



# Is bonesetter still a choice in the eastern region of Türkiye? A retrospective study investigating bonesetter interventions and consequences

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## Abstract

**Aim:** The aim of the current study is to evaluate the epidemiological and demographic characteristics of patients admitted to bonesetters and to determine the complications that occur in these patients.

**Materials and Methods:** Patients who applied to Elazığ Fethi Sekin City Hospital due to musculoskeletal trauma between January 2018 and January 2021 and were admitted to a bonesetter before this admission were evaluated retrospectively. The patients' age, gender, educational status, occupation, reason for applying to the bonesetter, the diagnosis told to the patient by the bonesetter, the actual diagnosis of the patient and the treatment given to the patient were evaluated, respectively. Complications were also evaluated by examining the patient's physical examination and radiographic examinations.

**Results:** The most common orthopedic disorder in patients was distal radius fracture and the most common reason for utilizing bonesetters was the recommendation of family and relatives. All of the diagnoses made by the bonesetters were defined as dislocations. There was no diagnosis of dislocation among the diagnoses made by physicians. In the student group; joint stiffness was found to be significantly lower than in the worker group. In the worker group; a significantly higher number of deformities were observed. More than half of the patients did not regret applying to a bonesetter. The rate of regret for men to apply to the bonesetters was found to be statistically significantly higher than that of women. Those who answered yes to the question of regret had significantly higher complications than those who answered no.

**Conclusion:** Especially in the eastern regions of our country, the application to bonesetters has been one of the ongoing realities of our country for years. Healthcare professionals have a major role to play in reducing the rate of referrals to bonesetters.



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## Introduction

Timely and correct intervention in musculoskeletal injuries is one of the most important factors in preventing many complications. Inappropriate or delayed medical treatment by bonesetters can cause serious problems, some of which are irreversible. One of the main reasons for the postponement and inadequate implementation of bone and tendon treatment in Turkey, especially in certain regions, is that patients are consulting with bonesetters before physicians. Today, although most patients come directly to the hospital in the case of any trauma, there are still those who go to bone specialists, especially in rural areas.

It is quite common to use traditional methods in the treatment of musculoskeletal injuries, especially in developing regions, such as Africa, Asia and South America. It has been reported that in most regions of Nigeria, 70–90% of fracture treatment is performed by non-physicians [1]. Although some health-related professional organizations in our country have tried to raise awareness to prevent complications, bonesetting practices have not yet been finished completely. Unfortunately, in some societies today, bonesetters are trusted and respected more than physicians [2]. A group of international experts from the World Health Organization (WHO) published a report on traditional treatment methods in a special issue in 1978 [3]. In some studies, no significant problems were found after intervention for simple fractures, but many devastating complications were found as a result of bone-forming interventions

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in more complex fractures and soft tissue injuries [4-10]. The aim of the current study is to evaluate the epidemiological and demographic characteristics of patients admitted to bonesetters and to determine the complications that occur in these patients.

### Materials and Methods

Patients who applied to Elazig Fethi Sekin City Hospital due to musculoskeletal trauma between January 2018 and January 2021 and were admitted to a bonesetter before this admission were evaluated retrospectively. The study was approved by the local institutional ethical re-



**Figure 1.** A 62-year-old male patient was admitted with limitation of movement 2 months after he applied to bonesetter and he refused the surgery.



**Figure 2.** A 53-year-old female patient was admitted with the advice of bonesetter. The patient refused the surgery.



**Figure 3.** A 76-year-old female patient presented to the emergency department due to pulmonary embolism 1 week after going to bonesetter. After the patient was followed for a while in the intensive care unit, her condition deteriorated and she died.



**Figure 4.** A 55-year-old female patient was admitted to the hospital 2 weeks after she went to bonesetter. The patient refused treatment for fear of surgery and for being disabled.

view board of the Firat University Medical Faculty Ethics Committee (2021/05-42). All patients who applied to the hospital due to musculoskeletal trauma and who applied to a bonesetter for the same trauma before applying to the hospital were included in the study. Patients whose

medical records could not be accessed and who did not agree to participate in the study were excluded from the study. Written informed consent was obtained from all patients participating in the study. The patients' age, gender, educational status, occupation, reason for applying to the bonesetter, the diagnosis told to the patient by the bonesetter, the actual diagnosis of the patient and the treatment given to the patient were evaluated, respectively. Complications were also evaluated by examining the patient's physical examination and radiographic examinations.

*Statistical analysis*

While evaluating the findings obtained in the study, IBM SPSS Statistics 22 (IBM SPSS, Turkey) program was used for statistical analysis. While evaluating the study data, the conformity of the parameters to the normal distribution was evaluated with the Shapiro-Wilkes test. While evaluating the study data, Kruskal Wallis test was used for the comparison of descriptive statistical methods (mean, standard deviation, frequency) as well as the parameters that did not show normal distribution in the comparison of quantitative data. Mann-Whitney U test was used for the comparison of the parameters that did not show normal distribution between two groups. Chi-square test, Fisher's Exact test, Fisher Freeman Halton test and Continuity (Yates) Correction were used to compare qualitative data. Significance was evaluated at the  $p < 0.05$  level.

**Results**

The study was conducted with a total of 106 cases, 50 (47.2%) men and 56 (52.8%) women, aged between 1 and 85 years, between January 2018 and January 2021. Table 1 shows descriptive statistics. While 41 (38.7%) of the patients participating in the study had lower extremity trauma, 65 (61.3%) had upper extremity trauma. The most common orthopedic disorder in patients was distal radius fracture (n: 18; 17%) and the most common reason for utilizing bonesetters was the recommendation of family and relatives (n: 79; 74,5%) (Table 2).

**Table 1.** Distribution of general characteristics.

		Min-Max	Mean±SS
Age		1-85	35.07±19.5
		n	%
Gender	Male	50	47.2
	Female	56	52.8
Educational Status	Pre-school	3	2.8
	Primary school	66	62.3
	High school	23	21.7
	University	14	13.2
Occupation	Pre-school	3	2.8
	Retired	1	0.9
	Housewife	45	42.5
	Worker	18	17
	Officer	5	4.7
	Student	34	32.1

**Table 2.** Distribution of reasons for admission, complications and treatments.

		n	%
Reason for admission	Fear of surgery	33	31.1
	Fear of hospitalization	10	9.4
	Relatives and family	79	74.5
	Fear of being disabled	25	23.6
	Fear of implants	15	14.2
	Fear of casting	27	25.5
Presence of complication	Absent	41	38.7
	Present	65	61.3
Complications (n=65)	Deformity	22	33.8
	Joint stiffness	37	56.9
	Malunion	16	24.6
	Arthrosis	11	16.9
	Subtalar arthrosis	2	3.1
	Nonunion	7	10.8
	Shortness of limb	7	10.8
	Edema	2	3.1
	Erythema	2	3.1
	Abscess formation	2	3.1
	Cellülit	2	3.1
	Ankylosis	1	1.5
	Joint laxity	2	3.1
	Extensor failure	2	3.1
Osteomyelitis	1	1.5	
Extremity	Lower	41	38.7
	Upper	65	61.3
Treatment	Antibiotic therapy	5	4,7
	Closed reduction internal fixation	1	0,9
	Casting	16	15.1
	Arthroscopic repair	1	0.9
	Bandage or brace	13	12.3
	Physiotherapy	13	12.3
	Open reduction internal fixation	25	23.6
	Referral to microsurgery	4	3.8
	Arthroscopic reconstruction	2	1.9
	Refusal	27	25.5
Follow-up	14	13.2	

In the survey, it was said that almost all of the diagnoses made by the bonesetters were defined as dislocations. Interesting finding of the current study was that there was no diagnosis of dislocation among the diagnoses made by physicians. When the occupational groups are examined; in the student group; joint stiffness was found to be significantly lower than in the worker group ( $p = 0.008$ ;  $p < 0.05$ ). In the worker group; a significantly higher number of deformities were observed ( $p = 0.021$ ;  $p < 0.05$ ) (Table 3).

In the present study, more than half of the patients did not regret applying to a bonesetter (Table 4).

In addition, the rate of regret for men to apply to the bonesetters was found to be statistically significantly higher than that of women ( $p < 0.05$ ) (Table 5).

Undoubtedly, one of the most important findings of our study is that those who answered yes to the question of

**Table 3.** Evaluation of the reasons for admission, complications, extremity and treatments.

		Occupation				p
		Retired and officer	Housewife	Worker	Student	
		n (%)	n (%)	n (%)	n (%)	
Reason for admission	Fear of surgery	4 (66.7%)	19 (42.2%)	3 (16.7%)	7 (20.6%)	0.022*
	Fear of hospitalization	0 (0%)	7 (15.6%)	3 (16.7%)	0 (0%)	-
	Relatives and family	4 (66.7%)	31 (68.9%)	14 (77.8%)	27 (79.4%)	0.677
	Fear of being disabled	4 (66.7%)	9 (20%)	4 (22.2%)	8 (23.5%)	0.123
	Fear of implants	0 (0%)	11 (24.4%)	4 (22.2%)	0 (0%)	-
	Fear of casting	1 (16.7%)	11 (24.4%)	9 (50%)	6 (17.6%)	0.089
Presence of complication	Absent	1 (16.7%)	16 (35.6%)	8 (44.4%)	13 (38.2%)	0.713
	Present	5 (83.3%)	29 (64.4%)	10 (55.6%)	21 (61.8%)	
Complications	Deformity	0 (0%)	6 (20.7%)	6 (60%)	10 (47.6%)	0.021*
	Joint stiffness	4 (80%)	16 (55.2%)	9 (90%)	8 (38.1%)	0.030*
	Malunion	1 (20%)	9 (31%)	0 (0%)	6 (28.6%)	0.223
	Arthrosis	1 (20%)	9 (31%)	0 (0%)	1 (4.8%)	-
Extremity	Lower	3 (50%)	20 (44.4%)	7 (38.9%)	9 (26.5%)	0.359
	Upper	3 (50%)	25 (55.6%)	11 (61.1%)	25 (73.5%)	
Treatment	Antibiotic therapy	0 (0%)	3 (6.7%)	1 (5.6%)	1 (2.9%)	-
	Casting	0 (0%)	2 (4.4%)	4 (22.2%)	9 (26.5%)	0.019*
	Bandage or brace	0 (0%)	8 (17.8%)	3 (16.7%)	2 (5.9%)	0.363
	Physiotherapy	1 (16.7%)	3 (6.7%)	5 (27.8%)	4 (11.8%)	0.128
	Open reduction internal fixation	1 (16.7%)	8 (17.8%)	4 (22.2%)	12 (35.3%)	0.326
	Refusal	3 (50%)	18 (40%)	3 (16.7%)	3 (8.8%)	0.004*
	Follow-up	1 (16.7%)	6 (13.3%)	1 (5.6%)	4 (11.8%)	0.808

Fisher Freeman Halton Test \*p<0.05. Note: Pre-school cases were excluded from the analysis due to their low number. Retired and officers were combined and analyzed.

regret had significantly higher complications than those who answered no (p= 0.000; p<0.05) (Table 6).

**Discussion**

In many fractures, the location of the fracture is obvious, and many people think that bringing the broken parts together is sufficient for treatment. This is the belief that the bonesetters are not different from the physicians and that they are even better because of some individual strengths and abilities [11]. However, in health institutions, there is a chance of a more detailed diagnosis based on imaging methods, and reduction of the fracture can be done with better comparisons. Bonesetters do not receive formal training in the modern orthopedic approach, but they do receive informal training from family members, often as part of their ancestral heritage. It does not have bone reduction applications and fracture treatment as well as the basic scientific principles of infection prevention and control [12].

According to a study conducted in 2011 [11], patients in the 1-10 age group comprised 26.2 percent of the study, and the most common complications were joint range of motion stiffnesses and deformities. In the study by Onuminya et al. [13], children made up 80% of the patient population and supracondylar fractures were responsible for 60% of the cases seen. However, the diversity of complications according to occupational groups was not examined in either study. In the present study, we observed

a high rate of deformity in the worker group (Figure 1) and a low rate of joint stiffness in the children group. We think this may be related to the severity of the trauma the worker group has experienced and the high elasticity and rapid regeneration capacity of the children’s joint structures. All the patients in our study had health insurance, but most of them lived in a rural area that was very close to the bonesetters and far from the hospital. Similar to the study by Zehir S. in 2015 [14], in the current study, no relationship was found between the distance of the patient to the hospital or the bonesetters and gender, educational status or occupational group. We believe that patients apply to the bonesetters for reasons such as easy access, easy persuasion on the advice of family and relatives and not seeing their condition as serious enough to apply to the hospital. In another study, bonesetters was shown to be preferred for reasons such as easy access, low cost, and cultural beliefs [15].

Similar to the study by Zehir S. in 2015 [14], we observed that the most common reason for applying to the bonesetters was the recommendation of family and relatives. Family relations in the eastern regions of Turkey are tighter and more complex than in the west. It can be thought that the strong family ties and the pressure created by the social environment in the society are important factors in the continuation of false beliefs and fears.

The most common injury type among patients who presented to the bonesetters was upper extremity injuries,

**Table 4.** Distribution of parameters related to bonesetter and actual diagnosis.

		Min-Max	Mean±SS	
Distance from home to hospital (km)		5-110	59.1±35.16 (70)	
Distance from home to bonesetter (km)		1-15	3.55±2.54 (3)	
		n	%	
Diagnosis of bonesetter	Ankle dislocation	20	18.9	
	Elbow dislocation	7	6.6	
	Knee dislocation	9	8.5	
	Knee fracture	1	0.9	
	Wrist dislocation	32	30.2	
	Hip dislocation	2	1.9	
	Shoulder dislocation	12	11.3	
	Finger dislocation	15	14.2	
	Drop of coccyx	6	5.7	
	Ankle infection	1	0.9	
	Knee infection	1	0.9	
	Diagnosis of physician	Abscess and cellulitis	2	1.9
		Anterior cruciate rupture	2	1.9
Bankart lesion		2	1.9	
De quervain tendinitis		3	2.8	
Giant cell tumor		1	0.9	
Falanx fracture		2	1.9	
Falanx cyst formation		1	0.9	
Fibula fracture		4	3.8	
Distal humeral fracture		7	6.6	
Proximal humeral fracture		2	1.9	
Femoral intertrochanteric		1	0.9	
Femoral neck fracture		1	0.9	
Calcaneus fracture		2	1.9	
Mallet finger		3	2.8	
Medial malleolar fracture		2	1.9	
Meniscus tear		2	1.9	
Metacarpal fracture		5	4.7	
Metatarsal fracture		4	3.8	
Patellar fracture		2	1.9	
Distal Radius fracture		18	17	
Radius ulna shaft fracture		5	4.7	
Talus fracture		2	1.9	
Distal Tibia fracture		1	0.9	
Proximal tibia fracture		2	1.9	
Soft tissue injury		30	28.3	
Distance from home to hospital	5-10 km	27	25.5	
	15 km	7	6.6	
	>15 km	72	67.9	
Distance from home to bonesetter	1-5 km	91	85.8	
	6-15 km	15	14.2	
Regret for applying to bonesetter	Yes	49	46.2	
	No	57	53.8	

especially distal radius fractures (17%) (Figure 2). This is similar to the finding by Zehir S. et al. [14] in Çorum,

where distal radius fractures were responsible for 19.7% of cases. In contrast, in the study by Dada et al. [16], humeral injuries were responsible for 29% of the cases seen. We observed that patients do not prefer bonesetters for very serious injuries but rather for simple and closed injuries. Dada et al. stated in 2009 [16] that bonesetters do not accept open injuries; mostly, applications for closed injuries are accepted. Bonesetters lack medical training, instead practicing traditional methods passed down over generations [16]. For closed fractures that can be treated with a simple intervention, bonesetters' methods might be adequate. However, articular and open fractures may result in conditions such as osteomyelitis, gangrene, malunion, joint stiffness, chronic articular dislocations, Volkman's ischemia, sepsis and tetanus [16,17] (Figure 3 and Figure 4) In another study, bonesetters were found to cause serious complications in complex injuries, but they are preferred in simpler cases and they can produce positive results in interventions [18].

Interestingly, while 46.2% of respondents thought that going to the bonesetters was regretful, 53.8% did not. Contrary to a study by Serdar et al. in 2013 [19], in the present study, regret was observed much more, especially in patients who developed complications, and it was found to be statistically significant ( $p < 0.05$ ). In particular, this result fits perfectly with the phrase, 'One misfortune is better than a thousand pieces of advice', which our people often use in daily life. In addition, the rate of men regretting going to the bonesetters was found to be significantly higher than that of women ( $p < 0.05$ ). One of the interesting findings of our study is that housewives refuse treatment at a high rate, and they are the least regretful group when applying to the bonesetters. When we offered treatment to housewives living in rural areas, it was observed that they generally consulted with their husbands about accepting or not. The low number of housewives who could openly say yes about regret in applying to the bonesetters made us think that the housewives were under family and social pressure. Although Serdar et al. [19] stated that patients who applied to the bonesetters and developed sequelae did not regret it, we could not find publications in the literature that statistically examined this regret. However, in the current study, our data appeared in this way.

In the survey, it was said that almost all the diagnoses made by the bonesetters were defined as dislocations, as Sargın S. et al. noted in 2013 [19]. On the contrary, Köstem L. [20] identified this rate as 30%. In addition, during the survey, it was learned that some of the bonesetters wanted the patient to have an X-ray taken and come back. In the present study, there were also bonesetters who advised the patient to go to the physician when his or her condition worsened. The sentences 'You had a dislocation, I put it in place' and 'Doctors cannot diagnose dislocation' appeared in the survey as the most frequently used sentences by the bonesetters to patients. There are many reasons why people choose alternative methods. One study showed that approximately half of people who live in urban areas and nearly all people who live in rural areas knew of these alternative methods. The most frequently used alternative treatment is bonesetting [21, 22]. In an-



**Table 5.** Evaluation of diagnosis and other parameters by gender.

		Gender			
		Male	Female	p	
		Mean±SS (median)	Mean±SS (median)		
Distance from home to hospital (km)		60.7±34.74 (72.5)	57.68±35.78 (70)	<sup>1</sup> 0.583	
Distance from home to bonesetter (km)		3.56±2.48 (3)	3.54±2.62 (3)	<sup>1</sup> 0.992	
		n (%)	n (%)		
Diagnosis of bonesetter	Ankle dislocation	9 (18%)	11 (19.6%)	-	
	Elbow dislocation	2 (4%)	5 (8.9%)		
	Knee dislocation	7 (14%)	2 (3.6%)		
	Knee fracture	1 (2%)	0 (0%)		
	Wrist dislocation	11 (22%)	21 (37.5%)		
	Hip dislocation	0 (0%)	2 (3.6%)		
	Shoulder dislocation	8 (16%)	4 (7.1%)		
	Finger dislocation	11 (22%)	4 (7.1%)		
	Drop of coccyx	1 (2%)	5 (8.9%)		
	Ankle infection	0 (0%)	1 (1.8%)		
	Knee infection	0 (0%)	1 (1.8%)		
	Diagnosis of physician	Abscess and cellulitis	0 (0%)	2 (3.6%)	
		Anterior cruciate rupture	2 (4%)	0 (0%)	
Bankart lesion		1 (2%)	1 (1.8%)		
De quervain tendinitis		0 (0%)	3 (5.4%)		
Giant cell tumor		0 (0%)	1 (1.8%)		
Falanx fracture		2 (4%)	0 (0%)		
Falanx cyst formation		1 (2%)	0 (0%)		
Fibula fracture		0 (0%)	4 (7.1%)		
Distal humeral fracture		2 (4%)	5 (8.9%)		
Proximal humeral fracture		2 (4%)	0 (0%)		
Femoral intertrochanteric		0 (0%)	1 (1.8%)		
Femoral neck fracture		0 (0%)	1 (1.8%)		
Calcaneus fracture		1 (2%)	1 (1.8%)		
Mallet finger		2 (4%)	1 (1.8%)		
Medial malleolar fracture		1 (2%)	1 (1.8%)		
Meniscus tear		2 (4%)	0 (0%)		
Metacarpal fracture		5 (10%)	0 (0%)		
Metatarsal fracture		3 (6%)	1 (1.8%)		
Patellar fracture		2 (4%)	0 (0%)		
Distal Radius fracture		4 (8%)	14 (25%)		
Radius ulna shaft fracture		5 (10%)	0 (0%)		
Talus fracture		1 (2%)	1 (1.8%)		
Distal Tibia fracture		1 (2%)	0 (0%)		
Proximal tibia fracture	2 (4%)	0 (0%)			
Soft tissue injury	11 (22%)	19 (33.9%)			
Distance from home to hospital	5-10 km	13 (26%)	14 (25%)	<sup>2</sup> 0.648	
	15 km	2 (4%)	5 (8.9%)		
	>15 km	35 (70%)	37 (66.1%)		
Distance from home to bonesetter	1-5 km	42 (84%)	49 (87.5%)	<sup>3</sup> 0.813	
	6-15 km	8 (16%)	7 (12.5%)		
Regret for applying to bonesetter	Yes	32 (64%)	17 (30.4%)	<sup>3</sup> 0.001*	
	No	18 (36%)	39 (69.6%)		

<sup>1</sup>: Mann Whitney U Test, <sup>2</sup> : Fisher Freeman Halton Test, <sup>3</sup>: Continuity (Yates) Correction. \*p<0.05

other urban-focused study, people reported that the main reasons for choosing bonesetters were low cost, easy access and short recovery time [23]. In the present study,

in 25.5% of the cases, the distance from home to the hospital was between 5–10 km, while it was 15 km in 6.6% and over 15 km in 67.9%. The distance from their house

**Table 6.** Evaluation of regret and reasons for admission, complications and treatments.

		Regret for applying to bonesetter		P
		Yes	No	
		n (%)	n (%)	
Reason for admission	Fear of surgery	20 (40.8%)	13 (22.8%)	<sup>1</sup> 0.074
	Fear of hospitalization	5 (10.2%)	5 (8.8%)	<sup>2</sup> 0.530
	Relatives and family	39 (79.6%)	40 (70.2%)	<sup>1</sup> 0.376
	Fear of being disabled	14 (28.6%)	11 (19.3%)	<sup>1</sup> 0.372
	Fear of implants	8 (16.3%)	7 (12.3%)	<sup>1</sup> 0.752
	Fear of casting	9 (18.4%)	18 (31.6%)	<sup>1</sup> 0.183
Presence of complication	Absent	5 (10.2%)	36 (63.2%)	<sup>1</sup> 0.000*
	Present	44 (89.8%)	21 (36.8%)	
Complications	Deformity	16 (36.4%)	6 (28.6%)	<sup>1</sup> 0.733
	Joint stiffness	24 (54.5%)	13 (61.9%)	<sup>1</sup> 0.770
	Malunion	8 (18.2%)	8 (38.1%)	<sup>1</sup> 0.151
	Arthrosis	2 (4.5%)	9 (42.9%)	<sup>2</sup> 0.000*
Extremity	Lower	20 (40.8%)	21 (36.8%)	<sup>3</sup> 0.675
	Upper	29 (59.2%)	36 (63.2%)	
Treatment	Antibiotic therapy	4 (8.2%)	1 (1.8%)	-
	Casting	8 (16.3%)	8 (14%)	<sup>1</sup> 0.955
	Bandage or brace	1 (2%)	12 (21.1%)	-
	Physiotherapy	8 (16.3%)	5 (8.8%)	<sup>1</sup> 0.376
	Open reduction internal fixation	25 (51%)	0 (0%)	-
	Refusal	5 (10.2%)	22 (38.6%)	<sup>1</sup> 0.002*
	Follow-up	0 (0%)	14 (24.6%)	-

to the bonesetters was between 1–5 km for 85.8% of respondents, while it was between 6–15 km for 14.2%. It is obvious that people can reach the bonesetters more easily in urban areas and that bonesetters are common in these regions. A study in Tanzania found that the average trip to access the hospital is 2.3 hours. It has been shown that beliefs and cultural predispositions, along with reasons such as long distance and high cost, are also effective in the choice of treatment. It has been shown that only 36% of the population prefer hospitals for musculoskeletal injuries in populations with such preferences [24]. In our study, the reason for using bonesetters was family and relative advice. This result of Ogunlusi et al. [25] similar to his study, which showed that the vast majority made that choice on recommendation. In a previous study, it was shown that 15.2% of patients regretted their referral to bonesetters. Similarly, more than half of the patients in this study did not regret applying to bonesetters [26].

Especially in the eastern regions of our country, the application to bonesetters has been one of the ongoing realities of our country for years. The biggest reason for this is that people do not have sufficient knowledge about health services and about complications that they can be faced with. The state should also support people, especially those living in rural areas, by providing healthcare education. Healthcare professionals have a major role to play in reducing the rate of referrals to bonesetters.

The limitations of this study were its retrospective design, small sample size and the lack of patients' long-term follow-up compared to some other studies. On the other

hand, the strength of our study is that it is one of the few studies in the literature questioning the regret of the patient statistically in applying to bonesetters. It is a study that clearly expresses the viewpoints of people living in the eastern regions of Turkey towards bonesetters.

#### Ethics approval

The study was approved by the Firat University Non-Interventional Research Ethics Committee (2021/05-42).

#### Conflict of interests

The authors declare that they have no conflict of interest.

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