

## FACTORS AFFECTING LIFE SATISFACTION AND FAMILY BELONGING OF PATIENT GROUPS WITH ORTHOPAEDIC SURGERY

### *Ortopedik Cerrahi Geçiren Hasta Gruplarının Yaşam Doyumu ve Aileye Aidiyetlerini Etkileyen Faktörler*

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#### ABSTRACT

#### ÖZ

**Objective:** To evaluate the life satisfaction and family belonging levels of the surgically treated orthopaedic patient groups for the first time in the literature, and to investigate the relationship between them.

**Material and Method:** A total of 998 people (787 patients/211 Controls) with a mean age of 41 (18-60 years) were included in this study. The data of this cross-sectional study was collected from 7 different patient groups (amputation-tumor-trauma-arthroplasty-arthroscopy) and healthy control group with using face-to-face survey technique. Personal Information form, life satisfaction scale and family belonging scales were used to collect research data.

**Results:** Life satisfaction and family belonging values of individuals <25 years of age, were statistically significant compared to other age groups ( $p<0.05$ ). Life satisfaction and family belonging mean scores of male participants, students and those with high economic status, were found to be significantly high ( $p<0.05$ ). The participants who have never been married had higher life satisfaction than those who were divorced and still married ( $p=0.007$ ). As the education level increased, the total family belonging levels of the groups also increased ( $p<0.001$ ). Among the groups, the lowest life satisfaction value was obtained from the malignant tumors group, and the highest one was simple orthopaedic surgery group. Life satisfaction values were significantly higher in those living with their families and those without chronic disease ( $p<0.05$ ). The relationship between life satisfaction and family belonging values in patients with benign tumors and simple orthopaedic surgery was higher than the other complicated patient groups.

**Conclusion:** While there was a significant positive relationship between life satisfaction and family belonging in patients with simple orthopaedic surgery, this relationship was weakened in patients with malignant tumors. In order to increase the life satisfaction and family belonging levels of these patient groups, physical, psychosocial and financial support should be provided to the patients and their families in addition to medical treatment.

**Keywords:** Life satisfaction, family belonging, oncology, orthopaedic surgery.

**Amaç:** Cerrahi tedavi uygulanan ortopedik hasta gruplarının yaşam doyumu ve aileye aidiyet düzeylerini literatürde ilk olarak değerlendirmek ve aralarındaki ilişkiyi araştırmak.

**Gereç ve Yöntem:** Bu çalışmaya yaş ortalaması 41 (18-60 yıl) olan toplam 998 kişi (787 hasta/211 kontrol) dahil edildi. Kesitsel tipteki çalışmamızın verileri 7 farklı ortopedik hasta grubu (amputasyon-tümör-travma-artroplastik-artroskopi) ve sağlıklı kontrol grubundan yüz yüze anket tekniği kullanılarak toplandı. Araştırma verilerinin toplanmasında kişisel bilgi formu, yaşam doyumu ölçeği ve aileye aidiyet ölçeği kullanıldı.

**Bulgular:** Yirmi beş yaş altı bireylerin yaşam doyumu ve aileye aidiyet değerleri diğer yaş gruplarına göre istatistiksel olarak anlamlıydı ( $p<0.05$ ). Erkek katılımcıların, öğrencilerin ve ekonomik durumu iyi olanların yaşam doyumu ve aileye aidiyet puan ortalamaları, anlamlı olarak yüksek bulundu ( $p<0.05$ ). Hiç evlenmemiş katılımcıların yaşam doyumu değerleri, boşanmış ve halen evli olanlara göre daha yüksekti ( $p=0,007$ ). Eğitim düzeyi yükseldikçe grupların toplam aileye aidiyet düzeylerinin arttığı görüldü ( $p<0.001$ ). Gruplar arasında yaşam doyumu değeri malign tümör grubunda en düşük, basit ortopedik cerrahi grubunda ise en yüksek gözlemlendi. Ailesiyle birlikte yaşayanlarda ve kronik hastalığı olmayanlarda yaşam doyumu değerleri anlamlı olarak yüksekti ( $p<0.05$ ). Benign tümörlü ve basit ortopedik cerrahi geçiren hastaların yaşam doyumu ve aileye aidiyet değerleri arasındaki ilişki diğer hasta gruplarına göre daha yüksekti.

**Sonuç:** Basit ortopedik cerrahi uygulanan hasta gruplarının yaşam doyumu ve aileye aidiyet değerleri arasında mevcut olan anlamlı pozitif ilişki, malign tümörlü grup gibi daha komplike hastalarda zayıflamıştır. Bu hasta gruplarının yaşam doyumu ve aileye aidiyet düzeylerinin yükseltilmesi için tıbbi tedaviye ek olarak, hastalara ve ailelerine fiziksel, psikososyal ve finansal destek sağlanmalıdır.

**Anahtar kelimeler:** Yaşam doyumu, aile aidiyeti, onkoloji, ortopedik cerrahi.



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## INTRODUCTION

Orthopaedic diseases requiring surgery are important health problems in which mental and physical problems can be seen during treatment (1). After orthopaedic surgical treatments, temporary or permanent limitation may be observed in the daily life routines, physical, psychosocial and financial status of the patients. We encounter these problems more frequently after major orthopaedic and oncological surgeries. As these patients describe themselves as disabled, new problems arise in their family relationships and business life. Young people can survive this period with less injury and can reorient their lives more easily than the elderly (2). Physical and psychosocial problems negatively affect the quality of life of patients and their families. In cases where the family support for the patients decreases, treatment process is adversely affected and the ability of patients to cope with problems decrease (3).

Satisfaction means to aordability of expectations and being content with what you have. Life satisfaction (LS), which means subjective well-being, is dened as positive evaluation of one's life, obtained as a result of comparing expectations and what they have. LS, which is a dynamic process, is a factor that individuals should have in order to evaluate themselves positively and to be happy (4). LS is the cognitive part of well-being. The most important factors affecting LS are personal tendencies, family relationships, and self-esteem, while individual identity and socio-economic relationships are other factors. We expect LS to be high in people who are sportsman, married, physically and mentally healthy, have good relations with their family and friends, and live in a wide social environment (5). It has been shown that there is a positive and significant relationship between the survival of patients underwent oncological orthopaedic surgery and the psycho-oncological approach (3).

The feeling of need for belonging and love is a need that is generally accepted today in the journey of human beings to nd meaning in social life. The sense of belonging helps people to recognize their environment, to create their own identities, and increase their quality of life (6). While social support has an indirect effect on overcoming depression and stress, a sense of belonging has a direct effect on them. It has been shown that individuals with high sense of belonging and better relationships among family members, are psychosocially functional and can overcome problems much more easily (7). The family, which contributes to the physical and psychosocial development of the individual, plays an important role in providing and maintaining the health and well-being of the individuals. Family Belonging (FB), a sub-type of belonging, is a meaningfulness brought about by co-existing with the other and sharing with them. Individuals with low FB have a weakened capacity to endure the diculties of life (8). It has been shown that there is a positive and significant relationship between the LS and FB values of university students (9).

Patients undergoing orthopaedic and oncologic surgery need more physical and psychosocial support from their families and environments during treatment compared to other patients. The physical, psychosocial, and economic status of the patients and their families are affected by their LS's and FB's. Determining the LS and FB values of each component of the society, is important for public health. The aim of this study is

to determine whether there is a relationship between LS and FB levels of the patient groups who underwent orthopaedic surgical treatment, and whether this relationship diers according to their socio-demographic data. In addition to the inadequacy of studies on this subject, the absence of any previous study on LS and FBs, especially in orthopaedic and oncological patient groups requiring surgery, increases the originality and value of our study.

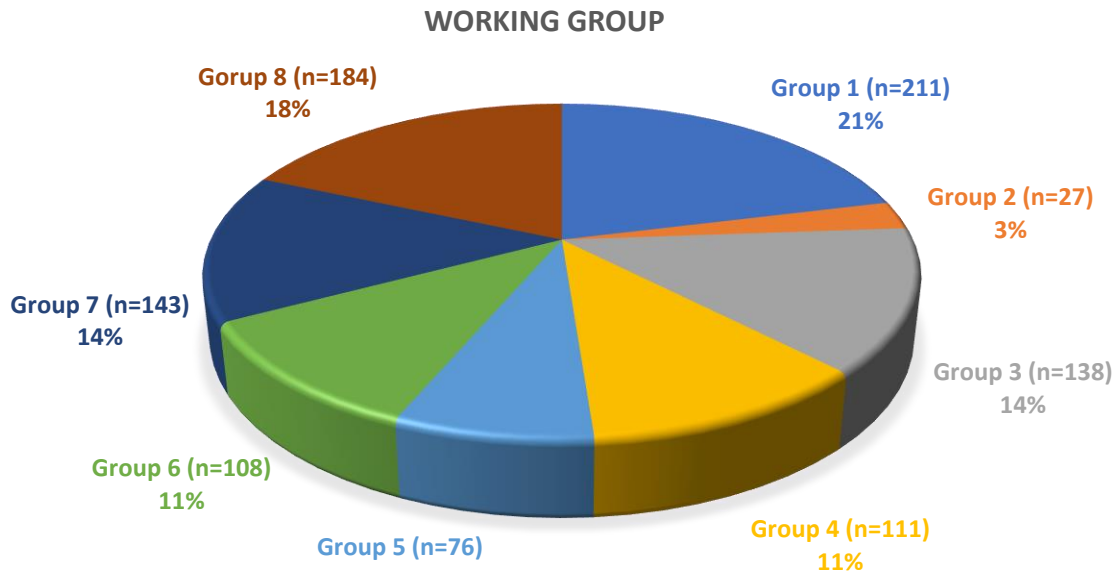
## MATERIALS AND METHODS

A total of 998 people, including 787 patients who were hospitalized for surgical treatment or previously operated and visited the outpatient clinic between July and December 2021, and 211 volunteers as control group, were included in this study. Our patients and healthy control groups were randomly selected on a voluntary basis, among individuals between the age of 18-60 years, who could be communicated and did not have any psychological disorder. There were no restrictions on the number, gender and other demographic variables of the individuals in the groups. Those with any chronic disease in the control group were not included the study. The participants were asked to ll in the questionnaires using the face-to-face interview technique. Data of 787 patients (156-malignant tumor, 187-benign tumor, 145-trauma, 184-simple surgery, 115-arthroplasty and major surgery) and 211 healthy controls from valid questionnaires were statistically analysed.

Three dierent questionnaires (Personal Information Form (PIF), LS Scale, FB Scale) were used by the author as data collection materials. The PIF with 24 questions, was used to collect the demographic data of the patient groups and control group. Socio-demographic and economic variables in PIF such as age, gender, living place, occupation, marital status, educational and economic status, family structure, number of children, number of siblings, having chronic illness, living with or apart from the family, parental survival status, continuous drug usage, satisfaction with living with or apart from the family, were analysed. The 5-point Likert-type LS Scale consisting of 5 questions was used to determine LS levels (5). In order to determine FB levels of groups, a ve-point Likert-type FB scale consisting of 17 questions was used (6). FB scale is a valid and reliable measurement tool used in psychology, social and guidance services, and family counselling. The first dimension of the LS scale, which consists of two dimensions, is called the sub-dimension of the individual's sense of belonging to his family, and the second dimension is the FB that the fami-ly makes the individual feel. The sum of both determines the total score of FB. As the score increases, the FB also increases (6).

A total of 8 groups (7 orthopaedic patients group / one control group) included in this study were as follows; G-1 control (n=211), G-2 amputation (n=27), G-3 malignant surgical tumor (n=138), G-4 benign aggressive tumor

(n=111), G-5 benign tumor (n=76), G-6 arthroplasty and major orthopaedic surgery (n=108), G-7 trauma (n=143), G-8 arthroscopy and simple orthopaedic surgery groups (n=184) (Figure 1).



**Figure 1.** Distribution of participant groups.

he relationships between LS and FB values of individuals in all groups were statistically compared among themselves and with the demographic data. This cross-section-al study was performed prospectively in accordance with ethical rules and the principles of the Declaration of Helsinki, after obtaining the approval of the ethics committee (10.11.2021/1477). The patients and volunteers in this study were informed and their consents were obtained.

In this cross-sectional study, the relational survey model from which one of the quantitative research methods, was used. The LS's, FB's and socio-demographic data obtained by evaluating the questionnaires from the groups, were compared among themselves with the IBM SPSS Statistic 23 statistical program and their correlations were examined.

Descriptive statistics, Pearson correlation test, independent groups t-test, one-way ANOVA and Kruskal Wallis analysis of variance tests were used to evaluate the data.

### RESULTS

Comparisons of LS and FB levels according to socio-demographic characteristics of 998 participants (437 male/561female) with a mean age of 41.4±13.6 (16-60) are presented in Table 1.

The sense of belonging sub-dimension score ( $p=0.004$ ) and total FB score ( $p=0.012$ ), were found to be higher in participants under 25 years of age than older participants. The LS ( $p=0.017$ ) and FB sub-dimension scores ( $p=0.016$ ) of male participants were found to be significantly higher than females. While unmarried participants had higher LS levels than

divorced or married participants ( $p=0.007$ ), no significant difference was observed in their FB levels ( $p>0.05$ ). While LS levels were found to be similar according to educational status,

sub-dimension and total FB scores showed significant differences between education groups ( $p=0.001$ ). It has been determined that this difference was due to the difference between primary school and university graduates. The group with the highest LS, sense of belonging sub-dimension and total FB levels according to their occupation, was the group of the students ( $p<0.001$ , 0.010 and 0.002, respectively). It was observed that the LS and sub-dimensions and total FB scores of those with high economic status, were significantly higher than lower ones ( $p<0.05$ ). When the groups are analysed according to their distribution, the control group (G1-21.1%) and the simple orthopaedic surgery group (G8-18.4%) were the most crowded groups (Figure 1) While the LS values of the groups showed statistically significant differences among themselves ( $p<0.001$ ),

This difference was not observed in the FB values of the groups (Table 2, Figure 2-3). Post hoc analyses determined that the statistical difference between the LS values of the groups was caused by the difference between the G1-G8, G3-G5, G3-G7, G3-G8, G5-G6 and G6-G8 groups. It was observed that the lowest LS values were in patients with malignant tumors, and the highest LS values in patients who underwent simple orthopaedic surgery.

The LS values of the participants with a family history of chronic disease were found to be significantly lower than those without chronic disease ( $p=0.010$ ) (Table 2). No significant relationship was found between the duration of chronic diseases in the family and the LS and FB scores of participants ( $p=0.705$ ,  $p=0.759$ ). In addition, while the LS levels of the participants living with their families were significantly higher than those living separately ( $p=0.031$ ), no significant difference was observed between the LS and FB levels when compared according to the satisfaction levels of those living apart from their families ( $p>0.05$ ) (Table 2).

**Table 1:** Comparison of the LS and FB levels of the groups according to the socio-demographic characteristics of the participants.

n=998)		Life Satisfaction Median (min-max)	Sense of Belongings Median (min-max)	Family Belonging Median (min-max)	Total Family Belonging Median (min-max)
<b>Age, n(%)</b>					
<25	145(14.5)	25(5-35)	53(23-60)	18(5-25)	70(28-85)
25-44	432(43.3)	21(5-35)	50.5(17-60)	18(8-25)	68(28-85)
45-60	421(42.2)	22(5-35)	50(20-60)	18(10-25)	68(33-85)
<b>P value</b>		<b>&lt; 0.001</b>	<b>0.004</b>	<b>0.367</b>	<b>0.012</b>
<b>Sex, n(%)</b>					
Male	437(43.8)	23(5-35)	51(17-60)	18(5-25)	69(28-85)
Female	561(56.2)	22(5-35)	50(20-60)	17(7-25)	68(33-85)
<b>P value</b>		<b>0.007</b>	<b>0.414</b>	<b>0.016</b>	<b>0.164</b>
<b>Marital Status, n(%)</b>					
Still married	687(68.8)	22(5-35)	50(17-60)	18(9-25)	68(28-85)
Not married	250(25.1)	24(5-35)	52(23-60)	18(5-25)	69(28-85)
Divorced/Widow	61(6.1)	20(5-35)	49(32-60)	17(11-22)	67(44-80)
<b>P value</b>		<b>0.007</b>	<b>0.066</b>	<b>0.165</b>	<b>0.063</b>
<b>Place living, n(%)</b>					
Village	65(6.5)	21(5-34)	52(26-60)	17(12-24)	69(40-84)
City	251(25.2)	23(5-35)	50(19-60)	17(7-25)	68(29-85)
Capital city	682(68.3)	22(5-35)	50.5(17-60)	18(5-25)	68(28-85)
<b>P value</b>		<b>0.440</b>	<b>0.058</b>	<b>0.312</b>	<b>0.155</b>
<b>Education Statue, n(%)</b>					
Illiterate	54(5.4)	20(5-35)	52(25-60)	18(13-23)	69(38-83)
Literate	46(4.6)	22(5-35)	49.5(28-60)	17(13-25)	67.5(42-85)
Primary education	360(36.1)	22(5-35)	49(20-60)	17(9-25)	67(33-85)
High School	231(23.1)	22(5-35)	50(17-60)	18(7-25)	68(28-85)
University	272(27.3)	22(5-35)	52(23-60)	18(5-25)	70(28-85)
Master/Doctora	35(3.5)	24(14-34)	51(35-60)	18(11-25)	69(49-84)
<b>P value</b>		<b>0.053</b>	<b>0.001</b>	<b>0.019</b>	<b>&lt;0.001</b>
<b>Mother Education, n(%)</b>					
Illiterate	96(9.6)	22(5-33)	50(17-60)	17(11-25)	67.5(28-85)
Literate	179(17.9)	22(5-35)	49(20-60)	17(11-25)	67(33-85)
Primary education	613(61.4)	22(5-35)	50(19-60)	18(7-25)	68(29-85)
High School	86(8.6)	23.5(5-35)	52(23-60)	19(5-25)	70(28-85)
University	20(2.0)	23(10-35)	54.5(42-59)	19(15-25)	72.5(58-80)
Master/Doctora	4(0.4)	21(17-23)	52.5(41-59)	17.5(14-21)	70(55-80)
<b>P value</b>		<b>0.483</b>	<b>0.324</b>	<b>0.010</b>	<b>0.091</b>
<b>Father Education, n(%)</b>					
Illiterate	30(3.0)	22(5-30)	50(17-60)	18(11-25)	67(28-85)
Literate	107(10.7)	23(5-35)	50(25-60)	17(12-25)	68(38-85)
Primary education	638(63.9)	22(5-35)	50(19-60)	18(7-25)	68(29-85)
High School	141(14.1)	21(5-35)	50(23-60)	18(5-25)	69(28-85)
University	73(7.3)	23(8-35)	54(31-60)	18(9-25)	70(40-84)
Master/Doctora	9(0.9)	25(8-31)	54(49-59)	18(14-21)	70(67-80)
<b>P value</b>		<b>0.709</b>	<b>0.282</b>	<b>0.403</b>	<b>0.273</b>
<b>Child number, n(%)</b>					
No child	278(27.9)	23(5-35)	51(17-60)	18(5-25)	68(28-85)
1 child	129(12.9)	22(5-35)	51(26-60)	18(9-25)	69(35-85)
2 children	282(28.3)	22(5-35)	50(28-60)	18(9-25)	68(38-85)
≥3 children	309(31.0)	22(5-35)	50(20-60)	18(9-25)	68(33-85)
<b>P value</b>		<b>0.142</b>	<b>0.322</b>	<b>0.712</b>	<b>0.602</b>
<b>Profession, n(%)</b>					
Unemployed	21(2.1)	21(7-35)	47(27-60)	16(11-24)	64(38-84)
Retired	79(7.9)	23(5-35)	50(28-60)	18(11-24)	68(42-84)
Student	103(10.3)	25(8-35)	53(23-60)	18(5-25)	70(28-85)
Officer	248(24.8)	22(5-35)	51(26-60)	18(9-25)	68(35-85)
Housewife	263(26.4)	22(5-35)	49(20-60)	17(9-25)	67(33-85)
Employee/private sector	284(28.5)	21(5-35)	50.5(17-60)	18(7-25)	69(28-85)
<b>P value</b>		<b>&lt;0.001</b>	<b>0.010</b>	<b>0.005</b>	<b>0.002</b>
<b>Income-generating job status n(%)</b>					
No					
Yes	582(58.3)	22(5-35)	50(17-60)	17(5-25)	68(28-85)
<b>P value</b>		<b>0.463</b>	<b>0.247</b>	<b>0.063</b>	<b>0.122</b>
<b>Montly household Income</b>					
<2000 TL	252(25.3)	20(5-35)	48(17-60)	17(10-25)	65(28-85)
2000-4000 TL	428(42.9)	23(5-35)	51(23-60)	18(5-25)	68.5(28-85)
4000-6000 TL	175(17.5)	23(5-35)	52(20-60)	18(8-25)	70(35-85)
>6000 TL	143(14.3)	24(8-35)	52(29-60)	18(9-25)	70(40-85)
<b>P value</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>&lt;0.001</b>
<b>Living home, n(%)</b>					
Rent	339(34.0)	22(5-35)	50(17-60)	18(8-25)	68(28-85)
Owned	659(66.0)	22(5-25)	50(20-60)	18(5-25)	68(28-85)
<b>P value</b>		<b>0.117</b>	<b>0.678</b>	<b>0.988</b>	<b>0.745</b>
<b>sd: standart deviation</b>					

Table 2: Comparison of scale scores by clinical groups and family structure.

Patients (n=998)	Life Satisfaction Median (min-max)	Sense of belongings Median (min-max)	Family Belongings Median (min-max)	Total family belongings Median (min-max)	
<b>Group, n(%)</b>					
G1-Control	211(21.1)	22(5-35)	51(26-60)	18(9-25)	69(35-85)
G2-Amputation	27(2.7)	21(5-35)	50(26-59)	17(13-22)	67(42-78)
G3-Malign tumor	138(13.8)	20(5-35)	52(17-60)	17(8-25)	69(28-85)
G4-Benign aggressif tumor	111(11.1)	22(5-35)	49(20-60)	17(10-25)	68(33-85)
G5-Benign tumor	76(7.6)	24(8-35)	50(27-60)	17(7-25)	68(39-85)
G6- Artroplasty, major surg.	108(10.8)	21(5-34)	49(25-60)	17.5(10-25)	67.5(38-85)
G7-Ortopaedic trauma	143(14.3)	23(9-35)	50(23-60)	17(5-25)	68(28-85)
G8-basic orthopaedic surgery	184(18.4)	25(6-35)	49(20-60)	18(10-25)	68(33-85)
<b>P value</b>	<b>&lt;0.001</b>	0.574	0.102	0.445	
<b>Family Structure, n(%)</b>					
Nuclear	739(74.0)	22(5-35)	50(17-60)	18(5-25)	68(28-85)
Spread	202(20.2)	23(5-35)	52(20-60)	18(10-25)	69(33-85)
Divorced	57(5.7)	21(5-35)	48(26-60)	17(7-25)	64(35-84)
<b>P value</b>	0.319	0.435	0.471	0.452	
<b>Mother or Father Alive, n(%)</b>					
Both alive					
Both dead	390(39.1)	23(5-35)	51(20-60)	18(5-25)	69(28-85)
Other, n(%)	106(10.6)	22(5-35)	49(20-60)	18(10-25)	67.5(33-82)
<b>P value</b>	502(50.3)	22(5-35)	50(17-60)	18(9-25)	68(28-85)
		0.300	0.185	0.898	0.302
<b>Parents living together n(%)</b>					
Yes					
No	67(6.7)	20(5-35)	52(28-60)	18(7-25)	69(38-85)
<b>P value</b>	931(93.3)	22(5-35)	50(17-60)	18(5-25)	68(28-85)
		0.163	0.400	0.978	0.528
<b>Chronic disease, n(%)</b>					
Have					
Not have	803(80.5)	22(5-35)	50(17-60)	18(5-25)	68(28-85)
<b>P value</b>	195(19.5)	22(5-35)	51(26-60)	18(9-25)	69(38-85)
		0.333	0.084	0.243	0.100
<b>Chronic disease in family, n(%)</b>					
have					
not have	328(32.9)	21.5(5-35)	50(20-60)	18(7-25)	68(33-85)
<b>P value</b>	670(67.1)	23(5-35)	51(17-60)	18(5-25)	68.5(28-85)
		<b>0.010</b>	0.162	0.701	0.263
<b>Living with family, n(%)</b>					
yes					
no	672(67.3)	23(5-35)	50.5(20-60)	18(5-25)	69(28-85)
<b>P value</b>	326(32.7)	22(5-35)	50(17-60)	17(7-25)	67.5(28-85)
		<b>0.031</b>	0.193	0.090	0.138

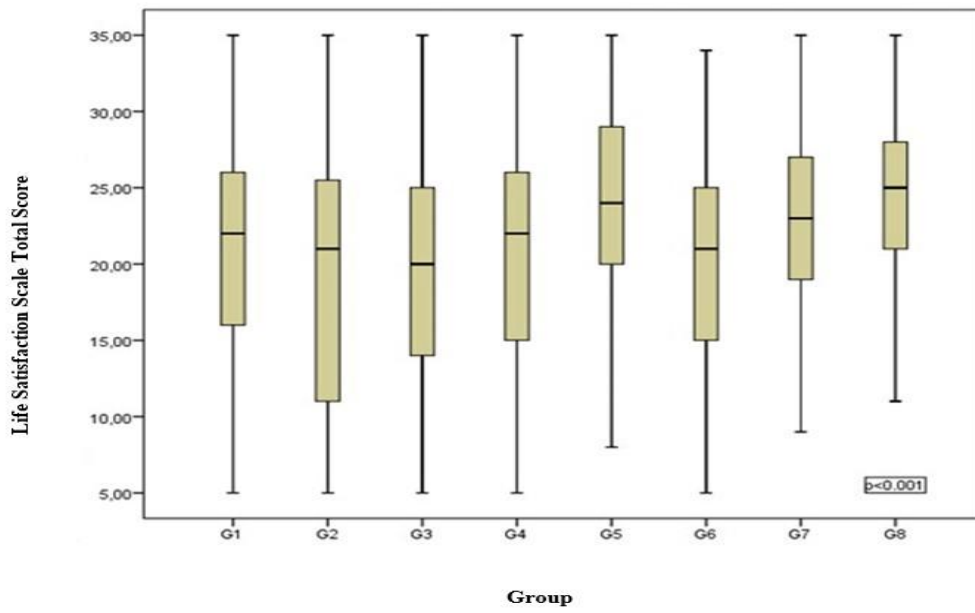


Figure 2: Comparison of LS levels of participant groups.

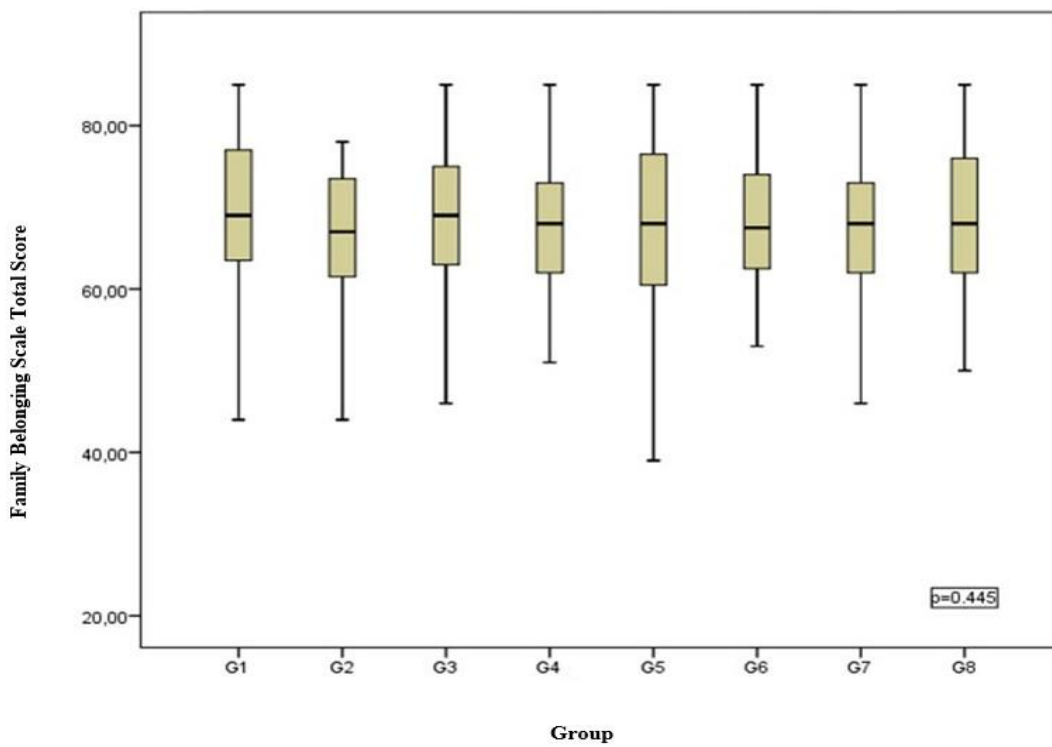


Figure 3: Comparison of the total levels of FB of the participating groups.

When the relationship between LS and FB levels were examined, a weak correlation was found between 0.258-0.280 values in all participants. On the other hand, varying levels of positive correlation were observed between the LS and FB levels of all groups (Table 3). When this relationship in clinical groups was examined by subgroup correlation analyses, it was

observed that there was no significant correlation between LS and FB levels in the G2 amputation group, but the relationships were increased towards easier surgery groups such as G4 (benign aggressive tumor), G5 (benign tumor) and G8 (simple orthopaedic surgery). Correlation coefficients in these groups were found to vary between 0.336 and 0.960 (Table 3).

**Table 3.** The relationship between LS and FB values in all patient groups.

	Sense of belonging r(p)	Family Belonging(p)	Total family belonging r(p)
<b>Total Group (n=998)</b>	<b>0.258(&lt;0.001)</b>	<b>0.261(&lt;0.001)</b>	<b>0.280(&lt;0.001)</b>
<b>G1-Control</b>	<b>0.223(&lt;0.001)</b>	<b>0.214(&lt;0.001)</b>	<b>0.243(&lt;0.001)</b>
<b>G2-Amputation</b>	0.295(0.135)	0.156(0.439)	0.278(0.160)
<b>G3-Malign tumor</b>	0.148(0.084)	<b>0.242(0.004)</b>	0.191(0.025)
<b>G4-Benign aggressif tumor</b>	<b>0.401(&lt;0.001)</b>	<b>0.406(&lt;0.001)</b>	<b>0.442(&lt;0.001)</b>
<b>G5-Benign tumor</b>	<b>0.442(&lt;0.001)</b>	<b>0.336(&lt;0.001)</b>	<b>0.426(&lt;0.001)</b>
<b>G6- Artroplasty, major surgery</b>	<b>0.217(0.024)</b>	<b>0.262(0.006)</b>	<b>0.235(0.014)</b>
<b>G7-Ortopaedic trauma</b>	<b>0.253(0.002)</b>	<b>0.172(0.040)</b>	<b>0.244(0.003)</b>
<b>G8-basic orthopaedic surgery</b>	<b>0.340(&lt;0.001)</b>	<b>0.960(&lt;0.001)</b>	<b>0.725(&lt;0.001)</b>

## DISCUSSION

In this study, the relationship between LS and FB was investigated in orthopaedic patient groups who underwent surgery. It is said that the perception of LS and family support weaken in the manifestation of the disease or in having problems in their improvement (7). Among the patients undergoing orthopaedic oncological surgery, elderly women with pain, patients with low socioeconomic status and unstable physical condition, are more prone to psychosocial problems. In addition to the medical problems of these patient groups, LS, quality of life and social belonging are also adversely affected. Social status, education level, financial situation, and family history play an important role in the treatment processes of these individuals (10). In another study, it was reported that LS and quality of life of haemodialysis patients were significantly lower than the healthy group, while depression and anxiety were higher (11). Similarly, it has been shown that there is a negative, moderately significant relationship between LS and depression in oncological patients receiving chemotherapy (12). It has been shown that there is a positive and significant relationship between LS and FB value of university students (9, 13). In our study, significant differences were found in the LS values of the groups, consistent with the literature. The highest LS values were observed in simple orthopaedic cases, and the lowest in patients with malignant tumors. The weak correlation and relationship between LS and FB seen in complicated groups such as amputations and malignant tumors, was increased towards less complicated groups such as simple orthopaedic surgery group. In addition, the highest LS and FB values in our study were observed in students. One of the main factors affecting LS and FB is age and gender. Due to many psychosocial problems, the family is more important than ever in adolescence (8). Young

haemodialysis patients have been shown to have higher LS values (11). Similarly, we found the sub-dimension and total

FB values to be significantly higher in the patient groups under the age of 25. It has been reported that gender does not make a significant difference on LS and family functions of individuals with chronic diseases, but the behavioural control of males is lower than that of females (14). In addition, no significant difference was also observed between LS and FB values of university students, according to gender (9). Unlike the literature, the reason why male participants' LS was higher than females in our study may be related to the fact that women are more affected by negative conditions such as illness and psychosocial problems.

Socio-economic characteristics of individuals are also effective on LS and FB. Studies have shown that there was a positive and significant relationship between the LS and FB scores of university students and their economic status (6,13). In addition, the LS values of haemodialysis patients with high economic status, were found to be significantly high (11). Similarly, LS and FB values were found to be significantly higher in orthopaedic patient groups with high economic status in our study.

People with high FB are happy psychosocially and have high self-care levels (6). The complications that develop after orthopaedic oncological surgeries are lower in elderly individuals living in extended families, compared to the elderly population living in nursing homes or alone (15). While there are publications stating that family structure does not make a significant difference on FB among university

students (13), there are also publications stating that individual living in the nuclear family has the highest and living in separated family has the lowest FB values (16). It has been reported that those who have a chronic disease and live with their families have higher perceived social support and higher LS value (14). There is conflicting information in the literature regarding the LS of university students living with or without their families (9,13). The LS value of participant living with families were found to be higher than those living separately in our study. This can be explained by the fact that parents' controlling and interfering perception on young people has turned into an expectation of care and attention in case of illness.

Marital status and social support are important determinants of emotional adjustment. Studies have shown that students living with their nuclear families have higher FB values than students with divorced parents and extended families (8, 17). The reason why emotional stress and depression is more common in married people who have sarcoma surgeries, compared to singles has been shown that patients have to deal with their partners' feelings and fears as well as their own problems (18). In another study, the LS of divorced oncological patients who received chemotherapy was found to be significantly high (12). While the LS was higher significantly in never-married orthopaedic patients than in married and divorced patients in our study, FB did not show any significant difference according to family structure. As the social support that cancer patients receive from their families and the education given to the patients and their families increases, the burden of care and treatment decreases, their depression decreases and their LS increases (19). It has been shown that LS and FB values are significantly higher in university students with a low number of siblings and high father educational level (9). Another study showed that the educational status of university students was significantly related to their happiness levels (13). In our study, LS levels were observed to be similar in all groups according to education level, while FB values of university graduated participants were found to be higher than the others.

The physical and psycho-social problems observed after orthopaedic and oncological surgeries change and rearrange the patient's relations with their environments. Psychosocial problems are more common in rare malignant tumors, low-activity amputees, and patients undergoing complicated limb salvage surgery (20). Chronic diseases and long disease durations negatively affect the LS and FB values of the patients (14). In a study conducted with haemodialysis patients, it was observed that the LS values of male patients with high economic status who underwent short-term haemodialysis were significantly higher than the others (11). In our study, while LS and FB levels of male patients, those with high economic status, and young male students under the age of 25 were found to be significantly higher, LS values were higher in patients living with families, who were never married, and who did not have a chronic disease in families. FB values were significantly higher in university graduates.

## CONCLUSION

In conclusion, patients who have undergone major orthopaedic and oncological surgery should be treated with a multidisciplinary approach by a specialist team, in order to overcome the increasing fear and anxiety and psychosocial problems of patients and their families. Patients also need medical social services practices in solving the problems during the treatment process. We think that increasing LS and FBs by providing physical, psychosocial, and financial support to patients in addition to medical treatment, will be beneficial in solving postoperative problems. The positive effects of LS and FB in the treatment of orthopaedic and oncological patients need to be clarified with long-term, prospective, and detailed studies.

*Ethics Committee Approval: The study was approved by the Ethics Committee of the University of Health Sciences, Dr. Abdurrahman Yurtaslan Ankara Oncology Training and Research Hospital (Date: 2021, Decision No: 1477).*

*Informed Consent: Written informed consent was obtained from all participants who participated in this study*

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