



## COMPARISON OF HOPELESSNESS LEVEL OF WOMEN WITH SHOULDER PAIN OMUZ AĞRISI OLAN KADINLARIN UMUTSUZLUK DÜZEYLERİNİN KARŞILAŞTIRILMASI

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### ABSTRACT

**Objective:** The purpose of this study was to evaluate and compare the hopelessness status of women with myofascial and traumatic shoulder pain.

**Materials and method:** 60 volunteer women with an average age of 40.1 years participated in the study. Socioeconomic characteristics of the individuals were examined with the help of the form prepared by the researchers. Beck Hopelessness Scale (BHS) was used to determine the hopelessness level. Data were collected with face to face interview technique by a nurse in this prospective study.

**Results:** The average score of BHS in the study was 7.4 for the myofascial group and 3.8 for the traumatic group and the difference between groups was statistically significant ( $p=0.02$ ).

**Conclusion:** There was a relationship between low education level, low income level, dissension between spouses, and the hopelessness in the myofascial group. It is important to evaluate the hopelessness level of women with myofascial shoulder pain. Because they may need social and psychological support in addition to medical treatment to overcome their complaints.

**Keywords:** Beck Hopelessness Scale, myofascial trigger point pain, shoulder pain

### ÖZ

**Amaç:** Bu çalışmanın amacı miyofasyal ve travmatik omuz ağrısı olan kadınların umutsuzluk düzeylerini değerlendirmek ve karşılaştırmaktır.

**Gereç ve yöntem:** Çalışmaya yaş ortalaması 40.1 yıl olan 60 gönüllü kadın katıldı. Bireylerin sosyoekonomik özellikleri araştırmacılar tarafından hazırlanan form yardımıyla incelendi. Umutsuzluk düzeyini belirlemek için Beck Umutsuzluk Ölçeği (BUÖ) kullanıldı. Bu prospektif çalışmada veriler bir hemşire tarafından yüz yüze görüşme tekniği ile toplandı.

**Bulgular:** Çalışmadaki ortalama BUÖ skoru miyofasyal grup için 7.4 ve travmatik grup için 3.8 idi ve gruplar arasındaki fark istatistiksel olarak anlamlıydı ( $p=0.02$ ).

**Sonuç:** Miyofasyal grupta düşük eğitim düzeyi, düşük gelir seviyesi, eşler arasında geçimsizlik ile umutsuzluk arasında bir ilişki vardı. Miyofasyal omuz ağrısı olan kadınların umutsuzluk düzeylerinin değerlendirilmesi önemlidir. Çünkü şikayetlerinin üstesinden gelmek için tıbbi tedaviye ek olarak sosyal ve psikolojik desteğe ihtiyaç duyabilirler.

**Anahtar kelimeler:** Beck Umutsuzluk Ölçeği, miyofasyal tetik nokta ağrısı, omuz ağrısı.

### INTRODUCTION

One of the major complaints of patients consulting with primary healthcare providers is shoulder pain [1,2]. The most common causes of this problem are subacromial impingement syndrome (SIS), and myofascial pain produced by myofascial trigger points (MTPs) [3-8]. MTPs are defined as exquisitely tender spots in discrete taut bands of hardened muscle that produce symptoms known as myofascial pain. They are classified into active and latent trigger points. Active MTPs cause a clinical pain complaint, are always tender, prevent full lengthening of the muscle and weaken the muscle. Latent MTPs are clinically quiescent with respect to spontaneous pain, and are painful only when palpated. A latent MTP may have all the other clinical characteristics of an active MTP and always has a taut band that increases muscle tension and restricts range of motion [9]. Palpation is still considered the only reliable clinical method of diagnosing MTPs.

The underlying pathophysiological mechanisms for MTPs are still unclear. For that reason, all therapeutic modalities including rehabilitation, injection therapy, medication, surgery or physical therapy may sometimes be conflicting or lacking [10-16].

Beck Hopelessness Scale is a 20-item self-evaluation type scale developed by Dr. Aaron T. Beck. It was designed to measure three major aspects of hopelessness: feelings about the future, loss of motivation, and expectations. The evaluation criteria are given points between 1 and 20. The sum of point's shows the level of hopelessness [17].

The aim of this study was to evaluate the hopelessness status of women with myofascial shoulder pain using Beck Hopelessness Scale and to compare them with women suffering from traumatic pain.

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## MATERIAL AND METHODS

The prospective study consisted of 60 women who volunteered to join this study and were examined by an orthopedic surgeon in a private clinic. 30 women with shoulder pain with palpable and tender myofascial trigger points were included in the myofascial group (group M) and 30 women who sustained traumatic shoulder pain included in the control group (group T). Exclusion criteria for myofascial group were systemic illness, supraspinatus tendon tear, cervical disc herniation, and acromioclavicular and glenohumeral joint arthritis. Patients with palpable and tender myofascial trigger points were excluded from the control group although they sustained traumatic pain. Data were collected with a face-to-face interview technique by a nurse (AY). The present study complies with the Declaration of Helsinki. The informed and written consent was taken from all volunteers. The necessary institutional permit was obtained for this study. Beck Hopelessness Scale was used to detect the hopelessness level. The patients were also questioned for their ages, occupation, educational level, financial income level and dissension with their spouses.

In both groups patients were sub-grouped according to educational level (group 1: elementary school, group 2 high school and higher), age (group A:  $\leq 30$ , group B: 30-40, group C:  $>40$ ), having an occupation (group X: have an occupation, group Y: no occupation), income level (group  $\alpha$ : low income, group  $\beta$ : intermediate-high income) and dissension between couples (group #: having problem, group &: no problem).

For data analyses Statistical Package for Social Sciences (SPSS) Version 22.0 (SPSS inc. Chicago. IL. USA) statistical program was used. Mann Whitney U and paired samples t tests were used for statistical analysis.  $P < 0.05$  was considered as significant.

## RESULTS

The location of trigger points was mostly in the infraspinatus muscle. The average age of patients enrolled in the study were 38.9 years in the myofascial group and 41.3 years in the control group. 7 and 9 patients were younger than 30 (23.3% and 30%), 11 and 10 were between 30 and 40 (36.7% and 33.3%) and 12 and 11 were older than 40 (40% and 36.7%) in myofascial and control groups respectively.

The educational level was elementary school in 25 and 21 patients (83.3 % and 70%) and high school and university in 5 and 9 respectively (16.7 % and 30%). While 10 of the patients (33.3%) in the myofascial group had an occupation, 15 patients (50%) in the control group had an occupation and 20 patients (66.7 %) in the myofascial group and 15 (50%) in the control group were housewives.

According to their income level 20 and 15 patients (66.7 % and 50%) had low, 10 and 15 (33.3% and 50%) had intermediate and good income level in myofascial group and control group respectively. While 22/30 (73.3 %) of the patients in the myofascial group had problems with their spouses, 8 (26.7 %) of them mentioned that they did not have such a problem. Fourteen patients (46.7%) in the control group had marital problems and 16 (53.3%) did not. There was not any statistically significant difference between the groups.

The average Hopelessness scale was detected as 7.4 and 3.8 in myofascial group and control group respectively.

Hopelessness level was compared both intergroup and between groups according to their ages, occupation, educational level, financial income level and dissension with their spouses.

The results showed that there was not any relationship between age, having an occupation, low education level, low income, dissension between couple and hopelessness level in the control group. While there was not any relationship between age, having an occupation and hopelessness status, a relationship between low education level, low income, dissension between couple and hopelessness level was found statistically significant (Table 1).

## DISCUSSION

Myofascial trigger points are local points, that are highly sensitive to pressure, the application of which causes characteristic referred sensations, including pain, muscle dysfunction, and sympathetic hyperactivity [9]. In clinical practice, the identification of MTPs is usually performed by palpation [18-21]. They most frequently locate in the infraspinatus and upper trapezius muscles. In the present study MTPs of the patient were mostly in the infraspinatus muscle in accordance with the literature [3,5,6]. In recent years, our understanding of the etiology, pathophysiology, and management of MTPs has increased [3]. However, the underlying pathophysiological mechanism for MTPs is still unclear and multimodal rehabilitation, injection therapy, medication, surgery, physical therapy or the application of other therapies in patients with MTPs may sometimes be problematic [5,9,16].

The aim of the present study was to determine the hopelessness status of patients who have MTPs with chronic, non-traumatic unilateral shoulder pain with Beck hopelessness scale. Beck hopelessness scale is scored between 0 and 20. The scale between 0-4 indicates that there is no hopelessness, between 4-8 shows mild, between 8-14 shows moderate and over 14 shows severe hopelessness [22-28]. Although the overall average hopelessness scale of 7.4 in our study shows that there is mild hopelessness of patients with shoulder pain with MTPs, the average hopelessness scale of the patients with low education level, low income and dissension with their spouses were  $7.80 \pm 2.64$ ,  $8.20 \pm 2.56$  and  $8.18 \pm 2.44$  respectively. This shows that women with low income and who have problems with their spouses have moderate hopelessness and those with low education have almost moderate hopelessness. Among these parameters low financial income has the highest effect on hopelessness.

The strength of this study was diminished by the small size of the series. Also, there were patients suffering from ankle pain in the traumatic group. We had to add these patients due to low number of patients with shoulder trauma. But we have decided to assess the hopelessness level of women who attended to the hospital with an objective complaint with similar age, occupation, education level, economical status and marital problems as possible.

As a conclusion; dissension between parents, low economical income and low educational level elevate hopelessness levels and may have a relation in couples with myofascial pain around shoulder. Assessing the hopelessness status of women with myofascial shoulder pain could be beneficial because these patients may need social and psychological support in addition to the current treatment regimens to overcome their complaints. Also forming family support groups may decrease hopelessness levels of women having dissension with their spouses.

It was reported that hopelessness level over 7 increases the suicide risk [29]. The levels detected in this study show that there may be a higher suicide risk for the women with myofascial shoulder pain than normal population. To the best of our knowledge this is the first study which evaluates the hopelessness status of patients with myofascial shoulder pain.

**Table 1.** Comparison of groups features

Groups	p value
Group 1- Group 2	$p < 0.05$ , $p = 0.04$
Group A- Group B	$p > 0.05$ , $p = 0.23$
Group A- Group C	$p > 0.05$ , $p = 0.27$
Group B- Group C	$p > 0.05$ , $p = 0.95$
Group X-Group Y	$p > 0.05$ , $p = 0.80$
Group $\alpha$ - Group $\beta$	$p < 0.05$ , $p = 0.02$
Group #- group &	$p < 0.05$ , $p = 0.002$

*Group comparison of group M according to educational level (group 1: elementary school, group 2 high school and higher), age (group A:  $\leq 30$ , group B: 30-40, group C:  $> 40$ ), having an occupation (group X: have an occupation, group Y: no occupation), income level (group  $\alpha$ : low income, group  $\beta$ : intermediate-high income) and dissension between couples (group #: having problem, group &: no problem).*

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