hastalık Algısı Ölçeği (HAÖ) kullanıldı.*

***Bulgular**: Bu çalışmada hastalık algısı ölçeğinin, hastalık hakkındaki görüşler boyutundaki puan ortalamaları düşük, hastalık nedenleri alt boyutlarında ise, en yüksek puanın risk faktörleri, en düşük puanın ise kaza ve şanş ortalamalarında olduğu tespit edildi. Hastaların yaş, eğitim durumu ve diğer özellikleri ile hastalık algısı arasında ilişki bulunmadı. Katılmcıların % 69.0'u TAT kullanmazken, %31'TAT kullandığını ifade etti. %84,7 gibi büyük çoğunluk sağlık çalışanları tarafından bilgilendirilirse TAT kullanabileceğini belirtti.*

***Sonuç**: Katılımcıların hastalık algıları ve kronik hastalıklarla ilgili bilgileri yeterli değildi. Katılımcıların TAT kullanımı orta düzeydeydi ve katılımcıların çoğunluğu bir sağlık profesyoneli tarafından bilgilendirilirse TAT kullanma niyetindeydi.*

***Anahtar kelimeler:** Kronik hastalıklar, hastalık algısı, tamamlayıcı ve alternatif tedaviler*

Received/Geliş: 11.12.2022
Accepted/Kabul: 04.08.2023
Published Online: 31.08.2023

Cite as: Akman Ö, Yıldırım D, Dokumacı D. Illness perceptions and the use of complementary and alternative medicines in patients with chronic illnesses. Jaren. 2023;9(2):108-117.

D. Yıldırım
İstanbul Aydın University, University Faculty of Health Sciences, Department of Nursing, İstanbul, Türkiye
✉ dilekyildirim@aydin.edu.tr
ORCID: 0000-0002-6228-0007

Ö. Akman 0000-0003-1460-3251
İstanbul Topkapı University, University Faculty of Health Sciences, Department of Nursing, İstanbul, Türkiye

D. Dokumacı 0000-0002-8526-021X
İstanbul Sabahattin Zaim University, Faculty of Health Sciences, Department of Nursing, İstanbul, Türkiye

INTRODUCTION

Chronic illnesses are illnesses, which lead to slow, progressive and irreversible changes in normal physiological functions, and require continuous healthcare and treatment in an important part of life [1,2]. Known as non-communicable diseases, chronic illnesses cause not only high rates of morbidity and mortality but also economic losses. In 2018, World Health Organization (WHO) (2018) estimated that 75% of the deaths around the world in 2020 would be related with chronic illnesses [1]. Similarly, Turkish Ministry of Health (2017) reported that chronic illnesses were responsible for the 71% of total deaths in Turkey [3]. In addition to economic losses and the increasing burden on healthcare system, chronic illnesses create adaptation problems for the patients. Perceptions and evaluations of the patients about the illnesses are highly important since their emotional and behavioral reactions, the way they cope with the illness, and the development of psychosocial difficulties and psychiatric disorders have negative impacts on treatment adherence and the quality of life. It is certain that material and spiritual values of the patients, and illness perceptions, including their beliefs about the illness and its processes, and the way to cope with the illness, differ among the patients [4,5]. Complex treatment processes, difficulties in pain management, symptoms and repeated hospitalization leads patients with chronic illness to search for complementary and alternative medicines (CAM) [6]. Existing studies show that CAM is widely used by patients with chronic illnesses, such as cancer, diabetes, stroke, cardiovascular diseases and chronic obstructive pulmonary disease (COPD) [6-11]. However, the majority of the patients, who use CAM, do not receive information about the CAM from the health professionals, inform the health personnel about the CAM they use, or even share the side effects of CAM with the health professionals [6-12]. Besides, the analysis of the literature shows a limited number of studies on illness perception and the use of CAM by patients with chronic illnesses. Due to this reason, this study aims to determine the illness perceptions and the CAM use among patients with chronic illnesses. The study intended to answer the following questions:

- How is the illness perception of patients with chronic illnesses?
- Which CAM do patients with chronic illnesses use?
- What are the factors influencing the use of CAM among patients with chronic illnesses?

MATERIALS AND METHODS

Purpose of the study

This study aimed to determine the illness perception and the use of CAM among patients with chronic illnesses.

Study population and sampling

The study had a descriptive, correlational and cross-sectional design and was conducted online via social media between October and December 2020. Patients with chronic illnesses, who were followed up at a family health center in Istanbul, Turkey, constituted the population of the study. Sample size was calculated using Cochran's formula for unknown population size. Accordingly, the minimum sample was calculated at 157 people for P = .50 and q = 0.50, with 5% error (d = 0.05) in the confidence interval range of 95% (α = .05). Patients over the age of 18 years, who were diagnosed with at least one of chronic illnesses six months before the start of the study, received treatment during the study period, could communicate in Turkish and agreed to participate in the study, were included to the study. Patients, who could not communicate in Turkish, had a cognitive disorder or refused to participate, were excluded. The study was completed with the participation of 200 patients with chronic illnesses.

Before data collection, participants were reached via phone and informed about the aim and the scope of the research. A Google survey was sent to participants via email and the participants were asked to complete the survey. All procedures took about 20 minutes.

Data collection and measures

Sociodemographic information form, CAM usage form and the revised illness perception questionnaire (IPQ-R) were used for data collection.

Sociodemographic information form

Prepared by the researchers, sociodemographic information form included 18 questions on age, gender, marital status, education and income levels, number of children, social security, physical exercise, smoking and alcohol consumption, chronic illnesses, self-evaluation of health condition, source of information about chronic illnesses and the use of CAM.

CAM Usage Form

Prepared by the researchers, the form included questions on the CAM methods, which were currently or formerly used or intended to be used, including, meditation/yoga, tai chi, acupuncture, chiropractic, homeopathy, bloodletting, massage, medicinal leech therapy, herbal medicine, reiki, hypnosis, reflexology, neural therapy, energy healing, and lifestyle diets.

Revised Illness Perception Questionnaire (IPQ-R)

IPQ was developed by Weinmann et al. (1996) to measure the components of illness representations and the revised IPQ (IPQ-R) was presented by Moss-Morris et al.[5,13] IPQ-R was adapted to Turkish population and the reliability and validity of the scale was tested by Kocaman et al.[14] IPQ-R was composed of three subscales, namely illness identity, views about illness and the causes of illness. Scores of the subscales were evaluated separately.

Illness Identity Subscale

Identity subscale included questions about 14 common symptoms of chronic illnesses, including pain, sore throat, nausea, breathlessness, weight loss, fatigue, stiff joints, sore eyes, wheeziness, headache, upset stomach, sleep difficulties, dizziness and loss of strength. Participants were first asked to rate whether they experienced each symptom since their illness using a yes/no response format. Next, they were asked whether they belied the symptom was related to their illness using the same format. The sum of the yes-rated items on the second rating formed the illness identity subscale.

Views about Illness Subscale

This subscale was composed of 38 items, which were rated on a 5-point Likert type scale (strongly disagree, disagree, neither agree nor disagree agree, strongly agree). The subscale had seven dimensions, namely, timeline (acute/chronic), timeline (cyclical), consequences, personal control, treatment control, illness coherence and emotional representation. Timeline dimensions were related with the perceived duration of the illness and grouped as acute/chronic or cyclical. Consequence dimension was related with the patient beliefs about the severity of the illness and the effects of illness on physical, social and psychological functioning. Personal control dimension was related with the beliefs about controlling the duration, course and treatment of illness. Treatment control dimension was related with the beliefs about treatment efficiency. Illness coherence dimension was about the extent to which the patient was aware of or comprehend the illness. Finally, emotional representation dimension was related with the feelings of the patients about the illness. Higher scores obtained from the identity, consequences, timeline (cyclical) and timeline (acute/chronic) dimensions indicated strong beliefs against chronicity and negative effects of the illness and the number of symptoms related with the periodic nature of illness. Higher scores obtained from the personal control, treatment control and illness coherence represented the belief that the illness could be controlled.

Causes of Illness Subscale

Causes of illness subscale was composed of 18 items and used the same 5-point Likert type scale. This subscale was related with the beliefs of the patients about the possible causes of illness and was composed of four dimensions, namely psychological attributions (stress, mental attitude, family problems, emotional state, personality and anxiety), risk factors (hereditary, diet, poor medical care, own behaviors, ageing, smoking and alcohol), immunity (germ, pollution, altered immunity) and accident/chance. Participants were also asked to write down three most important causes for them.

Ethical consideration

Permission was obtained from the Human Research Ethics Committee of İstanbul Sabahattin Zaim University Date: 23.10.2020, Number: 2020/10 conduct the research. The procedure was applied following the Helsinki Declaration.

Data Analysis

Collected data were analyzed using NCSS (Number Cruncher Statistical System) 2007 software (Kaysville, Utah, USA). Mean, standard deviation, median, frequency, percentage and minimum-maximum were used as descriptive statistical methods. Shapiro-Wilk test was used to test quantitative variables for normality of distribution. Mann-Whitney U test was used to compare two groups without normal distribution while Kruskal-Wallis test was used to compare the quantitative variables of three or more groups. Spearman's correlation analysis was used to determine the correlation between quantitative variables. Statistical significance was set at $p<0.05$.

RESULTS

Table 1 presented the findings on the descriptive characteristics of the participants. Mean age was

60.69±19.25 years, 62.9% were male, 80.7% were married, 76,2% had income equal to expenses, and 22.8% were graduates of high school. Main chronic illnesses of the participants were diabetes (22.3%), hypertension (19.8%), asthma (14.4%), cardiac diseases (12.4%), and COPD (8.9%), respectively. 85.1% of the participants had social security. 85.6% did not perform physical exercise regularly, 91.1% did not use alcohol and 84.2% did not smoke. 78.7% of the participants asked a physician for recommendations about health problems, 69.0% did not use CAM and 84.7% expressed that they would use CAM if recommended by health professionals.

Table 2 presented the mean scores obtained from the dimensions of the subscales of the IPQ-R. Mean score obtained from the illness identity subscale was 7.281±3.71. Mean scores obtained from the emotional representation, personal control, consequences, illness coherence, treatment control, timeline (acute/chronic), timeline (cyclical) dimensions of the views about illness subscale were 15.11±7.35, 14.88±6.95, 12.89±6.25, 11.60±5.31, 11.24±5.19, 10.63±5.06, and 9.28±4.33, respectively. Mean scores obtained from the risk factors, psychological attributions, immunity and accident/chance dimensions of the causes of illness subscale were 25.02±4.52, 24.98±4.57, 7.71± 3.65, and 5.76±2.66, respectively (Table 2).

Table 3 presented the opinions about the CAM methods and the methods used by the participants. The table showed that nearly all of the participants had no intentions to use one of the CAM methods, including, mediation/yoga (82.1%), tai chi (84%), acupuncture (88.2%), chiropractic (89.1%), homeopathy (87%), bloodletting (71.7%), massage (79.9%), medicinal leech (88.5%), reiki (89.4%), herbal medicine therapy (78.8%), hypnosis (88%), reflexology (90.1%), neural therapy (90.1%), energy healing (86.5%) and lifestyle diets (78.1%).

Table 4 presented the correlation analysis. A statistically significant positive correlation was found between emotional representations and the years of smoking. A statistically significant positive correlation was found between the Perception of Disease Timeline, Treatment Control, Consequences, Psychological Attribution, Risk Factors, Immunity and Accident/Chance subscales and the years of alcohol consumption ($p<0.05$).

Table 1. Descriptive characteristics of the participants (n=200)

Characteristics	n	%
Age (60.69±19.25)		
Gender		
Female	73	62.9
Male	127	36.1
Marital status		
Married	161	80.7
Single	39	19.3
Income level		
Less than expenses	27	13.4
Equal to expenses	152	76.2
More than expenses	21	10.4
Education level		
Illiterate	44	21.8
Literate	37	18.8
Primary school	17	8.4
Secondary school	24	11.9
High school	45	22.8
University	33	16.3
Chronic diseases		
Diabetes	47	23.3
Hypertension	40	19.8
Asthma	28	14.4
Cardiac diseases	25	12.4
COPD	17	8.9
Cancer	10	5.0
Kidney diseases	4	2.0
Liver diseases	2	1.0
Rheumatic and joint diseases	10	5.0
Immune system diseases	4	2.0
Thyroid dysfunctions	11	5.4
Behçet disease	2	1.0
Has social security		
Yes	170	85.1
No	30	14.9
Regular physical exercise		
Once a week	16	7.9
2-3 times a week	11	5.4
No	173	85.6
Alcohol consumption		
Yes	11	5.4
No	182	91.1
Gave up	7	3.5
Smoking		
Yes	22	10.9
No	168	84.2
Gave up	10	5.0
Source of information about diseases and health		
Physician	157	78.7
TV	12	5.9
Internet	29	14.4
Patient education materials	2	1.0
Uses CAM		
No	138	69.0
Yes	62	31.0
May use CAM if health professionals recommend		
Yes	170	84.7
No	30	15.3

Table 2. Scores obtained from the subscales of the IPQ-R scores (n=200)

Subscales	Dimensions	Mean±SD	Min-Max
Illness Identity	Number of symptoms	7.281±3.71	1-14
	Timeline acute/chronic	10.63±5.06	5-20
	Consequences	12.89±6.25	6-26
	Personal control	14.88±6.95	7-30
Views About Illness	Treatment control	11.24±5.19	5-25
	Illness coherence	11.60±5.31	5-24
	Timeline cyclical	9.28±4.33	4-19
	Emotional representation	15.11±7.35	6-30
	Psychological attributions	24.98±4.57	4-28
	Risk factors	25.02±4.52	7-30
Causes of Illness	Immunity	7.71± 3.65	3-15
	Accident/chance	5.76±2.66	2-9

Table 3. Opinions on and the usage of CAM methods (n=200)

Characteristics	n	%
Meditation/Yoga		
Currently use	2	1.2
Formerly used	1	0.6
May use at a convenient time	33	16.2
Do not think of using	164	82.1
Tai chi		
Currently use	-	-
Formerly used	1	0.6
May use at a convenient time	31	15.3
Do not think of using	168	84.0
Acupuncture		
Currently use	-	-
Formerly used	-	-
May use at a convenient time	24	11.8
Do not think of using	176	88.2
Chiropractic		
Currently use	-	-
Formerly used	1	0.6
May use at a convenient time	21	10.3
Do not think of using	178	89.1
Homeopathy		
Currently use	1	0.6
Formerly used	1	0.6
May use at a convenient time	24	11.8
Do not think of using	174	87.0
Bloodletting		
Currently use	17	8.6
Formerly used	7	3.7
May use at a convenient time	32	16.0
Do not think of using	143	71.7
Massage		
Currently use	10	4.9
Formerly used	1	0.6
May use at a convenient time	29	14.6
Do not think of using	160	79.9
Medicinal Leech		
Currently use	-	-
Formerly used	1	0.6

Table 3. Continued

Characteristics	n	%
Medicinal Leech		
May use at a convenient time	22	10.9
Do not think of using	177	88.5
Reiki		
Currently use	-	-
Formerly used	-	-
May use at a convenient time	21	10.6
Do not think of using	179	89.4
Herbal medicine		
Currently use	19	9.7
Formerly used	-	-
May use at a convenient time	23	11.5
Do not think of using	158	78.8
Hypnosis		
Currently use	-	-
Formerly used	1	0.7
May use at a convenient time	23	11.3
Do not think of using	176	88.0
Reflexology		
Currently use	-	-
Formerly used	1	0.7
May use at a convenient time	19	9.3
Do not think of using	180	90.1
Neural therapy		
Currently use	-	-
Formerly used	1	0.7
May use at a convenient time	19	9.3
Do not think of using	180	90.1
Energy healing		
Currently use	1	0.6
Formerly used	1	0.6
May use at a convenient time	25	12.3
Do not think of using	173	86.5
Lifestyle diet		
Currently use	12	5.9
Formerly used	2	1.2
May use at a convenient time	30	14.8
Do not think of using	156	78.1

Table 4. Correlation Analysis (n=200)

		1	2	3	4	5	6	7	8	9	10	11	12	13
1. Years of Smoking	r	1												
	p	.												
2. Daily smoking rate	r	-0.175	1.000											
	p	.517	.											
3. Years of Alcohol consumption	r	-0.316	-0.448	1										
	p	.684	.373	.										
4. Timeline (acute/ chronic)	r	.285	0	.797*	1									
	p	.237	0.319	.010	.									
5. Timeline (cyclical)	r	0.208	-0.405	0	.764**	1								
	p	.393	.086	0.293	.000	.								
6. Personal control	r	0.3	-0.186	0.33	.827**	.746**	1							
	p	.212	.445	.385	.000	.000	.							
7. Treatment control	r	.317	-0.312	.737*	.837**	.824**	.804**	1						
	p	.186	.194	.023	.000	.000	.000	.						
8. Illness coherence	r	0.349	-0.322	0.259	.732**	.893**	.737**	.834**	1					
	p	.143	.179	.502	0	.000	.000	.000	.					
9. Consequences	r	0.066	-.213	.852**	.854**	.720**	.837**	.769**	.713**	1				
	p	.789	.382	.004	.000	0	.000	.000	.000	.				
10. Emotional representation	r	.494*	-0.349	-0.034	.654**	.823**	.608**	.734**	.824**	.618**	1			
	p	.032	.144	.930	.000	.000	0	.000	.000	.000	.			
11. Psychological attributions	r	0.333	-0.181	.781*	.547**	.510**	.503**	.506**	.505**	.543**	.422**	1.000		
	p	.164	.459	.013	.000	.000	.000	0	.000	.000	.000	.		
12. Risk factors	r	0.371	-0.327	.725*	.369**	.424**	.346**	.400**	.387**	.409**	.379**	.774**	1	
	p	0.118	0.172	0.027	.000	.000	.000	.000	.000	.000	.000	.000	.	
13. Immunity	r	0.214	-0.131	.853**	.485**	.478**	.440**	.456**	.446**	.522**	.405**	.865**	.820**	1
	p	.380	.592	.003	.000	.000	.000	.000	.000	0	.000	.000	.000	.
14. Accident/ chance	r	-.055	-.138	.892**	.455**	.440**	.464**	.420**	.459**	.494**	.398**	.811**	.611**	.719**
	p	.823	.573	.001	.000	.000	.000	.000	.000	.000	0	.000	.000	.000

Spearman's correlation test was used

DISCUSSION

Chronic illnesses may influence the adaptation of the patients depending on the perceptions of the patients about the illness and associated difficulties. Perceptions and evaluations of the patients about the illnesses influence emotional and behavioral reactions, the way patients cope with the illness, the development of psychosocial difficulties and psychiatric disorders, treatment adherence and the quality of life. Additionally, illness perceptions of the patients and the factors that affect their perceptions should be analyzed in order to improve treatment adherence and control the factors affecting illness perceptions [15]. Some of the studies reported the impact of age, gender, education level and socio-economic status on illness perceptions [16,17]. Contrary to these studies, we did not find any impact of these variables on IPQ-R scores. Mean score obtained from the timeline (acute/chronic) dimension of the views about illness subscale indicated that the participants did not consider their illness as chronic. This finding

is parallel to the study of Karadağ and Akkuş (2020) on the illness perception among the hypertension patients [18]. Contrary to our finding, some of the studies in the literature found that patients with chronic illnesses had better illness perception [19-21]. This situation indicates that the patients could not establish personal control over their illnesses. Yet, studies on patients with chronic illnesses reported that personal control was higher when the patients believed and were informed that their illnesses had a chronic course [22]. In fact, mean scores obtained from the personal control, treatment control, illness coherence and timeline (cyclical) dimensions of the views about illness subscale of the IPQ-R were relatively low. These low scores indicated that the situation was chronic and had a cyclical nature, illness outcomes were negative and the participants could not clearly understand the frequency of the cycles of the illnesses. Besides, low score obtained from the illness coherence dimension indicated that the patients did not have sufficient knowledge on the illness. This situation may have led to lower levels of adherence to therapy and the belief that the illness may not be controlled. Furthermore, illness perceptions may have negative effects on the quality of life. Despite these, participants obtained relatively high score from the emotional representation dimension of the views about illness subscale, indicating negative feelings about the illness. Scores obtained by the participants of our study from the timeline (cyclical) and illness coherence dimensions were parallel to the findings of other studies [18,21,23]. Besides the scores obtained from the personal control and treatment control dimensions in the study of Oğuz et al. were parallel to our findings [24]. However, other studies reported less positive illness perception [20,25], stronger illness identity [26] belief in longer timeline [25], a better understanding of the illness [25,27] and more intense emotional representation [26,27]. The differences between the findings of our study and other studies may be explained with reference to the structure of the healthcare system, attitudes of healthcare professionals, cultural differences, education levels of the participants and the differences in belief systems.

Regarding the perceptions about the causes of illness, dimension with the highest and the lowest scores in our study were risk factors and accident/chance. Risk factors included hereditary factors, diet, poor medical care in the past, ageing smoking and alcohol. Parallel to our findings, the study of Karabulut and Gün (2019) found that risk factor was the dimension of the causes of illness subscale with the highest mean score [21]. Similarly, the study of Chen et al. (2009) on hypertension patients found that the highest scores were obtained from the psychological attributions and risk factors dimensions [16]. Contrary to our and other findings, the study of Hopman and Rijken (2015) on cancer patients found that the score obtained from the accident/chance dimension was higher [19]. This difference between our findings and the study of Hopman and Rijken (2015) may be related with the type of chronic illness and the outcomes of illness, which is in accordance with our finding that illness outcomes were not perceived negative. Besides, higher scores obtained from the risk factor dimension in our study may indicate that the participants were aware of their risky health behaviors performed in the past and the negative effects of these behaviors on their health. Patients, who are aware of the chronicity of their illnesses may find it easier to control their illness and adhere to therapy [19].

Today, patients with chronic illnesses use complementary or alternative therapy methods. In our study, a great majority of the participants had no intentions to use. CAM in the near future. However, 31% of the participants used CAM. The study of İnce et al. on patients with chronic viral hepatitis found that 27% of the participants used CAM [28]. The study of Castelino et al. on patients with chronic kidney disease in South India found that 66.3% of the participants used CAM [10] whereas the study of Bordbar et al. on thalassemia patients in southern Iran reported that 68.5% of the participants used CAM at least once [8]. The prevalence of CAM usage in Norway [29] and Iraq [30] were 33% and 65.5%, respectively. These differences in the prevalence of the use of CAM among patients with chronic illnesses may be related with the sociocultural structure, economic factors and the opportunities to access CAM. The use of CAM has been reported to increase patient awareness on the relationship between mind, body and lifestyle and to encourage patients to undertake personal responsibility about their health and develop more effective strategies to cope with the disease [31,32]. Hsu et al. reported that CAM usage resulted with positive outcomes, such as, increased options and hope, increased ability to relax, positive changes in emotional states and increased body awareness [33]. Similarly, the study of Sparber et al. on the use of CAM among the cancer patients found that CAM usage improved the quality of life through

more effective coping with stress, decreasing the discomforts of treatment and illness and fiving them a sense of control [34]. Due to this reason, patients with chronic illnesses might be informed about the benefits of the CAM. In our study, 84.7% of the participants expressed that they could use CAM if they were informed by the health professionals. Other studies found that information about CAM was not provided by health professionals [30]. Yet, if the patients were informed about the advantages and disadvantages of CAM, the complications caused by CAM usage could be prevented. Due to this reason, we believe that the health professionals might be educated on the use of CAM among patients with chronic illnesses.

This study has two limitations. Firstly, the number of participant patients with chronic illness was low and they did not represent different regions of Turkey. Secondly, the CAM used by the participants was restricted to a particular phase of their life.

CONCLUSIONS

This study found that the perceptions of the participants with chronic illnesses were not adequate and they were not sufficiently informed about their illness. There was no significant relationship between illness perception and age, education level and other characteristics of the participants. Finally, compared to other countries, the prevalence of the use of CAM among the patients was at moderate levels and the participants could use CAM if informed by the health professionals.

High illness perception among patients with chronic illness is an important factor. Health professionals, especially nurses, should inform the patients about the chronic illnesses in order to maintain an effective self-care management. Besides, health professionals should inform these patients about the CAM, which is widely used in today's world. Patient demands to be informed about CAM indicated the importance of the education of the health professionals on CAM. Based on the findings of this study, we may suggest that seminars and other education activities to improve the illness perceptions among patients with chronic illness might be conducted. Further qualitative studies might be conducted to analyze illness perceptions, the use of CAM and the affecting factors among patients with chronic illnesses. Nurses might evaluate the outcomes of healthcare interventions with an awareness on illness perception and CAM usage.

Acknowledgement
We thank the participants for sharing their time for their support with data collection.

Author contribution
Study conception and design: ÖA; data collection: DY, ÖA, and DD; analysis and interpretation of results: ÖA; draft manuscript preparation: ÖA. All authors reviewed the results and approved the final version of the manuscript.

Ethical approval
The study was approved by the İstanbul Sabahattin Zaim University Ethics Committee (Protocol no. 2020/10/23.10.2020).

Funding
The authors declare that the study received no funding.

Conflict of interest
The authors declare that there is no conflict of interest.

Yazar katkısı
Araştırma fikri ve tasarımı: ÖA; veri toplama: DY, ÖA ve DD; sonuçların analizi ve yorumlanması: ÖA; araştırma metnini hazırlama: ÖA. Tüm yazarlar araştırma sonuçlarını gözden geçirdi ve araştırmanın son halini onayladı.

Etik kurul onayı
Bu araştırma için İstanbul Sabahattin Zaim Üniversitesi Etik Kurulundan onay alınmıştır (Karar no: 2020/10/23.10.2020).

Finansal destek
Yazarlar araştırma için finansal bir destek almadıklarını beyan etmiştir.

Çıkar çatışması
Yazarlar herhangi bir çıkar çatışması olmadığını beyan etmiştir.

REFERENCES

1. World Health Organization. Noncommunicable diseases country profiles 2018. Available at: https://apps.who.int/iris/handle/10665/274512 (Accessed on Dec 22, 2021).

2. Bektaş Akpınar N, Aşkın Ceran M. Chronic diseases and rehabilitation nursing. Journal of Adnan Menderes University Health Sciences Faculty. 2019; 3(2): 140-52.
3. World Health Organization Regional Office for Europe. Multisectoral Action Plan of Turkey for Noncommunicable Diseases 2017-2025. Republic of Turkey, Ministry of Health Publication Number: 1057. Ankara; 2017. Available at: https://cdn.who.int/media/docs/librariesprovider2/country-sites/multisectoral-action-plan-of-turkey-for-noncommunicable-diseases-2017-2025-(english-and-turkish)f97f8061-5d52-4d6f-adab-f21d292c48f9.pdf?sfvrsn=377621a3_1&download=true (Accessed on Jan 22, 2021).
4. Ashley L, Marti J, Jones H, Velikova G, Wright P. Illness perceptions within 6 months of cancer diagnosis are an independent prospective predictor of health-related quality of life 15 months post-diagnosis. Psychooncology 2015; 24(11): 1463-70. **[Crossref]**
5. Moss-Morris R, Weinman J, Petrie K, Horne R, Cameron L, Buick D. The revised illness perception questionnaire (IPQ-R). Psychology and Health. 2002; 17(1): 1-16. **[Crossref]**
6. Ayele AA, Tegegn HG, Haile KT, Belachew SA, Mersha AG, Erku DA. Complementary and alternative medicine use among elderly patients living with chronic diseases in a teaching hospital in Ethiopia. Complement Ther Med. 2017; 35: 115-9. **[Crossref]**
7. Akgün Şahin Z, Şahin M. The view of patients with Choronic Obstructive Pulmonary Disease (COPD) on Complementary and Alternative Medicine (CAM) in Eastern Turkey. African Journal of Traditional, Complementary and Alternative Medicine. 2013: 10(3): 116-21. **[Crossref]**
8. Bordbar M, Pasalar M, Safaei S, et al. Complementary and alternative medicine use in thalassemia patients in Shiraz, southern Iran: A cross-sectional study. J Tradit Complement Med. 2017; 8(1): 141-6. **[Crossref]**
9. Qureshi M, Zelinski E, Carlson LE. Cancer and complementary therapies: current trends in survivors' interest and use. Integr Cancer Ther. 2018; 17(3): 844-53. **[Crossref]**
10. Castelino LR, Nayak-Rao S, Shenoy MP. Prevalence of use of complementary and alternative medicine in chronic kidney disease: A cross-sectional single-center study from South India. Saudi J Kidney Dis Transpl. 2019; 30(1): 185-93. **[Crossref]**
11. Ee C, Cave AE, Naidoo D, Boyages J. Prevalence of and attitudes towards complementary therapy use for weight after breast cancer in Australia: a national survey. BMC Complement Altern Med. 2019; 19(1): 332. **[Crossref]**
12. Yılmaz CK, Aşiret GD, Çetinkaya F, Kapucu S. The use of complementary and alternative medicine of chronic obstructive pulmonary. Dokuz Eylul University Faculty of Nursing Electronic Journal. 2017; 10(4): 216-21.
13. Weinman J, Petrie KJ, Moss-Morris R, Horne R. The Illness Perception Questionnaire: A new method for assessing the cognitive representtation of illness. Psychol Health. 1996; 11: 431-45. **[Crossref]**
14. Kocaman N, Özkan M, Armay Z, Özkan S. Validity and reliability study of the Turkish adaptation of the Disease Perception Scale. Anatolian Journal of Psychiatry. 2007; 8: 271-80.
15. Özkan Tuncay F, Fertelli T, Mollaoğlu M. Effects of loneliness on illness perception in persons with a chronic disease. J Clin Nurs. 2018; 27(7-8): e1494-500. **[Crossref]**
16. Chen SL, Tsai JC, Lee WL. The impact of illness perception on adherence to therapeutic regimens of patients with hypertension in Taiwan. J Clin Nurs. 2009; 18(15): 2234-44. **[Crossref]**
17. Yorulmaz H, Tatar A, Saltukoğlu G, Soylu G. Investigation of factors affecting disease perception in patients with diabetes. FSM Scientific Studies Journal of Humanities and Social Sciences. 2013; 1(2): 367-87.
18. Karadağ Z, Akkuş Y. Determination of disease perception in patients with hypertension. Turk J Cardiovasc Nurs. 2020; 11(26): 111-8.
19. Hopman P, Rijken M. Illness perceptions of cancer patients: relationships with illness characteristics and coping. Psycho-Oncology. 2015; 24(1): 11-8. **[Crossref]**
20. Tiemensma J, Gaab E, Voorhaar M, Asijee G, Kaptein AA. Illness perceptions and coping determine quality of life in COPD patients. Int J Chron Obstruct Pulmon Dis. 2016; 11: 2001-7. **[Crossref]**
21. Karabulut İ, Gün M. The effect of disease perception on medication compliance in patients undergoing percutaneous coronary intervention. Turk J Cardiovasc Nurs. 2019; 10(21): 8-16. **[Crossref]**
22. Borge CR, Moum T, Puline Lein M, Austegard EL, Wahl AK. Illness perception in people with chronic obstructive pulmonary disease. Scand J Psychol. 2014; 55(5): 456-63. **[Crossref]**
23. Gündüz F, Karabulutlu EY. Evaluation of illness perception, psychosocial adjustment and glycemic control in patients with type 2 diabetes mellitus. Anadolu Nursing Journal and Health Sciences Journal. 2016; 19: 106-15.
24. Oğuz S, Yetim M, Yalçın Ö, Ünalan YE, Çamcı G. The Effect of disease perception on treatment and diet compliance in individuals with hypertension. Cumhuriyet Nursing Journal. 2016; 5(2): 75-83.
25. Vaske I, Kenn K, Keil DC, Rief W, Stenzel NM. Illness perceptions and coping with disease in chronic obstructive pulmonary disease: Effects on health-related quality of life. J Health Psychol. 2017; 22(12): 1570-81. **[Crossref]**
26. Bonsaksen T, Haukeland-Parker S, Lerdal A, Fagermoen MS. A 1-year follow-up study exploring the associations between perception of illness and health-related quality of life in persons with chronic obstructive pulmonary disease. Int J Chron Obstruct Pulmon Dis. 2014; 9: 41-50. **[Crossref]**

27. Weldam SW, Lammers JWJ, Heijmans MJ, Schuurmans MJ. Perceived quality of life in chronic obstructive pulmonary disease patients: a cross-sectional study in primary care on the role of illness perceptions. BMC Family Practice. 2014; 15(1): 1-10. **[Crossref]**
28. Ince N, Kaya Ş, Yıldız İE, Parlak E, Bayar B. Use of complementary and alternative medicine in patients with chronic viral hepatitis in Turkey. Complement Ther Med. 2020; 48: 102229. **[Crossref]**
29. Kristoffersen AE, Stub T, Salamonsen A, Musial F, Hamberg K. Gender differences in prevalence and associations for use of CAM in a large population study. BMC Complement Altern Med. 2014; 14: 463. **[Crossref]**
30. Ibrahim IR, Hassali MA, Saleem F, Al Tukmagi HF, Dawood OT. Use of complementary and alternative medicines: a cross-sectional study among hypertensive patients in Iraq. Journal of Pharmaceutical Health Services Research. 2018; 9(1): 59-65. **[Crossref]**
31. Long AF. Complementary and alternative medicine (CAM) and the public health: an innovative healthcare practice in supporting and sustaining health and well-being. Epidemiology Open Access. 2013; 4(1): 1-6.
32. Eaves ER, Sherman KJ, Ritenbaugh C, et al. A qualitative study of changes in expectations over time among patients with chronic low back pain seeking four CAM therapies. BMC Complement Altern Med. 2015; 15: 12. **[Crossref]**
33. Hsu C, Bluespruce J, Sherman K, Cherkin D. Unanticipated benefits of CAM therapies for back pain: an exploration of patient experiences. J Altern Complement Med. 2010; 16(2): 157-63. **[Crossref]**
34. Sparber A, Bauer L, Curt G, et al. Use of complementary medicine by adult patients participating in cancer clinical trials. Oncol Nurs Forum. 2000; 27(4): 623-30.