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The Impact of Care Dependency, Spiritual Well-Being, and Selected Variables on Satisfaction with Life in Recipients of Liver Transplantation

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ABSTRACT

Objective: Although care dependency, spiritual well-being, and life satisfaction are important variables, they have not been sufficiently clarified after liver transplantation. The aim was to investigate the impact of care dependency, spiritual well-being, and selected characteristics on the satisfaction of life of liver transplant recipients.

Materials and Methods: A cross-sectional and descriptive study was conducted between May and December 2021 (n=214). Descriptive Characteristics Form, Care Dependency Scale (CDS), Spiritual Well-Being Scale (SWBS), and Contentment with Life Scale (CLAS) were utilized. Descriptive statistics, correlation analysis, and hierarchical linear regression analysis were employed.

Results: The mean scores were found to be 80.10±6.68 for CDS, 40.85±3.46 for SWBS, and 10.78±3.43 for CLAS. A moderate, positive, and significant relationship was identified between CDS and CLAS ($r=0.604$, $p<0.01$), while a low, positive, and significant relationship was observed between SWBS and CLAS ($r=0.271$, $p<0.01$). Gender, health insurance, and the presence of chronic illness were identified as other factors influencing satisfaction with life, explaining 11% of contentment with life variance. Along with these variables, spiritual well-being explained 15% of contentment with life satisfaction, and care dependency explained 37% of life satisfaction.

Conclusion: The care dependency, gender, health insurance, presence of chronic illness and spiritual well-being of liver transplant recipients significantly influence their life satisfaction. It is important to plan nursing interventions considering these variables after surgery and to provide care in a holistic and personalized manner.

Keywords: Care dependency, Life satisfaction, Liver transplants, Nursing, Spirituality, Well-being

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INTRODUCTION

Liver transplantation (LT) is a significant treatment method that enables patients with end-stage liver failure to survive.[1] However, due to being a major surgical intervention, it constitutes a trauma to the human body. This is because such procedures impact the entire body, leading to stress responses, susceptibility to infection, pain, the necessity to adapt to multiple medication regimens to prevent organ re-

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jection, anxiety, depression, restrictions in daily life activities, role and economic losses, and consequently an increase in care dependency.[2-4]

Care dependency is the process of relying on and being supported by others to meet one's needs due to a decrease in the individual's self-care ability.[5] Chronic illnesses, aging, surgical interventions, and hospitalization contribute to an increase in care dependency.[6] Liver transplant recipients, facing significant life experiences after LT, also experience an increase in care dependency for these reasons. Studies indicate that patients who undergo surgery are more dependent compared to non-surgical patients, and the recipients have a moderate level of dependency.[7,8] The recovery process for patients involves not only providing adequate medical treatment but also patient-centered nursing care.[9] Reduction of dependency and support for independence contribute to individuals returning to active life, improving their quality of life, and increasing life satisfaction.[3,9] At this point, surgical nurses who provide 24-h uninterrupted care are at a key point.

Liver transplant recipients experience a stressful process throughout all stages of the transplant surgery.[10] Each individual's coping mechanism for this stressful process varies. While some individuals may have more negative attitudes, others may adapt more quickly.[10] At this point, the importance of spiritual well-being in managing and effectively coping with the disease process is emphasized.[11,12] Spiritual well-being is defined as an individual's ability to find meaning in life and have a sense of purpose within life.[13] The spiritual well-being as an indicator of individuals' quality of life in the spiritual domain.[14] Studies have indicated that spiritual beliefs and well-being reduce problems, such as pain, depression, and anxiety and are crucial for a quick and effective recovery from illnesses.[15,16] Given that LT is a major surgical intervention, recipients often experience pain, anxiety, and depression, and feelings of guilt due to the possibility of causing harm to the donor.[17] These factors can significantly impact recipients' adjustment, coping, and life satisfaction during the post-operative period. Furthermore, this increases the likelihood of recipients developing post-transplant complications. Therefore, nurses may need to assess and support recipients' spiritual well-being to achieve positive patient outcomes.

Satisfaction is the feeling and thought that individuals form based on the level of fulfillment of their expectations, needs, and desires, and also an important variable for feeling happy and peaceful life.[18] Life satisfaction, on the other hand, is related to the individual's efforts to achieve all life goals, the extent to which they have achieved them, and how they evaluate and perceive this process.[19] Therefore, life satisfaction is closely connected to good physical and mental health. Studies have shown that life satisfaction varies with age, gender, employment status, education level, economic and marital status, family and social life, and personality traits.[20,21] Studies conducted with different samples have indicated a relationship between spiritual well-being and life satisfaction.[20-22] However, in the literature, no study addressing the relationship between spiritual well-being and life satisfaction in liver transplant recipients has been found. Furthermore, the literature lacks a study investigating the effect of care dependency and spiritual well-being on life satisfaction in liver transplant recipients. The absence of research on these three variables creates a significant gap in the literature, and elucidating these variables is crucial for supporting and delivering high-quality and holistic post-operative care to recipients. Hence, the study aimed to determine the effect of care dependency, spiritual well-being, and selected factors on life satisfaction in recipients. It is believed that the results of the study will provide guidance to organ transplant clinical nurses.

Research Questions

1. Which sociodemographic and clinical characteristics affect satisfaction with life in liver transplant recipients?
2. Does care dependency affect life satisfaction in liver transplant recipients?
3. Does spiritual well-being affect satisfaction with life in liver transplant recipients?
4. What is the relationship between care dependency, spiritual well-being, and life satisfaction in liver transplant recipients?

MATERIALS AND METHODS

Type of the Research

This cross-sectional and descriptive study was aimed to investigate the impact of care dependency, spiritual well-being, and selected characteristics on satisfaction with life of liver transplant recipients. The study followed the EQUATOR guidelines for research reporting by employing the TREND checklist.

Population and Sample

The study was conducted in the organ transplant service and outpatient clinic of a liver transplant institute located in Türkiye, between May 7, 2021, and December 30, 2021. Inclusion criteria for the sample were being 18 years and older, being in the post-operative period, undergoing living donor LT, being hospitalized for at least three days, having the ability to understand and speak Turkish, having person-place-time orientation, and not having hearing or speech problems. Exclusion criteria were multiple organ transplants, cadaveric LT, experiencing liver graft rejection, and undergoing retransplanta-

tion. At the end of the research, using G*power 3.1, with effect size=0.50, p=0.05, and a sample size of 200, the "post hoc" "compute achieved power" analysis indicated a study power of 0.99. For the variable of care dependency, a correlation coefficient of r=0.20 was adopted.[23] Based on this value, with a 95% confidence interval, a 5% margin of error, and 80% power, the sample size was determined to be 193. To account for potential losses, the study was concluded with a total of 214 participants, including approximately 11% backup (21 individuals).

Data Collection

The convenience sampling method was used in the study. The data were collected through face-to-face interviews with voluntary liver transplant recipients who met the research criteria by the authors. The data were collected in a quiet room in the Organ Transplant Service and Outpatient Clinic, with only the researcher and the patient present. During data collection, care was taken to ensure the patient was free from pain and that their vital signs were stable. The average duration for data collection in the study was 20–30 min. After explaining the purpose and outcomes of the research verbal and written consent was obtained from patients. The Descriptive Characteristics Form, the Care Dependency Scale (CDS), the Spiritual Well-Being Scale (SWBS), and the Contentment With Life Scale (CLAS) were used to collect data.

Descriptive Characteristics Form

The form includes a total of 12 questions related to the patient's age, gender, marital status, education and employment status, place of residence, economic status, presence of social security, chronic illness status, time and reason for LT, and the existence of someone who can assist with care.[2-5,8]

The CDS

Originally created by Dijkstra et al.[24] in 1996 and later translated into Turkish by Yönt et al.,[25] the scale comprises 17 items assessed on a five-point Likert scale, with responses ranging from "1=completely dependent" to "5=immediately, almost/completely independent." The total scores on the scale can vary from 17 (minimum) to 85 (maximum), where higher scores signify a higher level of independence in addressing the patient's care requirements.[24,25] There is no cut-off point on the scale. The Cronbach's alpha coefficient for the scale is 0.91,[25] and for this specific study, it is calculated as 0.92.

SWBS

In the context of Türkiye, Aktürk et al.[26] conducted a study to validate and assess the reliability of Peterman's scale.[27] The scale, comprising 12 questions, is structured around three subscales: Faith, peace, and meaning. It is noteworthy that reverse scoring is applied to items 4 and 8. Utilizing a Likert-style structure, the FACIT-Sp scale requires participants to provide responses on a scale ranging from 0 to 4, where "0" represents "never," and "4" corresponds to "always." The overall score on the scale can range from 0 to 48.[26,27] There is no cut-off point on the scale. The scale demonstrates a Cronbach's alpha ranging between 0.78 and 0.93,[27] in this particular study, the calculated value was 0.79.

CLAS

Akın and Yalnız conducted a validation and reliability examination of the scale developed by Lavallee et al.[28] within a Turkish context.[28,29] Consisting of 5 questions, participants respond on a 7-point Likert-style rating scale, with options ranging from "1" (strongly disagree) to "7" (strongly agree). Notably, items 3 and 4 involve reverse coding. The overall satisfaction level of an individual is determined based on the cumulative score of the provided responses, with higher scores indicating increased satisfaction. The total score on the scale ranges from 5 to 35.[28,29] There is no cut-off point on the scale. The Cronbach's alpha previously identified as 0.73,[29] in this study it was 0.86.

Statistical Analysis

The analysis of research data was conducted using the Statistical Package for the Social Sciences 22.0 software package. The normal distribution of the data was determined by employing skewness and kurtosis coefficients. Pearson Correlation Analysis and Hierarchical Linear Regression Analysis were utilized to elucidate relationships and effect between the variables. Cronbach's Alpha was employed to determine the internal consistency of the scales.

Ethical Approval

Approval for ethical considerations was secured from the Social and Human Sciences Research Ethics Board of the respective university (Approval Number: 2021/387; Decision Date: April 30, 2021), and authorization was obtained from the institution where the research took place (Date: May 06, 2021–Reference: E.42691). Informed written consent was obtained from the sampled patients. The research was carried out considering the principles of the Helsinki Declaration.

RESULTS

Among liver transplant recipients, it was determined that 53.3% were male, 84.1% were married, 31.3% had completed primary education, 41.6% had three or more children, 43% lived in urban areas, 73.8% were employed, 46.7% had a moderate income level, and the mean age was 48.15 (standard deviation [SD]=11.50). Examining the health-related characteristics of the participants, it was found that 94.4% had health insurance, 71.5% received assistance for care from someone, 34.6% had a chronic illness other than transplantation, 64% underwent LT due to hepatitis, and the average time elapsed

Table 1. The distribution of individuals according to their demographic characteristics (n=214)

Characteristics	n	Percentage
Age, years (mean±SD)	48.15±11.50	(min-max: 19–70 years)
Duration after transplantation, months (mean±SD)	23.72±18.26	1–82 months
Gender		
Female	100	46.7
Male	114	53.3
Marital status		
Single	34	15.9
Married	180	84.1
Education level		
Illiterate	50	23.4
Literate	13	6.1
Primary school	67	31.3
Middle school	30	14.0
High school	38	17.8
University	16	7.5
Number of children		
No children	46	21.5
1–2 children	79	36.9
3 children and above	89	41.6
Place of residence		
City center	92	43.0
District	73	34.1
Village	49	22.9
Employment status		
Employed	56	26.2
Unemployed	158	73.8
Income level		
Good	28	13.1
Moderate	100	46.7
Poor	86	40.2
Presence of health insurance		
Yes	202	94.4
No	12	5.6
Presence of a person providing assistance for care		
Yes	153	71.5
No	61	28.5
Presence of chronic disease other than transplantation		
Yes	74	34.6
No	140	65.4
Reason for liver transplantation		
Hepatitis (B-C-Toxic-Autoimmune-Fulminant)	137	64.0
Hepatocellular carcinoma	29	13.6
Cirrhosis (cryptogenic Liver-Wilson-biliary)	35	16.4
Budd-chiari	6	2.8
Other*	7	3.2

*HPA: Hepatorenal syndrome-hydatid cysts.

after transplantation was 23.72 months (SD=18.26) (Table 1).

The mean total score for the SWBS among liver transplant recipients was 40.85±3.46, indicating a high level of spiritual well-being. The mean total score for the CDS was found to be 80.10±6.68, suggesting a high level of independence in meeting care needs. Participants' mean total score on the CLAS was 10.78±3.43, indicating low life satisfaction. The relationships between SWBS, CDS, CLAS, age, and time elapsed since transplantation for liver transplant recipients are shown in Table 2. A moderate, positive, and significant relationship was found between CDS and CLAS ($r=0.604$, $p<0.01$), while a low, positive, and significant relationship was observed between SWBS and CLAS ($r=0.271$, $p<0.01$) (Table 2).

A hierarchical linear regression analysis was conducted to determine the effect of demographic variables, care dependency, and spiritual well-being on individuals' contentment with life. Before the regression analysis, pairwise relationships between demographic variables and the CLAS were examined. Variables that showed a statistically significant relationship with the CLAS were included in the regression model, and some categorical variables were transformed into dummy variables. Model 1 revealed a significant model where gender, the presence of health insurance, and having a chronic illness other than transplantation explained 11% of the variance in life satisfaction ($F_{(3,210)}=10.432$; $p<0.001$, Adj. $R^2=0.11$). Gender ($\beta=-1.052$; $p<0.05$), the presence of health insurance ($\beta=2.429$; $p<0.05$), and the presence of a chronic illness ($\beta=-1.973$; $p<0.001$) are statistically significantly linked with life satisfaction. It was determined that female liver transplant recipients have lower levels of life satisfaction. In addition, transplant recipients with health insurance exhibit higher life satisfaction (Table 3). Subsequently, the spiritual well-being variable was added to the model, creating Model 2. The variables significantly explained 15% of the variance in life satisfaction with a 4% increase ($F_{(4,209)}=10.684$ $p<0.001$, Adj. $R^2=0.15$, R^2 Change=0.04). In Model 2, a significant and positive relationship was revealed between spiritual well-being and life satisfaction ($\beta=0.203$; $p<0.01$). Individuals with higher spiritual well-being exhibit higher life satisfaction (Table 3). In the final step, care dependency was added to the model. In Model 3, care dependency significantly explained 37% of the variance in life satisfaction with a 22% increase ($F_{(5,208)}=26.855$; $p<0.001$, Adj. $R^2=0.37$, R^2 Change=0.22). A positive and significant relationship was identified between the level of independence in care and life satisfaction ($\beta=0.290$; $p<0.001$). As the level of independence in care increased among liver transplant recipients, their life satisfaction also increased (Table 3).

Table 2. The mean, standard deviation, and correlation values of the variables

Variables	Mean	SD	α		1	2	3	4	5
1. Age	48.15	11.50	-	r	-				
				p	-				
2. Duration after transplantation	23.72	18.26	-	r	0.420**	-			
				p	**0.000**	-			
3. SWBS	40.85	3.46	0.53	r	0.124	0.043	-		
				p	0.117	0.973	-		
4. CDS	80.10	6.68	0.95	r	**–0.266****	0.083	**0.403****	-	
				p	**0.000**	0.226	**0.000**	-	
5. CLAS	10.78	3.43	0.89	r	–0.123	0.110	**0.271****	**0.604****	-
				p	0.072	0.109	**0.000**	**0.000**	-

p: Statistical significance **p<0.01; SD: Standard deviation; α: Cronbach alpha; r: Correlation coefficient; SWBS: Spiritual Well-being scale; CDS: Care dependency scale; CLAS: Contentment with life scale.

Table 3. Hierarchical linear regression models for contentment with life

Dependent variable	Regression models	Independent variables	β	95% CI	t	p	VIF	DW
CLAS	Model 1	Constant	9.670	7.757; 11.583	9.966	0.000		1.761
		Gender (Female)	–1.052	–1.925; –0.179	–2.376	0.018	1.004	
		Presence of health insurance (Yes)	2.429	0.530; 4.328	2.522	0.012		
		Presence of chronic disease other than transplantation (Yes)	–1.973	–2.889; –1.056	–4.242	0.000	1.011 1.006	
	Model 2	Constant	18.022	12.510; 23.534	6.446	0.000		
		Gender (Female)	–0.974	–1.830; –0.118	–2.243	0.026	1.008	
		Presence of health insurance (Yes)	2.237	0.374; 4.100	2.367	0.019	1.015	
		Presence of chronic disease other than transplantation (Yes)	–1.684	–2.599; –0.769	–3.627	0.000	1.047	
		SWBS	0.203	0.077; 0.330	3.176	0.002	1.049	
	Model 3	Constant	–12.958	–21.404; –4.513	–3.025	0.003		
		Gender (Female)	–0.739	–1.475; –0.003	–1.980	0.049	1.013	
		Presence of health insurance (Yes)	1.932	0.332; 3.531	2.381	0.018	1.017	
		Presence of chronic disease other than transplantation (Yes)	–0.150	–1.008; 0.708	–0.345	0.731	1.251	
		SWBS	0.023	–0.093; 0.139	0.391	0.696	1.198	
		CDS	0.290	0.225; 0.356	8.728	0.000	1.439	

Model values; Model 1: F=10.432; adjusted R^2=0.11; Model 2: F=10.684; adjusted R^2=0.15; R^2 change=0.04; Model 3: F=26.855; adjusted R^2=0.37; R^2 change=0.22; p<0.05; β: Unstandardized beta coefficient, 95% CI: 95.0% confidence interval for β, DW: Durbin-Watson, VIF: Variance inflation factor, SWBS: Spiritual Well-being scale, CDS: Care dependency scale, CLAS: Contentment with life scale

DISCUSSION

Liver transplant recipients were found to have a good level of care independence and were independent in meeting their care needs. This result is consistent with individuals who underwent major surgical procedures in the literature.[7,8,23] It is believed that this is associated with the success of the surgery and the quality of nursing care provided afterward. In addition, this study reveals that care dependency explains a significant percentage of life satisfaction, and there is a moderate, positive, and significant relationship between them. It is assumed that this relationship is associated with individuals having high independence, the absence of different chronic illnesses other than the transplant indication, the ability to survive due to LT surgery, and the inclusion of mostly younger recipients in the study.

When examining the total scores obtained from the SWBS, it is evident that transplant recipients have a high level of spiritual well-being. Spiritual well-being is considered an important component for coping with challenges.[12] In this context, it can be said that the recipients utilize spirituality to cope with the challenges of the post-operative period. Furthermore, the high level of spiritual well-being in recipients may be attributed to the cultural norm in Türkiye, where individuals generally stay with their close relatives during the post-operative period, and their relatives provide physical, emotional, and social support. In this study, a positive and significant relationship was found between individuals' spiritual well-being and their contentment with life. Therefore, it can be stated that spiritual well-being enhances contentment with life, a result consistent with many studies in the literature.[20-22] The reason behind this may be that as spiritual well-being increases, individual control and independence also increase, leading individuals to become more aware of the meaning and purpose of life. The study also indicates that transplant recipients often perceive post-transplant life as a second chance at life.[30]

Life satisfaction is a subjective evaluation individuals make about their own lives.[19] In this sense, recipients have not been able to form a positive outlook on their post-operative lives. Most studies in the literature have found moderate levels of life satisfaction in elderly and healthy individuals.[19,20] This result differs from the findings of this study. It is thought that the reason for this difference is that the liver transplant recipients in the present study are younger and have undergone a vital surgical intervention. In addition, the fact that recipients are married and employed, and most of them have three or more children, may lead to disruptions in their roles after LT. Another factor may be the recipients' sense of responsibility toward their relatives who donated organs for living donor LT. These variables are crucial factors for life satisfaction. In line with this, the study supports that recipients with health insurance have higher levels of life satisfaction. In this context, the absence of economic difficulties regarding healthcare expenses and the sense of security in terms of accessing healthcare services may have influenced life satisfaction. This is because recipients in the post-operative period after LT may be unable to work for a while due to the possibility of developing infections and rejection.[17] In this study, no significant difference was found in terms of age and life satisfaction. A possible explanation for this finding could be related to the majority of recipients in the study being young and remaining employed. Unemployment and early retirement are significant issues after LT.[17] These issues affect individuals' life satisfaction by influencing their ability to meet daily needs, access healthcare, and receive sufficient social support.[31] In addition, the chronic and progressive nature of diseases, degenerative processes, prolonged exposure to symptoms, and complications deeply impact patients and alter their life satisfaction. However, the majority of recipients in the study do not have a different chronic illness apart from the transplant etiology. This situation may have contributed to the lower level of care dependence. In addition, advancements in surgical procedures and post-operative care, along with mobilizing patients as soon as possible after the operation, are crucial for increasing independence.[23] These variables may also enhance life satisfaction. Furthermore, the presence of recipients' family members after surgery, providing support in every aspect, may have influenced life satisfaction. A study conducted on orthopedic patients examined life satisfaction in terms of gender differences, revealing results similar to this study, where men had higher life satisfaction. This outcome suggests that female recipients may be more affected by their health condition and LT.

CONCLUSION

The gender, presence of chronic illness, health insurance status, care dependency, and spiritual well-being of the liver transplant recipients in the study affect their satisfaction of life. In light of these results, it is crucial for organ transplant nurses to provide care by considering the individual characteristics of patients in the post-operative period. This approach is deemed highly important for enhancing patients' quality of life, expediting their recovery, and preventing complications. It is anticipated that nursing care offered with this perspective will have high quality, leading to increased patient satisfaction and improved quality of life. Therefore, it is recommended that the variables affecting patients' life satisfaction after LT are carefully considered and routinely evaluated in clinics. It is also recommended that this study is conducted with other organ transplant patients and recipients of cadaveric transplants, with interventional studies planned.

DECLARATIONS

Ethics Committee Approval: The study was approved by Ondokuz Mayıs University Ethics Committee (No: 2021/387, Date: 30/04/2021).

Informed Consent: Written consent was obtained from patients

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REFERENCES

1. Ferrarese A, Cattelan A, Cillo U, Gringeri E, Russo FP, Germani G, et al. Invasive fungal infection before and after liver transplantation. World J Gastroenterol 2020;26:7485–96.
2. Åberg F. Quality of life after liver transplantation. Best Pract Res Clin Gastroenterol 2020;46-47:101684.
3. Akbulut S, Ozer A, Saritas H, Yilmaz S. Factors affecting anxiety, depression, and self-care ability in patients who have undergone liver transplantation. World J Gastroenterol 2021;27:6967–84.
4. Kapıkıran G, Özkan M. The effect of foot reflexology on pain, comfort and beta endorphin levels in patients with liver transplantation: A randomized control trial. Eur J Integr Med 2021;45:101344.
5. Dijkstra A, Hakverdioğlu G, Muszalik M, Andela R, Korhan EA, Kędziora-Kornatowska K. Health related quality of life and care dependency among elderly hospital patients: An international comparison. Tohoku J Exp Med 2015;235:193–200.
6. Yilmaz FT, Yildiz E, Cevik BE, Unver Z. Care dependency in individuals with chronic physical disease: Its relationship with compliance to treatment and life satisfaction. Ann Med Res 2020;27:1989–98.
7. Koç S, Büker N, Şavkın R, Kıter E. Ortopedi ve travmatoloji hastalarının bağımsızlık ve depresyon düzeylerinin hemşirelik bakımından memnuniyet düzeyi üzerine etkisi. J Kartal TR 2012;23:130–6. [Article in Turkish]
8. Kılıç HF, Cevheroğlu S, Görgülü S. Determination of care dependency level of patients staying in medical and surgical clinics. DEUHFED.2017;10:22–8.
9. Kwame A, Petrucka PM. A literature-based study of patient-centered care and communication in nurse-patient interactions: Barriers, facilitators, and the way forward. BMC Nurs 2021;20:158.
10. Gultekin A, Kavak F, Ozdemir A. The correlation between spiritual well-being and psychological resilience in patients with liver transplant. Medicine 2019;8:531–6.
11. Moal-Ulvoas G. Positive emotions and spirituality in older travelers. Ann Tour Res 2017;66:151–8.
12. Zadworna-Cieślak M. Spirituality, satisfaction with life and health-related behavior of older residents of long-term care institutions-a pilot study. Explore (NY) 2020;16:123–9.
13. Clark CC, Hunter J. Spirituality, spiritual well-being, and spiritual coping in advanced heart failure: Review of the literature. J Holist Nurs 2019;37:56–73.
14. Fehring RJ, Miller JF, Shaw C. Spiritual well-being, religiosity, hope, depression, and other mood states in elderly people coping with cancer. Oncol Nurs Forum 1997;24:663–71.
15. Connerton CS, Moe CS. The essence of spiritual care. Creat Nurs 2018;24:36–41.
16. Gülnar E, Özveren H, Tüzer H, Yılmazer T. An investigation of pain beliefs, pain coping, and spiritual well-being in surgical patients. J Relig Health 2022;61:4028–38.
17. Iseri O, Karayurt O, Yilmaz S. The effects of individualized education on depression, anxiety, quality of life in liver transplant recipients. Int J Caring Sci 2021;14:1917–30.
18. Pan Y, Chan SHW, Xu Y, Yeung KC. Determinants of life satisfaction and self-perception of ageing among elderly people in China: An exploratory study in comparison between physical and social functioning. Arch Gerontol Geriatr 2019;84:103910.
19. Şahin DS, Özer Ö, Yanardağ MZ. Perceived social support, quality of life and satisfaction with life in elderly people. Educ Gerontol 2019;45:69–77.
20. Ghimire S, Baral BK, Karmacharya I, Callahan K, Mishra SR. Life satisfaction among elderly patients in Nepal: Associations with nutritional and mental well-being. Health Qual Life Outcomes 2018;16:118.
21. Lee YH, Salman A. The Mediating Effect of Spiritual Well-being on depressive symptoms and health-related quality of life among elders. Arch Psychiatr Nurs 2018;32:418–24.
22. Özdemir AA, Kavak Buda F, Dural G, Gültekin A. The relationship between spiritual well-being, life satisfaction and hope in elderly individuals in Turkey. J Relig Health 2023;62:3123–36.
23. Baksi A, Genç H. Cerrahi girişim geçiren hastaların bakım bağımlılığı durumlarının bakım algısı, sosyodemografik ve klinik özellikler açısından incelenmesi. Turk Klin J Nurs Sci 2020;12:465–72. [Article in Turkish]
24. Dijkstra A, Buist G, Dassen T. Nursing-care dependen-

cy. Development of an assessment scale for demented and mentally handicapped patients. Scand J Caring Sci 1996;10:137–43.

25. Yönt GH, Akın Korhan E, Khorshid L, Eşer İ, Dijkstra A. Bakım Bağımlılığı Ölçeğinin (Care Dependency Scale) yaşlı bireylerde geçerlik ve güvenirliğinin incelenmesi. Turk J Geriatr 2010;13:71. [Article in Turkish]
26. Aktürk Ü, Erci B, Araz M. Functional evaluation of treatment of chronic disease: Validity and reliability of the Turkish version of the Spiritual Well-Being Scale. Palliat Support Care 2017;15:684–92.
27. Peterman AH, Fitchett G, Brady MJ, Hernandez L, Cella D. Measuring spiritual well-being in people with cancer: The functional assessment of chronic illness therapy--Spiritual Well-being Scale (FACIT-Sp). Ann Behav Med 2002;24:49–58.
28. Lavallee LF, Hatch PM, Michalos AC, McKinley T. Development of the contentment with life assessment scale (CLAS): Using daily life experiences to verify levels of self-reported life satisfaction. Soc Indic Res 2007;83:201–44.
29. Akın A, Yalnız A. Yaşam Memnuniyeti Ölçeği (YMÖ) Türkçe formu: Geçerlik ve güvenirlik çalışması. Electron Soc Sci J 2015;14:95–102. [Article in Turkish]
30. Patel A, Agnihotri V, Ojha SK, Chandel VK, Mahato TK. Organ and tissue transplantation – a second chance of life. Int J Adv Sci Res Dev 2023;8:382–7.
31. Fazekas C, Kniepeiss D, Arold N, Matzer F, Wagner-Skacel J, Schemmer P. Health-related quality of life, workability, and return to work of patients after liver transplantation. Langenbecks Arch Surg 2021;406:1951–61.